

2011 | **WORLD ENVIRONMENTAL & WATER RESOURCES CONGRESS**
PALM SPRINGS, CALIFORNIA ♦ MAY 22-26, 2011

Bearing Knowledge for Sustainability

www.asce.org/conferences/ewri2011



ATTEND THE 2011 CONGRESS TO BOOST YOUR INSIGHTS INTO SUSTAINABLE PROJECTS FOR A SUSTAINABLE FUTURE!



Mark W. Killgore
P.E., D.WRE,
M.ASCE

On behalf of the American Society of Civil Engineers' Environmental & Water Resources Institute, I am pleased to update you on the exciting program that so many EWRI volunteers and staff have produced for the upcoming **2011 World Environmental & Water Resources Congress** in Palm Springs, California. As we cross over into another year, water resources and environmental stories dominate the news. California is facing major floods and Europe is paralyzed by snow storms. Meanwhile in Cancun, Mexico, talks recently concluded on climate change, while oil spills and EPA carbon regulation have ruled the airwaves.

Our Congress is an important opportunity for professionals in the environmental and water fields to convene and focus on topics of the day such as these. In particular, this year's technical program encourages "Bearing Knowledge for Sustainability" to spur the environmental and engineering community to integrate the notion of sustainability in dealing with vexing technical, economic, social, environmental, and political issues.

Our Congress will begin with an Opening Ceremony showcasing local perspectives by **Peter G. Nelson**, a board member of both the Coachella Valley Water District and Salton Sea Authority. We will also be pleased to welcome U.S. EPA Assistant Secretary for Water, **Peter S. Silva, P.E.**, who will deliver the Keynote Lecture of national interest. Office of Water (OW)

Our goal: to enhance life by engineering sustainable water and environmental solutions.

activities are targeted to prevent pollution wherever possible and to reduce risk for people and ecosystems in the most cost-effective ways possible. OW is responsible for implementing the Clean Water Act and Safe Drinking Water Act, and portions of the Coastal

Zone Act Reauthorization Amendments of 1990; Resource Conservation and Recovery Act; Ocean Dumping Ban Act; Marine Protection, Research and Sanctuaries Act; Shore Protection Act; Marine Plastics Pollution Research and Control Act; London Dumping Convention; International Convention for the Prevention of Pollution from Ships; and several other statutes.

For an international perspective, we will feature a special session on the 2010 Catastrophic Monsoon Flooding in Pakistan and the Global Community's Response.

The Congress will also offer 10 short courses, plus our traditional technical tracks covering urban water resources, groundwater, dam safety, watershed management, systems engineering, water and wastewater engineering, and international issues and projects, plus a strong local program focused on Southwest environmental water issues such as restoration of the Salton Sea, the Bay Delta Program, and state-of-the-art infrastructure projects.

We have reserved Tuesday morning to give you opportunity to explore your choice of six local technical projects or three recreational outings.

Please register for the **2011 World Environmental & Water Resources Congress** today and join us at the oasis in the desert that is Palm Springs. Together, let's strive to work to accomplish our goal to enhance life by engineering sustainable water and environmental solutions.

Sincerely,

Mark W. Killgore, P.E., D.WRE, M.ASCE
General Conference Chair
PSE Hydro Dam Safety Implementation Manager
Mark.Killgore@pse.com



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CONGRESS SPECIAL SESSION

The 2010 Catastrophic Monsoon Flooding in Pakistan and the Global Community's Response

Join us for an informative session on the catastrophic flooding that menaced Pakistan this past summer. The flooding was characterized as the worst in 80 years. It affected over 60,000 square miles of territory and inflicted hardship on some 20 million people. More than 2,000 persons perished. Representatives from government, academia, and other organizations will discuss the event, relief efforts, and plans to address any future reoccurrence of such flooding.



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For the most up-to-date technical program, please check the Congress website:
www.asce.org/conferences/ewri2011

CONGRESS PROGRAM HIGHLIGHTS

14 Concurrent Technical Sessions, plus Poster Sessions, covering research and practice issues related to these areas of interest and more:

- Sustainability
- Urban water resources
- Groundwater
- Dam safety
- Watershed management
- Systems engineering
- Water and wastewater engineering
- International issues and projects
- Southwest environmental water issues

10 Short Courses:

- Numerical Modeling of Estuarine Systems Using ADH
- Principles of Streambank Analysis and Stabilization
- Modeling of River Migration at Multiple Scales: A GIS-based Toolbox for River Restoration
- Low Impact Development (LID)
- Introduction to the CUAHSI Hydrologic Information System
- Advanced Topics with the CUAHSI Hydrologic Information System
- Lessons Learned from Southwestern U.S. Stream Restoration
- Rainwater Harvesting for Water Supply & Stormwater Management
- Effective Use of the International Stormwater BMP Database
- AAEE Carbon Footprint Workshop

7 Specialty Forums:

- Arid Lands Symposium
- Climate Change Symposium
- Sustainability Symposium
- 6th World Water Forum Symposium: North American Regional Event
- 7th Urban Watershed Management Symposium
- 8th Groundwater, Hydrology, Quality, and Management Symposium
- 13th Water Distribution Systems Analysis Symposium (WDSA 11)

6 Technical Tours:

- Salton Sea Environmental Restoration Project
- Coachella Valley Water District Control Room
- Desert Hot Springs, Mission Springs, and Levees
- Oak Glen Creek Detention Basin Project
- Thousand Palms Preserve on the San Andreas Fault
- Sustainability Tour of Downtown Palm Springs

3 Recreational Tours:

- The Living Desert Safari
- San Andreas Fault Jeep Tour
- Palm Springs Aerial Tramway

Networking Events and Awards Presentations

Spouse/Guest Program

Student Program: Wednesday Is Student Day!

2011 EWRI CONGRESS SCHEDULE AT-A-GLANCE

Subject to change.

SATURDAY, MAY 21

8:00 a.m. - 10:00 p.m.

Committee Meetings

SUNDAY, MAY 22

7:00 a.m. - 7:00 p.m.

8:00 a.m. - 10:00 p.m.

8:00 a.m. - 5:00 p.m.

8:00 a.m. - 5:00 p.m.

8:00 a.m. - 5:00 p.m.

8:00 a.m. - 5:00 p.m.

8:00 a.m. - 12:00 p.m.

1:00 - 5:00 p.m.

5:00 - 6:00 p.m.

REGISTRATION (Closed for Lunch from 1:00 - 2:00 p.m.)

Committee Meetings

SHORT COURSE #1: Numerical Modeling of Estuarine Systems Using ADH

SHORT COURSE #2: Principles of Streambank Analysis and Stabilization

SHORT COURSE #3: Modeling of River Migration at Multiple Scales: A GIS-based Toolbox for River Restoration

SHORT COURSE #4: Low Impact Development (LID)

SHORT COURSE #5: Introduction to the CUAHSI Hydrologic Information System

SHORT COURSE #6: Advanced Topics with the CUAHSI Hydrologic Information System

Committee Open House and Past Chairs Cocktail Hour

MONDAY, MAY 23

6:30 a.m. - 6:30 p.m.

7:30 - 9:00 a.m.

8:00 a.m. - 5:00 p.m.

8:30 - 10:00 a.m.

9:00 a.m. - 4:00 p.m.

9:00 - 10:30 a.m.

10:30 - 11:00 a.m.

11:00 a.m. - 12:30 p.m.

12:30 - 1:30 p.m.

1:30 - 3:00 p.m.

3:00 - 3:30 p.m.

3:30 - 5:00 p.m.

5:30 - 9:30 p.m.

5:30 - 7:30 p.m.

5:30 - 7:30 p.m.

REGISTRATION (Closed for Lunch from 1:00 - 2:00 p.m.)

OPENING CEREMONY, KEYNOTE BREAKFAST AND LECTURE, AND LIFETIME ACHIEVEMENT AWARD PRESENTATION

Hospitality Lounge – International and Registered Guests

Orientation Breakfast for Spouses/Guests

Exhibit Hall Open

CONCURRENT TECHNICAL SESSIONS I

Networking Break

CONCURRENT TECHNICAL SESSIONS II

Lunch on Your Own

CONCURRENT TECHNICAL SESSIONS III

Networking Break

CONCURRENT TECHNICAL SESSIONS IV

Committee Meetings

Exhibit Hall Open

ICE BREAKER RECEPTION – SECTION WELCOME WITH POSTERS IN THE EXHIBIT HALL

TUESDAY, MAY 24

6:30 a.m. - 6:30 p.m.

7:30 - 9:00 a.m.

7:30 - 9:00 a.m.

8:00 a.m. - 5:00 p.m.

8:00 a.m. - 12:00 p.m.

8:00 a.m. - 12:00 p.m.

8:00 a.m. - 12:00 p.m.

8:00 a.m. - 12:00 p.m.

8:30 a.m. - 1:15 p.m.

8:30 a.m. - 12:00 p.m.

9:00 a.m. - 5:30 p.m.

9:00 a.m. - 4:00 p.m.

9:00 a.m. - 2:00 p.m.

9:00 a.m. - 2:00 p.m.

9:00 a.m. - 2:00 p.m.

9:00 a.m. - 1:15 p.m.

9:00 a.m. - 12:00 p.m.

9:30 a.m. - 1:00 p.m.

10:30 - 11:00 a.m.

12:30 - 1:30 p.m.

1:00 - 4:00 p.m.

1:30 - 3:00 p.m.

3:00 - 3:30 p.m.

3:30 - 5:00 p.m.

5:30 - 9:30 p.m.

5:30 - 7:30 p.m.

5:30 - 7:30 p.m.

6:00 - 6:35 p.m.

REGISTRATION (Closed for Lunch from 1:00 - 2:00 p.m.)

WATERSHED COUNCIL BREAKFAST, AWARDS, AND LECTURE

WATER DISTRIBUTION SYSTEM ANALYSIS (WDSA) SYMPOSIUM BREAKFAST AND LECTURE

Hospitality Lounge – International and Registered Guests

SHORT COURSE #7: Lessons Learned from Southwestern U.S. Stream Restoration

SHORT COURSE #8: Rainwater Harvesting for Water Supply and Stormwater Management

SHORT COURSE #9: Effective Use of the International Stormwater BMP Database

SHORT COURSE #10: AAEE Carbon Footprint Workshop

RECREATIONAL TOUR #1: The Living Desert Safari

RECREATIONAL TOUR #2: San Andreas Fault Jeep Tour

Symposium Sessions

TECHNICAL TOUR #1: Salton Sea Environmental Restoration Project

TECHNICAL TOUR #2: Coachella Valley Water District Control Room

TECHNICAL TOUR #3: Desert Hot Springs, Mission Springs, and Levees

TECHNICAL TOUR #4: Oak Glen Creek Detention Basin Project – An Example of Integrated Watershed Management

TECHNICAL TOUR #5: Thousand Palms Preserve on the San Andreas Fault

TECHNICAL TOUR #6: Sustainability Tour of Downtown Palm Springs

RECREATIONAL TOUR #3: Palm Springs Aerial Tramway

Networking Break

Lunch on Your Own

Exhibit Hall Open

CONCURRENT TECHNICAL SESSIONS V

Networking Break

CONCURRENT TECHNICAL SESSIONS VI

Committee Meetings

Exhibit Hall Open

VISITING INTERNATIONAL FELLOWS RECEPTION WITH POSTERS IN EXHIBIT HALL

AAWRE 7th Annual Diplomate Induction Ceremony

WEDNESDAY, MAY 25

7:00 a.m. - 5:00 p.m.
 7:30 - 9:00 a.m.
 7:30 - 9:00 a.m.
 8:00 a.m. - 5:00 p.m.
 9:00 a.m. - 3:30 p.m.
 9:00 - 10:30 a.m.
 9:00 - 10:30 a.m.
 10:30 - 11:00 a.m.
 11:00 a.m. - 12:30 p.m.
 11:00 a.m. - 12:30 p.m.
 12:30 - 1:30 p.m.
 12:30 - 1:30 p.m.
 1:30 - 3:00 p.m.
 1:30 - 3:30 p.m.
 3:00 - 3:30 p.m.
 3:30 p.m.
 3:30 - 5:00 p.m.
 3:30 - 5:00 p.m.
 6:00 - 9:00 p.m.
 6:00 - 10:00 p.m.

REGISTRATION (Closed for Lunch from 1:00 - 2:00 p.m.)
PLANNING AND MANAGEMENT COUNCIL BREAKFAST, AWARDS, AND LECTURE
IRRIGATION AND DRAINAGE COUNCIL BREAKFAST, AWARDS, AND LECTURE
 Hospitality Lounge – International and Registered Guests
 Exhibit Hall Open
 CONCURRENT TECHNICAL SESSIONS VII
Oklahoma State University - Woolpert Scholar Session on Urban Stormwater Management
 Networking Break
 CONCURRENT TECHNICAL SESSIONS VIII
P.B. Design Competition
 Lunch on Your Own
Student Luncheon
 CONCURRENT TECHNICAL SESSIONS IX
Student Technical Paper Competition
 Networking Break
 Exhibit Hall Closes
 CONCURRENT TECHNICAL SESSIONS X
Career Opportunity after College Panel Discussion
KEY SOCIAL EVENT
 Younger Member Field Trip: Wine Tasting

AAWRE ETHICS EVENTS WILL BE SCHEDULED

Engineers consistently face decisions that have ethical implications associated with them. The safety of the public is our primary concern; however, personal gain or time pressures may challenge our commitments periodically.

During this Congress, the American Academy of Water Resources Engineers will offer its popular Engineering Ethics Panel Discussion and Being an Effective Expert Witness Session. (See page 13.) Watch for further announcements about the scheduling of these events, which can help you fulfill your annual Professional Development Hour (PDH) ethics requirement: www.asce.org/conferences/ewri2011.

THURSDAY, MAY 26

7:00 a.m. - 1:00 p.m.
 7:30 - 9:00 a.m.
 7:30 - 9:00 a.m.
 8:00 a.m. - 12:00 p.m.
 9:00 - 10:30 a.m.
 10:30 - 11:00 a.m.
 11:00 a.m. - 12:30 p.m.
 12:30 - 1:30 p.m.
 1:30 - 3:00 p.m.
 3:00 - 3:30 p.m.
 3:30 - 5:00 p.m.

REGISTRATION
ENVIRONMENTAL COUNCIL BREAKFAST, AWARDS, AND LECTURE
HYDRAULICS AND WATERWAYS COUNCIL BREAKFAST, AWARDS, AND LECTURE
 Hospitality Lounge – International and Registered Guests
 CONCURRENT TECHNICAL SESSIONS XI
 Networking Break
 CONCURRENT TECHNICAL SESSIONS XII
 Lunch on Your Own
 CONCURRENT TECHNICAL SESSIONS XIII
 Networking Break
 CONCURRENT TECHNICAL SESSIONS XIV

2011 WORLD ENVIRONMENTAL & WATER RESOURCES CONGRESS

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Engineers without Borders (EWB)

Federation of Civil Engineering Organization of the Mexican Republic (FECIC)

US Army Corps of Engineers (USACE)

Water Science & Policy Center (WSPC), UC Riverside

Ventura County Watershed Protection District (VCWPD)

Santa Ana Watershed Project Authority (SAWPA)

Complete details of the technical program will be posted on the Web site and published in the Final Program.

SATURDAY, MAY 21

Committee Meetings

8:00 a.m. - 10:00 p.m.

SUNDAY, MAY 22

REGISTRATION

7:00 a.m. - 7:00 p.m.

(Closed for Lunch from 1:00 - 2:00 p.m.)

Committee Meetings

8:00 a.m. - 10:00 p.m.

SHORT COURSE # 1: Numerical Modeling of Estuarine Systems Using ADH

8:00 a.m. - 5:00 p.m.

PRESENTERS: Jennifer N. Tate, Gaurav Savant, Ph.D., P.E., Gary L. Brown, Robert T. McAdory, Ph.D., Coastal and Hydraulics Laboratory (CHL), Engineer Research and Development Center (ERDC), U.S. Army Corps of Engineers, ERDC-CHL, Vicksburg, MS

Coastal systems, estuaries, and rivers alter greatly over time through natural and human causes. How will these changes affect the system as a whole? What are the overall benefits of system changes? These alterations were once studied through the use of scaled physical models. Physics-based numerical models, including water quality and ecological modules, have more recently become the practice.

CHL-ERDC has worked with numerical models since their inception to develop modeling tools for coastal, estuarine, and river simulations that are able to be linked with ecosystem and water quality models to investigate system-wide effects. These numerical modeling tools are used to study ecosystem restoration, salinity intrusion, sediment erosion/deposition and navigational effects due to proposed changes to federally navigated waterways, storm surge, etc.

With the widespread use of numerical modeling, it is imperative that expert modelers provide the best means of applying these tools to real world problems, and that non-modelers have insight into the modeling process and model results.

This workshop will provide you, the non-modeler, with knowledge of numerical modeling and how to incorporate it into your projects and research. Modeling has the potential to add great value to a study but can actually be harmful if some basic principals are misunderstood or neglected. It is vital for the research community to properly understand numerical model set-up, results, and limitations in order to make the proper decisions for future restoration efforts.

This workshop, focused on numerical modeling of estuarine systems, will include:

- an overall explanation of numerical modeling and what it means
- why numerical models are a useful tool to supplement many estuarine studies
- what questions a numerical model can help answer
- what questions should be asked when developing a numerical model for an estuarine system regarding salinity, sediment, water quality, restoration, etc.
- how to decide what type of model should be used, whether two or three dimensions
- what information must be gathered to set up the numerical model: boundary conditions, datums, validation data, bathymetry
- what is necessary to build a good mesh: resolution, boundary locations, element alignment
- what is necessary for model validation and verification
- examples of good and bad modeling practices and how that impacts the results

See Registration Form (page 25) for fees. Registration fee includes course materials, lunch, and networking breaks.

SHORT COURSE #2: Principles of Streambank Analysis and Stabilization

8:00 a.m. - 5:00 p.m.

PRESENTERS: Andrew Simon, Ph.D., Research Geologist, USDA-ARS National Sedimentation Laboratory, Oxford, MS; Robert E. Thomas, Ph.D., Post Doctoral Research Associate, Department of Civil and Environmental Engineering, University of Tennessee, Knoxville, TN

This course is designed for professionals engaged in stream investigation, management, stabilization, and restoration. It 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 you with the opportunity to investigate the factors that control bank stability, while also recognizing the significance of these factors when designing mitigation measures. You will receive bank-stability modeling software (with sound effects) for future use, a CD containing all lectures (in 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
- 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.

See Registration Form (page 25) for fees. Registration fee includes course materials, lunch, and networking breaks.

SUNDAY, MAY 22

SHORT COURSE #3: Assessment and Modeling of River Migration: Introducing a GIS-based Toolbox for River Restoration

8:00 a.m. - 5:00 p.m.

PRESENTERS: **Jorge D. Abad**, Assistant Professor, University of Pittsburgh, Department of Civil and Environmental Engineering, Pittsburgh, PA; **Eddy J. Langendoen**, Research Hydraulic Engineer, USDA National Sedimentation Laboratory, Oxford, MS; **Davide Motta, Roberto Fernandez, Marcelo H. Garcia**, Chester and Helen Siess Professor, University of Illinois at Urbana-Champaign, Department of Civil and Environmental Engineering, Urbana, IL

River restoration is a common practice both in the United States and overseas. Stream re-meandering without proper consideration of suitable bed morphology, planform features, and floodplain soil and vegetation heterogeneity often leads to stream instability and consequent degradation of in-stream habitat. Typically, stream re-meandering projects exclusively consider architectural-type planform design, and do not account for the concept of overall equilibrium dynamics for meandering rivers. This short course presents the development of a GIS-based platform for describing and analyzing river statistics and simulations of meander migration.

In this intensive short course, students, professionals, and scientists will hear lectures on theory and modeling aspects, plus case applications, of river meandering and streambank erosion across multiple spatial and temporal scales, and receive instruction on the use of the GIS-based toolbox.

The course will cover: (1) Review of the basic theory of hydrodynamics and bed morphodynamics of meandering rivers; (2) State-of-the-art modeling of hydrodynamics and bed morphodynamics of meandering rivers: (a) review of the 2D depth-averaged and 3D governing equations and turbulence closures, (b) applications of 2D depth-averaged models, and (c) applications of 3D models; (3) Review of theory and modeling of streambank erosion processes responsible for channel migration, and applications of the 1D river morphology model CONCEPTS; (4) RVR Meander + CONCEPTS, a new physically-based platform for assessing river migration for engineering applications: (a) pre-processing tool, (b) statistical tool, (c) 2D model of hydrodynamics and bed morphodynamics, (d) physically-based model of streambank erosion, (e) methodology for river migration, and (f) impact on migration patterns; (5) Sample applications: (a) the re-meandered channel Trout Creek in the Lake Tahoe Basin, CA, (b) natural river migration of the Mackinaw River, IL, (c) effects of floodplain heterogeneity, and (d) limitations of the model.

See Registration Form (page 25) for fees. Registration fee includes course materials, lunch, and networking breaks.

SHORT COURSE #4: Low Impact Development (LID)

8:00 a.m. - 5:00 p.m.

PRESENTER: **Steven D. Trinkaus, P.E., CPESC, CPSWQ, M.ASCE**, Principal, Trinkaus Engineering LLC, Southbury, CT

MORNING SESSION

Understanding and Implementing Principles of Low Impact Development

- Understanding the status quo (conventional development, stormwater management)
- Drawbacks of conventional approaches
- Origins and Principles of LID
- Benefits of LID (environmental, municipal, public, developers)

Applying LID Strategies to a Site

- Environmental Site Design (natural resource assessment and evaluation)
- General hydrologic considerations
- LID site planning tools (application to a site)
- Site plan development

LID Hydrologic Considerations

- Principles of LID
- Tools to achieve the hydrologic principles of LID
- Regional hydrologic considerations
- Evaluating LID hydrologic scenarios

AFTERNOON SESSION

The Regulatory Framework and LID

- Current regulatory system
- Approaches to LID (state, local)
- Regulatory barriers in zoning, subdivision, and inland wetland regulations
- Regulatory language to eliminate current regulatory barriers to include LID
- Outlines and concepts to be included in LID manuals

LID Integrated Management Practices

- Bioretention, filter strips, vegetated swales, level spreaders
- Subsurface gravel wetlands, pond/wetland systems, constructed wetlands
- Permeable pavement, porous concrete, open course pavers
- Rain barrels, cisterns

Erosion and Sedimentation Controls for the Implementation of LID Practices

- Causes of erosion and sedimentation
- Solutions for the control of soil erosion and sedimentation
- Environmental and regulatory considerations
- Are the E/S issues different for LID systems?

Case Studies (Applying LID and Regulations)

- Applications (residential, commercial)
- Regulatory Approaches

See Registration Form (page 25) for fees. Registration fee includes course materials, lunch, and networking breaks.

SUNDAY, MAY 22

SHORT COURSE #5: Introduction to the CUAHSI Hydrologic Information System

8:00 a.m. – 12:00 p.m.

PRESENTERS: David R. Maidment, Ph.D., M.ASCE, Professor, Tim Whiteaker, Research Associate, University of Texas, Austin, TX

The CUAHSI Hydrologic Information System (CUAHSI-HIS) provides standards, services, and software for better access to online water data such as streamflow from the U.S. Geological Survey, so that you can spend less time searching for data and more time on your analysis. This half-day course will introduce you to CUAHSI-HIS and teach you how to access water data using freely available CUAHSI-HIS software. Hands-on training will be provided in Excel as well as a stand-alone GIS program called HydroDesktop, which CUAHSI-HIS has developed.

See Registration Form (page 25) for fees. Registration fee includes course materials and networking breaks. A dual #5-6 registration also includes lunch.

SHORT COURSE #6: Advanced Topics with the CUAHSI Hydrologic Information System

1:00 – 5:00 p.m.

PRESENTERS: David R. Maidment, Ph.D., M.ASCE, Professor, Tim Whiteaker, Research Associate, University of Texas, Austin, TX

This half-day course provides hands-on training in using advanced capabilities of HydroDesktop to analyze water data. This is for users who really want to get into the details of HydroDesktop. Through demonstration, you will also learn how power users can incorporate the same CUAHSI-HIS Web services that HydroDesktop uses into their own custom applications. The course will wrap up by summarizing CUAHSI-HIS from both data consumer and data publisher perspectives, leaving you with the knowledge you need to continue working with CUAHSI-HIS and with a message that you can share with others in your organization.

See Registration Form (page 25) for fees. Registration fee includes course materials and networking breaks. A dual #5-6 registration also includes lunch.

Short Courses #5 & #6:

Getting Water Data with the CUAHSI Hydrologic Information System

This two-part course provides hands-on training in using the CUAHSI Hydrologic Information System to find, access, and analyze water observation data. Please bring your own Windows laptop with wireless capabilities. You will receive an email two weeks prior to the workshop with instructions on how to install free CUAHSI software that we will use in the course. Note that there is a special price incentive to attend both sequential courses. See Registration Form (page 25). Lunch is included for all-day registrants.

Committee Open House and Past Chairs Cocktail Hour

5:00 - 6:00 p.m.

Visit with EWRI volunteer members at their council/committee tables to learn about their activities and research – from wastewater and stormwater issues to the development of standards, from student and new professional concerns to furthering the science through communications.

Join us as we thank the immediate past chairs of our committees and councils for their excellent service to EWRI and the civil engineering profession.

Included for all Full, Student, and Spouse/Guest Registrants. Additional tickets: \$45.

MONDAY, MAY 23

REGISTRATION

6:30 a.m. – 6:30 p.m. (Closed for Lunch from 1:00 - 2:00 p.m.)

OPENING CEREMONY, KEYNOTE BREAKFAST AND LECTURE, AND LIFETIME ACHIEVEMENT AWARD PRESENTATION

7:30 - 9:00 a.m.



Rollin H. Hotchkiss
Ph.D., P.E., D.WRE,
F.ASCE
ASCE-EWRI President

Your official welcome to the Congress will be presented by ASCE-EWRI President **Rollin H. Hotchkiss, Ph.D., P.E., D.WRE, F.ASCE**

Following the welcome, you will hear from our first keynote presenter, **Peter S. Silva, P.E.**, Assistant Administrator for Water, U.S. Environmental Protection Agency. Appointed by President Barack Obama, he started in this position on July 27, 2009.

Silva has more than 32 years of public sector experience in the water and wastewater fields, with extensive knowledge of U.S.-Mexico border issues. Prior to joining EPA, he was a Senior Policy Advisor on Lower Colorado River issues for the Metropolitan Water District of Southern California. Before that, he served for six years as the Vice-Chair of the California Water Resources Control Board, having been appointed by both Governors Davis and Schwarzenegger. Preceding this, he was the Deputy General Manager of the Border Environment Cooperation Commission housed in Juarez, Mexico. His other experience includes 10 years with the City of San Diego (both Clean Water Program and Water Utilities Department), four years in charge of the San Diego office of the International Boundary and Water Commission, and five years with the California Regional Water Quality Control Boards in Los Angeles and San Diego.

Silva earned a B.S. in Civil Engineering from California State Polytechnic University, Pomona, and is a Registered Civil Engineer in California.

You will hear next from our second keynote presenter, **Peter G. Nelson**, President, Coachella Valley Water District Board. Nelson was selected to preside over the board in December 2010 after 10 years of board service. The Coachella Valley Water District is a public agency governed by a five-member board of directors. The directors represent five geographic regions, but are elected at-large by all registered voters within CVWD's boundaries. The district provides domestic and irrigation water, agricultural drainage, wastewater treatment and reclamation services, regional storm water protection, groundwater management, and water conservation.

Nelson also serves as Vice President of the Salton Sea Authority, Director with the California Farm Water Coalition, and Director with the California Desert Grape Administrative Committee.

A graduate of California State University, Fresno, with a degree in agricultural economics, Nelson personally manages farming on about 2,000 acres of dates, grapes, and citrus for a number of firms. He previously was General Manager of Agricultural Operations for J & P Properties of Thermal, also producing dates, grapes, and citrus.

The 2010 Lifetime Achievement Award presentations will follow to members of EWRI in recognition of their lifelong and eminent contributions to the environmental and water resources engineering disciplines through practice, research, and public service.

Keynote Breakfast included for all Full, Student, and Monday-daily Registrants. Additional tickets: \$35.



Peter S. Silva, P.E.
*Assistant Administrator
for Water, U.S.
Environmental
Protection Agency*



Peter G. Nelson,
*President, Coachella
Valley Water District
Board; Vice President,
Salton Sea Authority*

MONDAY, MAY 23

Hospitality Lounge – International and Registered Guests

8:00 a.m. - 5:00 p.m.

Orientation Breakfast for Spouses/Guests

8:30 - 10:00 a.m.

Your registered spouse or guest is invited to this casual buffet breakfast that is followed by a presentation by a representative of a local tourism agency. Come enjoy an overview of all Palm Springs has to offer.

The Orientation/Breakfast for Spouses/Guests is included in the Spouse/Guest Registration. Additional tickets: \$35.

Exhibit Hall Open

9:00 a.m. - 4:00 p.m.

CONCURRENT TECHNICAL SESSIONS I

9:00 - 10:30 a.m.

Networking Break

10:30 - 11:00 p.m.

CONCURRENT TECHNICAL SESSIONS II

11:00 a.m. - 12:30 p.m.

Lunch on Your Own

12:30 - 1:30 p.m.

CONCURRENT TECHNICAL SESSIONS III

1:30 - 3:00 p.m.

Networking Break

3:00 - 3:30 p.m.

CONCURRENT TECHNICAL SESSIONS IV

3:30 - 5:00 p.m.

Committee Meetings

5:30 - 9:30 p.m.

Exhibit Hall Open

5:30 - 7:30 p.m.

ICE BREAKER RECEPTION – SECTION WELCOME WITH POSTERS IN THE EXHIBIT HALL

5:30 - 7:30 p.m.

In addition to providing you with an opportunity to meet and reconnect with colleagues from around the world, this reception will feature the EWRI Sections and Branch Activities Council presenting its annual Outstanding Technical Group/Institute Chapter Award. This award honors an outstanding ASCE Section or Branch Environmental and/or Water Resource Technical Group or EWRI Chapter based on its activities, relative to its size and geographic location. For more information on this award, please contact Sections and Branch Activities Council Chair **Sheila Carpenter-van Dijk** at sheilacv@tampabay.rr.com.

At this event, you will also have the opportunity to view technical posters and meet their presenters.

Included for all Full, Student, Monday-daily, and Spouse/Guest Registrants. Additional tickets: \$45.



TUESDAY, MAY 24

REGISTRATION**6:30 a.m. – 6:30 p.m.** (Closed for Lunch from 1:00 - 2:00 p.m.)**WATERSHED COUNCIL BREAKFAST, AWARDS, AND LECTURE****7:30 - 9:00 a.m.**

The Watershed Council is pleased to invite you to this breakfast, which includes the presentation of Watershed Council awards and the 2011 Ven Te Chow Award Lecture. The Chow Award recognizes an individual whose lifetime achievements in the field of hydrologic engineering have been distinguished by exceptional achievements and significant contributions in research, education, or practice. The Chow awardee receives a crystal plaque, certificate, and cash prize.

Your choice of the Watershed Council Breakfast or Water Distribution System Analysis (WDSA) Symposium Breakfast is included for all Full, Student, Tuesday-daily, and Spouse/Guest Registrants. Additional tickets: \$35.

WATER DISTRIBUTION SYSTEM ANALYSIS (WDSA) SYMPOSIUM BREAKFAST AND LECTURE**7:30 - 9:00 a.m.**

Over the last decade, the WDSA Symposium within the annual EWRI Congress has evolved into the premier forum for papers and presentations on water distribution systems analysis, modeling, and management. This third annual WDSA Symposium Breakfast will be devoted to a keynote address by a distinguished engineer.

Your choice of the Water Distribution System Analysis (WDSA) Symposium Breakfast or Watershed Council Breakfast is included for all Full, Student, Tuesday-daily, and Spouse/Guest Registrants. Additional tickets: \$35.

Hospitality Lounge – International and Registered Guests**8:00 a.m. - 5:00 p.m.****SHORT COURSE #7:
Lessons Learned from
Southwestern U.S. Stream
Restoration****8:00 a.m. - 12:00 p.m.**

PRESENTERS: Kumud Acharya, Ph.D., M.EWRI, Associate Research Professor, Division of Hydrologic Sciences, Desert Research Institute, NV; Mark Stone, Ph.D., A.M.ASCE, Assistant Professor, Water Resources Engineering, University of New Mexico, NM; Julianne J. Miller, A.M.ASCE, Research Hydrologist, Division of Hydrologic Sciences, Desert Research Institute, NV

Stream restoration techniques in the arid and semi-arid Southwest U.S. are relatively immature compared to more humid regions of the country where a majority of the stream restoration projects and research have been conducted. Many of the concepts such as bankfull discharge that are used in wetter regions cannot be directly transferred to this unique region, because the underlying physical and biological processes that shape Southwest streams are different. Further, the range of ecosystem services provided by Southwest streams are poorly understood and often underappreciated.

The objective of this short course is to describe the lessons learned from Southwestern stream restoration in managing and restoring streams in the arid and semi-arid Southwest. We will focus on the case studies of the Las Vegas Wash and the Rio Grande. Topics to be covered will include: (1) hydrology and ecosystem services of dryland streams; (2) geomorphic responses to modified hydrology; (3) setting restoration goals and priorities; (4) instream flows; (5) streambank protection; and (6) habitat design.

See Registration Form (page 25) for fees. Registration fee includes course materials, lunch, and networking breaks.

TUESDAY, MAY 24

SHORT COURSE #8: Rainwater Harvesting for Water Supply and Stormwater Management

8:00 a.m. - 12:00 p.m.

PRESENTER: Jennifer J. Walker, P.E., D.WRE, CFM, M.ASCE, *President, Waterarth, Inc., Houston, TX*

This short course will focus on environmentally sound stormwater management with hands-on exercises. Participants, who will receive design tips, operation and maintenance details, and practical advice and recommendations, should bring a laptop and/or calculator to the session.

Jennifer Walker is a certified Permaculturist with more than a decade of hands-on construction and maintenance experience with LID micro-concepts, such as harvesting rainwater, constructing bioretention/rain gardens, altering time of concentrations, amending soil, disconnecting impervious cover, removing impervious cover, and recycling gray water. Her experience with green infrastructure, sustainability, and LID ranges from small-scale projects to region-wide studies, including residential, commercial, transportation, public works, and industrial projects. She has extensive experience in water resources planning, analysis, and design for land development, public works, and transportation projects. She is also involved with large-scale and high-profile regional detention master plans for public agencies.

See Registration Form (page 25) for fees. Registration fee includes course materials and networking break.

SHORT COURSE #9: Effective Use of the International Stormwater BMP Database

8:00 a.m. - 12:00 p.m.

PRESENTERS: Jonathan Jones, P.E., D.WRE, M.ASCE, Jane Clary, LEED AP, CPESC, and/or Andrew Earles, Ph.D., P.E., D.WRE, CPESC, *Wright Water Engineers, Inc., Denver, CO*; Eric Strecker, P.E., M.ASCE, Marcus Quigley, P.E., D.WRE, CPESC, Marc Leisenring, P.E., and/or Aaron Poresky, P.E., *Geosyntec Consultants, Inc., Portland, OR*

This course will provide instruction on how to effectively use the International Stormwater BMP Database, provide the most current information regarding BMP performance, and provide real-world examples of how the database has been used in the stormwater management community nationwide. Following a brief overview of the BMP Database project purpose and outcomes to date, you will get hands-on use of the BMP Database data entry spreadsheets and effective query development for the master database.

The second portion of the course will provide an overview of the analysis findings to date, based on application of the BMP Database recommended performance analysis protocols, with emphasis on contemporary stormwater management issues such as volume reduction, bacteria, nutrients, TSS, and metals. The final portion of the course will provide real-world examples of how the database has been used to inform and support scientifically-based stormwater management activities and regulations in communities throughout the U.S. At the end of the course, participants should be able to query the database for their own research, be knowledgeable of BMP performance findings to date, and understand how the database findings can be used to support stormwater management efforts in your own community.

Background: The International Stormwater BMP Database is a long-term project that began in 1994 through the vision of members active in ASCE's Urban Water Resources Research Council and leadership by the U.S. Environmental Protection Agency (EPA). Funded for many years by EPA, the project is now supported by a coalition of partners including the Water Environment Research Foundation (WERF), Federal Highway Administration, American Public Works Association, as well as ongoing support from ASCE-EWRI and selected support by EPA for specific project products.

The project is multi-faceted and includes guidance on BMP monitoring, design parameters, and watershed characteristics to report with BMP monitoring studies to facilitate analysis, performance analysis protocols, and a database containing performance information for more than 400 publicly available BMP studies. During 2008-2010, major revisions to the database were completed to enhance user friendliness, incorporate Low Impact Development (LID) practices and site designs, refine analysis protocols, and develop new performance summaries. All project materials are publically available for download at www.bmpdatabase.org.

See Registration Form (page 25) for fees. Registration fee includes course materials and networking break.

TUESDAY, MAY 24

SHORT COURSE #10: AAEE Carbon Footprint Workshop



8:00 a.m. - 12:00 p.m.

PRESENTER: Wayne McFarland, P.E., DEE, CEM, CRM, LEED AP, GHD, Inc., Syracuse, NY

Learn how to calculate carbon footprints and carbon credits, the concepts involved in carbon trading, and proposed legislation. You will get the opportunity to tackle problems involving water/wastewater processes, biosolids management, solid waste management, and fleet emissions. Thereafter, you will have the opportunity to discuss your solutions and results.

The course will provide participants specific knowledge of water/wastewater, biosolids, solid waste, and fleet carbon footprint calculations that will be useful in consulting or agency work.

See Registration Form (page 25) for fees. Registration fee includes course materials and networking break.

Recreational Tours

See page 23 for three Recreational Tour options that are also offered in this time period.

AAWRE ETHICS EVENTS WILL BE SCHEDULED

Watch for scheduling announcements:

www.asce.org/conferences/ewri2011

AAWRE Panel Discussion on Engineering Ethics

PANELISTS: Don Frevert, F.ASCE, retired government engineer; Amy Lara, Ph.D., philosophy professor; Brian Wahlin, M.ASCE, consulting engineer; Lisa Wahlin, attorney

FACILITATOR: Steve Starrett, Ph.D., P.E., D.WRE, F.ASCE

The panelists will cover what they feel are the most challenging ethical situations engineers are currently facing and what approaches they use to solve dilemmas.

AAWRE Being an Effective Expert Witness Session

PRESENTER: Rich Van Bruggen, P.E., D.WRE, Principal, Water Resources Consulting Services, Windsor, CA

In today's litigious atmosphere, water resources professionals and/or their organizations are often involved in civil suits. Professionals are also often asked to be expert witnesses in civil suits and to provide services for mediations.

In this course, the role of the expert witness in litigation support and trial testimony will be discussed, and various methods will be offered for being a more effective expert, both in dealing with your client's lawyer, and providing more effective and memorable testimony to the judge and jury at trial. The process of delivering testimony will be discussed in the context of the expert being the teacher and the jury his class. Six persuasive strategies for making complex technical concepts more understandable to the jury will be presented by way of examples in the field of water resources engineering.



Symposium Sessions

9:00 a.m. - 5:30 p.m.

6th World Water Forum Symposium: North American Regional Event

An all-inclusive, multi-stakeholder process to find policy-oriented solutions to promote good water management (e.g., sustainable development, basic right to water, MGDs). This symposium will help formulate messages representing sentiments of the North American region, in advance of the Forum in Marseille, France, March 16-22, 2012.

KEYNOTE SPEAKER: Benedito Braga, World Water Council Vice President

Session 1: World Water Council and Forum Concept and Structure

Session 2: Bridging "Top-Down" and "Community-based" Approaches to the World's Water Crisis

Session 3: Thematic Topics of the 6th World Water Forum

Session 4: Closing and Next Steps

Program will include invited speakers and panelists from the following organizations: American Development Bank, AWRA, Bechtel Corp., Global Environment Facility, IJC, The Nature Conservancy, USAID, U.S. Army Corps of Engineers, United Water, Water For People, World Water Council, and others.

TUESDAY, MAY 24

Subject to change.

All Tours will board buses 15 minutes prior to departure time.

TECHNICAL TOUR #1: Salton Sea Environmental Restoration Project

Departure Time: 9:00 a.m.
Return Time: 4:00 p.m.



You are invited to join us for a tour of the fascinating Salton Sea, located 226 feet below sea level. The tour will be led by a representative of the U.S. Geological Survey's Salton Sea Science Office.

The Salton Sea Ecosystem Restoration Program coordinates efforts of the legislature, various Federal, State, and local agencies, stakeholders, and the general public to implement restoration activities at the Salton Sea in conformance with the following objectives: (1) restore long-term stable aquatic and shoreline habitat to historic levels for the diversity of fish and wildlife that depend on the Salton Sea; (2) eliminate air quality impacts from restoration projects; and (3) protect water quality.

Our bus tour may include the wetland restoration project on the North Shore, the Salton Sea State Recreation Area, and other destinations along the lake that illustrate the water and environmental challenges facing the area.

Additional information: <http://www.water.ca.gov/saltonsea/> and <http://www.usgs.gov/saltonsea/>

Fee: \$60, includes bus transportation, lunch. Dress appropriately for hot sunny conditions and bring sunscreen and adequate water. Good footwear and hats are advised. Drive time between hotel and first stop: approx. 1 hour.

TECHNICAL TOUR #2: Coachella Valley Water District Control Room

Departure Time: 9:00 a.m.
Return Time: 2:00 p.m.



Kevin Hemp (r.) shows the CVWD's Control Room to a group of visiting students, while Kathy Keeley (seated) is one of the control operators who monitors safety systems and controls irrigation water deliveries and other operations throughout the district's 1,000 square-mile boundary from this state-of-the-art facility.

Coachella Valley Water District (CVWD) is a government agency formed in 1918 by the registered voters within the district. CVWD is responsible for the importation and distribution of domestic water, wastewater collection and reclamation, regional stormwater and flood protection, importation and distribution of irrigation water, irrigation drainage collection, groundwater management, and water conservation. CVWD's service area covers approximately 1,000 square miles mostly within the Coachella Valley in Riverside County, California. Its boundaries also extend into small portions of Imperial and San Diego counties. The Coachella Valley is a fascinating place in which to live, work, and play. A once-barren wasteland, it has been transformed into a vibrant collection of diverse communities with thriving agricultural and recreation/hospitality industries.

This tour will visit the control room of the CVWD. The control room is where the district controls and monitors the operations of its facilities that deliver irrigation and domestic (drinking) water, collect and recycle wastewater, provide regional stormwater protection, and – perhaps more importantly now than ever before – promote water conservation. In this room, operators use a SCADA system to monitor operations, including flow along the 123-mile Coachella Canal, reservoir levels, and well operations to deliver domestic water to more than 107,000 residential and business customers and service nearly 60,000 acres.

Additional information: <http://www.cvwd.org>

Fee: \$40, includes bus transportation, lunch, and extra water. Dress appropriately for hot sunny conditions and bring sunscreen and adequate water. Good footwear and hats are essential. Drive time between hotel and control room: approx. 1 hour.

TUESDAY, MAY 24

All Tours will board buses 15 minutes prior to departure time.

TECHNICAL TOUR #3: Desert Hot Springs, Mission Springs, and Levees

Departure Time: 9:00 a.m.
Return Time: 2:00 p.m.

Representatives of the Mission Springs Water District (MSWD) and Riverside County Flood Control and Water Conservation District



(RCFC&WCD) will provide an interesting tour of water resource features in the valley. We will start by disproving the myth that arid areas do not have levees. We will visit Federal and non-Federal levees, including Chino Canyon Levee, Arenas Canyon Levee, Palm Canyon Levee, Whitewater, and Mission Lakes Levee. The visits will expose you to three types of levee materials: stone, concrete, and soil cement.

The second part of our tour will introduce you to features in the Desert Hot Springs area, some of which are under the jurisdiction of MSWD.

We will start at the California Aqueduct turnout for supplying recharge water to MSWD, then continue to the recharge ponds (capable of handling 25,000 AFY) on Worsley Road near Route 62. Afterwards, we will see features that are the basis for the history of this area. At the intersection of Palm and Pierson lie multiple sites that are over the hot mineral water aquifer; the sites include boutique spas that pump hot water (90-100 degrees) for soaking spas/pools.

We will stop at Cabot's Old Pueblo Museum. Its structure is hand-made, created from reclaimed and found objects. The Pueblo is four stories, 5,000 square feet, and includes 35 rooms, 150 windows and 65 doors.

Our last stop will be at the intersection of Two Bunch Palms near Miracle Hill, the location of artesian hot water sites. Miracle Hill gets its name from the fact that hot water is available on one side of the hill, while cold water is available on the other side.

Additional information: <http://www.floodcontrol.co.riverside.ca.us/> and <https://www.mswd.org/default.aspx>

Fee: \$40, includes bus transportation, lunch, and extra water. Dress appropriately for hot sunny conditions and bring sunscreen and adequate water. Good footwear and hats are essential. Drive time between hotel and Desert Hot Springs: approx. 30 minutes.

TECHNICAL TOUR #4: Oak Glen Creek Detention Basin Project – An Example of Integrated Watershed Management

Departure Time: 9:00 a.m.
Return Time: 2:00 p.m.



Accompany a water resources engineer from David Evans and Associates (DEA) to tour an award-winning detention basin project, located in a beautiful natural setting near Yucaipa, California. Enjoy a wonderful hike of about one mile and see how infrastructure and nature can peacefully coexist.

The three basins of the Oak Glen Creek Detention Basin Project were designed to capture stormwater in both large and small events and to allow stormwater infiltration into the groundwater basin and "recharge" of the groundwater table. The DEA team designed the project to save existing oak trees while planting disturbed areas with native materials, which provide habitat for wildlife and minimize the need for maintenance. The project includes a small parking lot, recreational trails, outdoor classrooms, educational kiosks, and scenic outlooks. The educational kiosks and signage provide information on the water cycle and assist people in understanding the importance of water in our environment while educating them on how to clean up, conserve, and recycle water.

The project represents an integrated approach to watershed management. By capturing stormwater and allowing groundwater infiltration, we reduce downstream flooding, improve water quality, recharge the groundwater supply, and provide open space for wildlife and plant life.

Additional information: <http://www.yucaipa.org/cityProjects/index.php>

Fee: \$40, includes bus transportation, lunch, and extra water. Dress appropriately for hot sunny conditions and bring sunscreen and adequate water. Good footwear and hats are essential. Drive time between hotel and project: approx. 1 hour.

TECHNICAL TOUR #5: Thousand Palms Preserve on the San Andreas Fault

Departure Time: 9:00 a.m.
Return Time: 1:15 p.m.



You are invited to join us for a tour of Thousand Palms Preserve, a true oasis. The tour will be led by a manager of the Preserve, "an Area of Conservation and Ecological Concern." Water is found in the Preserve, owing to the presence of the San Andreas Fault. This results in a series of springs that provide water to support plants and animals that couldn't otherwise survive in this environment. The landscape is dominated by the California fan palm which grows up to 45 feet (14 m) tall and can live 150 to 200 years.

After our narrated tour, you are welcome to walk the trails that connect the various palm groves and other natural features of the Preserve.

Additional information: <http://coachellavalleypreserve.org>

Fee: \$40, includes bus transportation and extra water. Dress appropriately for hot sunny conditions and bring sunscreen and adequate water. Good footwear and hats are essential. Drive time between hotel and Preserve: approx. 30 minutes.

TUESDAY, MAY 24

**TECHNICAL TOUR #6:
Sustainability Tour of
Downtown Palm Springs**

9:00 a.m. - 12:00 p.m.

Join the Manager of Sustainability for the City of Palm Springs on a tour demonstrating how the City of Palm Springs and local businesses are implementing sustainable design in the built environment.

The sustainability tour begins at the Palm Springs Convention Center and highlights the sustainable technologies incorporated into the design of that facility. The tour will visit the new water- and energy-efficient Palm Springs Animal Shelter, and will explore the Desert Water Agency's desert landscape demonstration center. We will also see some innovative waste reduction and transportation projects along the way.

Additional information: <http://www.ci.palm-springs.ca.us/index.aspx?page=778>

Fee: \$40, includes transportation and eco-friendly lunch. Dress appropriately for hot sunny conditions and bring sunscreen and adequate water. Good footwear and hats are recommended. Drive time between hotel and various destinations varies from 5 to 10 minutes and moderate walking is involved.

Networking Break

10:30 - 11:00 a.m.

Lunch on Your Own

12:30 - 1:30 p.m.

Exhibit Hall Open

1:00 - 4:00 p.m.

CONCURRENT TECHNICAL SESSIONS V

1:30 - 3:00 p.m.

Networking Break

3:00 - 3:30 p.m.

CONCURRENT TECHNICAL SESSIONS VI

3:30 - 5:00 p.m.

Committee Meetings

5:30 - 9:30 p.m.

Exhibit Hall Open

5:30 - 7:30 p.m.

VISITING INTERNATIONAL FELLOWS RECEPTION WITH POSTERS IN THE EXHIBIT HALL

5:30 - 7:30 p.m.

Enjoy a beverage and a lite bite while strolling through our exhibits. Talk to our exhibitors about your future projects. Study our technical posters and introduce yourself to their creators, on hand to discuss technical details of interest.

Also at this event, greet members of the International Council (IC) and welcome recipients of the 2011 EWRI Visiting International Fellowship:

- **Dr. M.L. Kansal**, Department of Water Resources Development and Management, Indian Institute of Technology - Roorkee
- **Professor Pradeep Kumar**, Indian Institute of Technology - Roorkee
- **Ms. Chen Zang**, Lecturer/Assistant Professor, Inner Mongolia University of Technology

These individuals were competitively selected by the IC's Visiting International Fellowship Committee, and the award assists them in efforts to participate in the Congress and to experience additional professional and cultural exchange activities while in the United States.

The IC established the Visiting International Fellowship (VIF) program to promote cultural and technical exchange between U.S. and Canadian EWRI members and international colleagues from developing countries. This marks the VIF program's eleventh year, and the Fellowship has supported winners from a diverse range of nations, including India, Iraq, Jordan, Mexico, Nicaragua, South Africa, and Uganda.

The program has enjoyed a number of strong applications for this year, and EWRI looks forward to welcoming these selected recipients for 2011.

Included for all Full, Student, Tuesday-daily, and Spouse/Guest Registrants. Additional tickets: \$45.

AAWRE 7th Annual Diplomate Induction Ceremony

6:00 - 6:35 p.m.

The American Academy of Water Resources Engineers (AAWRE) will host its 7th Annual Diplomate Induction Ceremony to honor all new Diplomates who earned the Diplomate, Water Resources Engineer (D.WRE) certification from fall 2010 to spring 2011, and to give special recognition to those who have made significant contributions to the Academy. Ceremony speakers will include ASCE-EWRI President, **Rollin Hotchkiss, Ph.D., P.E., D.WRE, F.ASCE**, and AAWRE President, **S.K. Nanda, P.E., P.H., D.WRE, M.ASCE**.

At this event, you will have the opportunity to meet and congratulate the new Diplomates, and to interface with AAWRE Board members and staff.

This event is open to all Congress attendees.



WEDNESDAY, MAY 25

Wednesday is a day focused on student activities, including student poster displays all day. Employers, meet your prospective employees!

EWRI 20th Annual Student and Younger Member Photography Contest

ASCE Student Chapter or club members and younger members have been invited to submit digital photographs that reflect the Congress' theme, BEARING KNOWLEDGE FOR SUSTAINABILITY. One photograph will be selected to appear on the cover of the Congress proceedings. The winner receives travel to the Congress, registration, and one night's lodging.

REGISTRATION

7:00 a.m. - 5:00 p.m. (Closed for Lunch from 1:00 - 2:00 p.m.)

WEDNESDAY, MAY 25

PLANNING AND MANAGEMENT COUNCIL BREAKFAST, AWARDS, AND LECTURE

7:30 - 9:00 a.m.

Please join us for the Planning and Management Council Breakfast, which will include presentation of Planning and Management Council awards. Also at this time, the 2011 Julian Hinds Award Lecture will be presented by the author of a paper judged to have made the most meritorious contribution to the field of water resources development, or to an individual for notable performance, long years of distinguished service, or specific actions that advanced engineering in the field of water resources planning, development, and management. The Hinds award consists of a plaque, certificate, and cash prize.

Your choice of the Planning and Management Council or Irrigation and Drainage Council Breakfasts is included for all Full, Student, Wednesday-daily, and Spouse/Guest Registrants. Additional tickets: \$35.

IRRIGATION AND DRAINAGE COUNCIL BREAKFAST, AWARDS, AND LECTURE

7:30 - 9:00 a.m.

The Irrigation and Drainage Council invites you to its breakfast, with presentation of the Irrigation and Drainage Council awards and the 2011 Royce J. Tipton Award. The Tipton Award is made annually to an ASCE member who has made a definitive contribution to advance the science of irrigation and drainage engineering in the areas of teaching, research, planning, design, construction, or management. The contributions may have been realized in notable performance, long years of service, or specific actions. The award includes a plaque, certificate, and cash prize.

Your choice of the Irrigation and Drainage Council or Planning and Management Council Breakfasts is included for all Full, Student, Tuesday-daily, and Spouse/Guest Registrants. Additional tickets: \$35.

Hospitality Lounge – International and Registered Guests

8:00 a.m. - 5:00 p.m.

Exhibit Hall Open

9:00 a.m. - 3:30 p.m.

CONCURRENT TECHNICAL SESSIONS VII

9:00 - 10:30 a.m.

Oklahoma State University - Woolpert Scholar Session on Urban Stormwater Management

9:00 - 10:30 a.m.

The OSU - Woolpert partnership has increased opportunities for engineering students to work on real world problems. Students in Biosystems Engineering, focused on urban water resources issues, are selected from a list of applicants by a joint OSU - Woolpert committee. Students develop a final report, present to OSU colleagues, and travel under Woolpert funding to a national professional meeting – the 2011 EWRI Congress – to present the results.

For questions regarding the program, please contact the session organizer, **Billy Barfield**, at billy.barfield@okstate.edu.

Networking Break

10:30 - 11:00 a.m.

CONCURRENT TECHNICAL SESSIONS VIII

11:00 a.m. - 12:30 p.m.

P.B. Design Competition

11:00 a.m. - 12:30 p.m.

Currently all undergraduate civil engineering programs are required to include a “capstone” design experience, and schools are strongly urged to require their students to work in teams. Up to four (4) finalist design teams will be selected to compete at the 2011 EWRI Congress. Each student design team will orally present its project to a panel of industry judges during this special session. Each team will receive up to \$1,000 for travel reimbursement and a team plaque.

To enter, send a four-page project description and include the Faculty Advisor's recommendation to **Dr. Bijay K. Panigrahi** at bpnigrahi@bpcgi.com by March 1, 2011.

Lunch on Your Own

12:30 - 1:30 p.m.

Student Luncheon

12:30 - 1:30 p.m.

Students and Younger Members: Plan to attend our Student Luncheon. It is a wonderful opportunity to network with fellow civil engineering students and to learn more about the ASCE-EWRI Student and New Professionals Activities Council.

Included for all Student Registrants.

CONCURRENT TECHNICAL SESSIONS IX

1:30 - 3:00 p.m.

Student Technical Paper Competition

1:30 - 3:30 p.m.

The 2011 Student Technical Paper Competition offers students a chance to develop leadership and presentation skills at the EWRI Congress – presenting in this time period before an audience of both peers and experienced professionals.

Any member of an ASCE Student Chapter is eligible to submit a 6-8 page paper. Any subject matter related in technical aspect to environmental or water resources engineering will be accepted, including laboratory or field studies, summary of course work, or thesis research. There are two categories: graduate or undergraduate. Cash awards will be presented at the Congress, and travel to the Congress for paper presentation will be provided to five students.

Networking Break

3:00 - 3:30 p.m.

Exhibit Hall Closes

3:30 p.m.

CONCURRENT TECHNICAL SESSIONS X

3:30 - 5:00 p.m.

For information on the ASCE-EWRI Student and New Professionals Activities Council, visit http://content.ewrinstitute.org/committees/ewri_studacts.html

WEDNESDAY, MAY 25

Career Opportunity after College Panel Discussion

3:30 - 5:00 p.m.

MODERATOR: Jamal Nagamia, P.E., M.ASCE, Florida Department of Transportation

PANELISTS: Balu Bhayani, P.E., F.ASCE; Dale Jacobson, P.E., BCEE, F.ASCE, Jackson Satchell Consultants; Kathleen Leonard, Ph.D., University of Alabama - Huntsville

EWRI's Congress is an excellent forum for students to discuss professional possibilities after graduation. For questions regarding this panel discussion, please contact **Jamal Nagamia** at nagamj@yahoo.com.

KEY SOCIAL EVENT

6:00 - 9:00 p.m.

Congress attendees are invited to experience the unique and exciting culture of the Palm Springs area during our special evening together.

Plan to join us at an incredible venue for the ultimate networking event plus dinner, to celebrate the Southwest and our **2011 World Environmental & Water Resources Congress** achievements and colleagues!

Watch for the Key Social Event location announcement: www.asce.org/conferences/ewri2011.

Separate ticket required. Tickets: \$90, includes transportation, entertainment, and dinner.

Younger Member Field Trip: Wine Tasting

6:00 - 10:00 p.m.

Watch for Younger Member Field Trip details: www.asce.org/conferences/ewri2011

THURSDAY, MAY 26

REGISTRATION

7:00 am - 1:00 pm

ENVIRONMENTAL COUNCIL BREAKFAST, AWARDS, AND LECTURE

7:30 - 9:00 a.m.

You are invited to begin your day with the Environmental Council Breakfast. At this event, Environmental Council awards will be presented. The 2011 Simon W. Freese Environmental Engineering Award Lecture will then be offered by an eminent environmental engineer selected to receive this recognition along with a certificate and cash prize.

Your choice of the Environmental Council or Hydraulics and Waterways Council Breakfasts is included for all Full, Student, Thursday-daily, and Spouse/Guest Registrants. Additional tickets: \$35.

HYDRAULICS AND WATERWAYS COUNCIL BREAKFAST, AWARDS, AND LECTURE

7:30 - 9:00 a.m.

The Hydraulics and Waterways Council will offer an engaging early-morning breakfast program. Following the presentation of Hydraulics and Waterways Council awards, you will hear a presentation by a distinguished lecturer in the field.

Your choice of the Hydraulics and Waterways Council or Environmental Council Breakfasts is included for all Full, Student, Thursday-daily, and Spouse/Guest Registrants. Additional tickets: \$35.

Hospitality Lounge - International and Registered Guests

8:00 a.m. - 12:00 p.m.

CONCURRENT TECHNICAL SESSIONS XI

9:00 - 10:30 a.m.

Networking Break

10:30 - 11:00 a.m.

CONCURRENT TECHNICAL SESSIONS XII

11:00 a.m. - 12:30 p.m.

Lunch on Your Own

12:30 - 1:30 p.m.

CONCURRENT TECHNICAL SESSIONS XIII

1:30 - 3:00 p.m.

Networking Break

3:00 - 3:30 p.m.

CONCURRENT TECHNICAL SESSIONS XIV

3:30 - 5:00 p.m.



EXHIBITS MAY 23-25

EWRI 2011 EXHIBITORS As of 1/24/11

American Academy of Water Resources Engineers (AAWRE) of ASCE

www.aawre.org

Association of State Dam Safety Officials

www.damsafety.org

Bio Clean Environmental Services, Inc.

www.biocleanenvironmental.net

Campbell Scientific, Inc.

www.campbellsci.com

EnviroCert International, Inc.

www.envirocertintl.org

Engineering Ministries International

www.emiworld.org

ESRI (Environmental Systems Research Institute, Inc.)

www.esri.com

In-Situ® Inc.

www.in-situ.com

INSTRUMENTATION NORTHWEST

www.inwusa.com

Parsons Brinckerhoff

www.pbworld.com

Solinst Canada Ltd.

www.solinst.com

WEST Consultants, Inc.

www.westconsultants.com



EXHIBIT HALL HOURS*

SUNDAY, MAY 22

12:00 – 5:00 p.m. Exhibitor Move-in

MONDAY, MAY 23

9:00 a.m. – 4:00 p.m. Exhibit Hours

10:30 – 11:00 a.m. Networking Breaks in the Exhibit Hall

3:00 – 3:30 p.m.

5:30 – 7:30 p.m. Exhibit Hours

5:30 – 7:30 p.m. Ice Breaker Reception – Section Welcome with Posters in the Exhibit Hall

TUESDAY, MAY 24

1:00 – 4:00 p.m. Exhibit Hours

3:00 – 3:30 p.m. Networking Break in the Exhibit Hall

5:30 – 7:30 p.m. Exhibit Hours

5:30 – 7:30 p.m. Visiting International Fellows Reception with Posters in the Exhibit Hall

WEDNESDAY, MAY 25

9:00 a.m. – 3:30 p.m. Exhibit Hours

10:30 – 11:00 a.m. Networking Breaks in the Exhibit Hall

3:00 – 3:30 p.m.

3:30 p.m. Exhibit Hall Closes

3:30 – 6:00 p.m. Exhibitor Move-out

**Hours subject to change.*

OPPORTUNITIES ...

to exhibit or sponsor, contact **Sean Scully**
(sscully@asce.org / 703-295-6154)
or **Kira Simonson** (ksimonson@asce.org / 703-295-6349)
to exhibit, contact **Debra Leigh**
(debraleigh@qwest.net / 402-330-2844)

2010 EXHIBITORS INCLUDED THESE ORGANIZATIONS:

- Aarhus Geophysics
- AKRF, Inc.
- Aquaveo
- Campbell Scientific, Inc.
- Fuss & O'Neill
- Hach Homeland Security
- Hanna Instruments
- Hydro International
- Milone & MacBroom, Inc.
- NCEES
- Norwich University Master of Civil Engineering
- Orenco Systems® Inc.
- Worcester Polytechnic Institute - WPI
- XERIPAVE, LLC
- YSI, Inc.

ADA Compliance

The Palm Springs Convention Center and Renaissance Marriott Palm Springs Hotel and Convention Center are fully accessible to the physically challenged and provide auxiliary aids and services. If you require special assistance at the Congress, please submit a written description of your requirements with your registration form or email registrations@asce.org BEFORE April 25, 2011. While ASCE will make every effort to meet the needs of the physically challenged, accommodations cannot be guaranteed without prior notification.

ASCE Bookstore

ASCE will operate its popular bookstore at the Congress. The bookstore is a great opportunity to browse through the many new and classic titles on display covering all topics in civil engineering.

Attendee Packets

Advance registrants will receive their name badges and any tickets ordered at the ASCE Registration Desk during registration hours. Advance registrants should present the official ASCE registration receipt to on-site registration staff to obtain Congress materials. If you submit a registration form via fax or postal mail one week prior to or after the registration cut-off date, please be sure to bring a copy of your fax or postal confirmation (as well as your email confirmation if you have received one), along with the original registration form paperwork to ensure ASCE on-site registration staff can process your registration. Due to the time constraints near and after the registration cut-off date, the appropriate paperwork may not have been forwarded to the on-site staff before their departure.

Attire

The dress code for the Congress is business casual (i.e. slacks, casual dresses) to business attire (i.e. neckties, business suits). Meeting room temperatures will vary, so wear layered clothing to ensure your personal comfort. We also recommend attendees wear comfortable shoes. Please note that certain events may have specific details on attire, and you should refer to the event description for more information.

Badge Policy and Ribbons

Your Congress registration name badge is your admission to the educational sessions. Please wear your badge at all times while in the Palm Springs Convention Center and Renaissance Marriott Palm Springs Hotel and Convention Center. Tickets are required for the pre- and post-Congress events, meals, and special events. Where tickets are required, please be sure to bring your tickets with you to each event as you will not be admitted without a ticket. Ribbons will be available at the Registration Desk. ASCE recommends you remove your badge when leaving the hotel.

City Information

For more information on Palm Springs, California or the surrounding area, please contact the Palm Spring Bureau of Tourism directly at www.visitpalmsprings.com/ or visit the destination page on the Congress Web site.

Committee Meetings

To receive a Meeting Request Form, visit <http://content.asce.org/conferences/ewri2011/program.html> or contact Sara Hagan, Board and Meeting Specialist, at shagan@asce.org.

Congress Location

PALM SPRINGS CONVENTION CENTER
277 N. Avenida Caballeros
Palm Springs, CA 92262
Phone: 760-325-6611
www.palmspringscc.com

EWRI Sustainable Conference Policy Statement

ASCE-EWRI is committed to sustainable Congresses in accord with the ASCE policy on The Role of the Civil Engineer in Sustainable Development.

ASCE defines sustainability as a set of economic, environmental, and social conditions in which all of society has the capacity and opportunity to maintain and improve its quality of life indefinitely, without degrading the quantity, quality, or availability of natural resources and ecosystems. Sustainable development is the process of converting natural resources into products and services that are more profitable, productive, and useful, while maintaining or enhancing the quantity, quality, availability, and productivity of the remaining natural resource base and the ecological systems on which they depend.

To that end, ASCE-EWRI works with hotels and convention centers that strive to make our events green and include amenities such as reusable pitchers and water coolers rather than plastic bottles. Our conference hotel, part of the California Green Lodging program, employs more than 27 EarthPact eco-initiatives across multiple disciplines including Administration, Food & Beverage, Facility Management, Conferences & Meetings, Public Relations, and Room Operations. The Palm Springs Convention Center incorporates cold water HVAC storage systems that reduce energy use during peak hours and automated controls that minimize load, resulting in 60% energy efficiency. Among its many other eco-friendly, sustainable initiatives are green food vendors.

The WATER BEARER is an archetype... with water to provide the essence of new and fuller life, an earthen vessel to contain the community's wealth. Cultural identity is derived from the local tribe's relationship to the desert oasis. Water is the source of prosperous life and community in the desert, for commerce as well as pleasure.

Exhibit and Sponsor Opportunities

Put your company's innovative products, services, and computer applications in the spotlight in our bustling Exhibit Hall! To reserve your 2011 EWRI Congress exhibit booth space, contact **Sean Scully** at sscully@asce.org / 703-295-6154 or **Kira Simonson** at ksimonson@asce.org / 703-295-6349 or **Debra Leigh** at debraleigh@qwest.net / 402-330-2844. Each exhibit booth rental includes one (1) Full Exhibitor registration and one (1) Exhibit Hall-Only badge. The Full Exhibitor registration will include Congress Proceedings.

Let your company shape the industry! Become a 2011 EWRI Congress sponsor by contacting **Sean Scully** or **Kira Simonson**.

To view the many EWRI Congress Exhibitor and Sponsor Opportunities in detail, visit the Exhibitors' and Sponsors' pages at www.asce.org/conferences/ewri2011.

HOUSING

Official Headquarters Hotel of the
 2011 EWRI CONGRESS

RENAISSANCE MARRIOTT PALM SPRINGS HOTEL AND CONVENTION CENTER

888 Tahquitz Canyon Way
Palm Springs, California 92262
Main Phone: 760-322-6000

<http://www.marriott.com/hotels/travel/pspr-renaissance-palm-springs-hotel/>

Connected to the Palm Springs Convention Center and at the foot of the dramatic San Jacinto Mountains, the expansive Renaissance Marriott Palm Springs Hotel draws from its surroundings to blend nature with modernism. With museums and theaters nearby and easy access to an area fused with a glamorous history, the hotel offers you a desert resort atmosphere, plus the calm of a beautiful desert sunset. It is the ideal convention and vacation destination.

Standard Room Rates

Single/ Double \$129 per night

**All room rates are subject to applicable tax, which is currently 15.5% per room, per night, and is subject to change.*

Reservation Cutoff Date

Thursday, April 21, 2011

**When making your room reservation, you must ask for the ASCE-EWRI 2011 Congress room block in order to receive the reduced Congress rate.*

**When making your reservation online, please enter "ascasca" in the field labeled "Group Code" under "Check Rates and Availability."*

Parking

The hotel has on-site parking for a daily parking fee of \$10. Valet parking is also available for a daily fee of \$18.



International

International Letter of Invitation Request Instructions

- Send requests to Katerina Lachinova at klachinova@asce.org and your Congress invitation letter will be prepared and sent in pdf format via email.
- Letters may be faxed if requested. Please provide a fax number and indicate that, in addition to the email copy, you would also like to receive the letter via fax.
- Letters cannot be emailed or sent to the U.S. Embassy or Consulate. ASCE cannot intervene on behalf of invitees with the U.S. Embassy or Consulate via fax, phone, surface mail, or email.
- If you have any questions, please contact us at: klachinova@asce.org.
- The U.S. Department of State provides information on traveling to the United States regarding passports, international travel, etc. Their Web site is accessible via: http://travel.state.gov/visa/temp/types/types_1262.html.
- ASCE encourages you to process visa documents at least 6 months in advance of the Congress date. Please remember that the U.S. Department of State now requires you to appear for a personal interview in order to apply for a visa and requires that you have a machine-readable passport. Some U.S. Consulates have up to a four-month waiting period for an interview, so please contact your nearest consulate as soon as possible to request an interview date. If you have difficulty getting a timely interview appointment, please contact Katerina Lachinova (klachinova@asce.org) and ASCE will do what it can to help. ASCE cannot refund registration fees after the registration cutoff date due to an individual's inability to obtain a visa. Please file your paperwork as far in advance as possible in order to be eligible for a refund prior to the registration cutoff date.
- If you are unable to obtain a visa, your cancellation must be received in writing by ASCE by **April 30, 2011** to receive a refund for registration fees. A \$100 processing fee will be deducted from all refunds.
- Please note a new process for some who travel to the U.S. All travelers from countries that have a Visa Waiver Program with the U.S. are required to obtain approval through the Electronic System for Travel Authorization (ESTA). The new system is designed to ease travel for those from the visa waiver countries. This Web-based system takes only a few minutes to complete. Unlike passport checks, the airlines will not be verifying ESTA registration prior to boarding, so please make sure you have obtained approval before embarking on your journey to avoid being refused entry. To ascertain if you fall within the Visa Waiver Category, follow the link to the ESTA registration site and complete the application online: <https://esta.cbp.dhs.gov/esta/esta.html>

Visiting International Fellowship

Each year, EWRI's International Council (IC) invites applications for Visiting International Fellows from faculty, professionals, and student researchers from developing countries. The fellowships are intended to increase the participation of water resources and environmental professionals from developing countries in EWRI conferences, and promote sustained professional and cultural exchange.

While attending the EWRI conference, each Fellow is expected to give a presentation in a technical session on his/her research on a water/environmental resources issue in his/her country; and participate with other International Fellows in a panel discussion on international water/environmental resource issues as a representative of his/her country.

Each Fellow is hosted by a U.S. or Canadian EWRI/ASCE member who is responsible for submitting the application to the IC. The host also assists in arranging supplemental professional activities for the Fellow during the visit. Example activities include visiting with key agencies, consultants or researchers; working collaboratively on papers, proposals, or projects; and touring facilities or field sites relevant to the Fellow's area of interest.

Fellowships include a one-year membership in EWRI and/or ASCE and registration fees for the EWRI Congress. The remainder of the fellowship can be used to partially cover conference travel expenses. The stipend will not cover travel expenses for the technical and cultural activities planned outside of the conference. These may be covered by matching fund grants from corporations, government agencies, schools, or individuals.

Visit www.cabnr.unr.edu/saito/infovif.htm for more information about the Fellowship.

NOTE: EWRI is preparing for the 10th anniversary of the Visiting International Fellowship (VIF) to be celebrated during the **2011 World Environmental & Water Resources Congress**. Because we will recognize the accomplishments of the past Fellows and hosts, the VIF committee will be contacting past fellows and hosts for updates and photos, and particularly to learn of ways the program has positively impacted their careers. If you are a past Fellow or host and your contact information has changed, please contact Dr. Stacy Langsdale, past chair of the VIF committee, at slangsdale@gmail.com.

Meeting Room Overcrowding

ASCE will make every effort to schedule popular events in rooms large enough to accommodate anticipated attendance. Because many events are extremely popular, it is wise to select alternative events as you plan your Congress schedule. ASCE and the Palm Springs Convention Center and Renaissance Marriott Palm

Springs Hotel and Convention Center are **REQUIRED** to follow local fire regulations and may ask participants in rooms filled to capacity to choose another event.

No Smoking Policy

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Proceedings

One copy of the Proceedings is included with each Full and Full Student Registration. All those who should receive the Proceedings with their registration will receive a ticket with their onsite materials. You **MUST** pick up your Proceedings onsite by submitting your ticket at the Proceedings Desk in the Registration area.

If you fail to pick up your Proceedings onsite, then post-Congress you must mail in your Proceedings ticket with a written request no later than June 22, 2011 to the attention of Lucy King, ASCE Conference Department.

Basic Student Registrants and Daily Registrants may purchase the Proceedings onsite at the ASCE Bookstore or post-Congress at www.pubs.asce.org/.

Professional Development Hours (PDHs)

You may earn 38 PDHs, which are nationally recognized units of record, by attending Congress concurrent sessions and short courses. Please note there are differences from state to state in continuing education requirements for professional engineering licensure. ASCE follows NCEES guidelines on continuing professional competency. Because continuing education requirements for P.E. license renewal vary from state to state, ASCE strongly recommends that individuals regularly check with their state requirements that affect P.E. licensure and the ability to renew licensure. For details on your state's requirements, please go to: www.ncees.org/Licensing_boards.php.

Program Changes

ASCE reserves the right to cancel programs and/or sessions because of low registration. In the unlikely event of a cancellation, all registrants will be notified and will receive a full refund, if applicable. Programs and sessions are subject to change and ASCE reserves the right to substitute a program, session, and/or speaker of equal caliber to fulfill educational requirements.

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Recording of Sessions

Video or audio recording of any educational session is strictly prohibited without prior written permission from both ASCE and the session presenter(s).

Release/Waiver/Special Assistance

Photograph Release: By submitting the Registration form, I hereby release any photographs that may be incidentally taken of me during these events by ASCE to be used for any purpose.

Liability Waiver: I agree and acknowledge that I am undertaking participation in ASCE events and activities at my own free and intentional act, and I am fully aware that possible physical injury might occur to me as a result of my participation. I give this acknowledgement freely and knowingly that I am, as a result, able to participate in ASCE events, and I do hereby assume responsibility for my own well being. I also agree not to allow any other individual to participate in my place.



Student Activities

Student attendees at the 2011 EWRI Congress are encouraged to participate in student activities and competitions in Palm Springs. The event offers opportunities for civil engineering students and younger members in the profession to participate, network, and enjoy themselves, and benefit alongside our more experienced professionals

Opportunities for students at the Congress include the following, mainly centered on "Student Day," which takes place on Wednesday, May 25.

- **Student Paper and Poster Presentations**
- **Student Luncheon**
- **Oklahoma State University - Woolpert Scholars Session on Urban Stormwater Management**
- **Career Opportunities After College Panel Discussion**
- **Student Competitions: PB Student Design Competition, Student Technical Paper Competition, and Annual Student and Younger Member Photography Contest**

Student Registration

Student Full Registration includes Technical Sessions, Exhibit Hall, Networking Breaks, Student Activities, Student Luncheon, and Proceedings.

Basic Student Registration includes all of the above as well as the Student Luncheon but does not include Proceedings.

Transportation

Airport Information

PALM SPRINGS INTERNATIONAL AIRPORT - PSP

Phone: 760-318-3800

Hotel direction: 1 mile west

Driving Directions

To reach hotel, exit airport and proceed west on Tahquitz Canyon (towards mountains). Pass Farrell and Sunrise Blvd., and the hotel will be on your right, immediately following N. Avenida Caballeros Street.

For a detailed Google map of the area, visit <http://www.palmspringscc.com/cn/directions?ls=12412>.

Hotel Shuttle

Airport shuttle service to the Renaissance Palm Springs Hotel is complimentary. To arrange for shuttle service, pick up your luggage then call the hotel from a courtesy phone in baggage claim. The shuttle will meet you in the median section outside of the baggage claim area.

AAA Limousine Services, Inc.

**210 N. El Cielo Road,
Palm Springs, CA 92262
Phone: 888-268-5466**

Full-service operator. Provider of premium chauffeured transportation in sedans, limos, vans, SUVs, and mini-coaches. Airport, tours, and dine-arounds.

Classicab

**100 S. Sunrise Way Suite 530,
Palm Springs, CA 92262
Phone: 760-322-3111**

Economical, multilingual, exceptional service. Meet and greet, transfers, tours, and day trips. Group coordination of coaches, chauffeured sedans, taxis, and taxi-vans.

Coachella Valley Taxi Owners Association

**718 S. Eugene, Palm Springs, CA 92264
Phone: 877-778-TAXI**

Offering taxi and town car service for all conventions, corporate outings, and meetings. The most economical transportation available in the Palm Springs area and Coachella Valley, with over 160 taxis, including six and seven passenger vans and luxury sedans. Single travelers or groups.

Car Rentals

Save on car rentals! EWRI 2011 has negotiated discounted car rental rates. Enjoy the many attractions Palm Springs has to offer while taking advantage of this great deal. Please use this Hertz discount code PC# 144782 when booking to save up to \$5 a day on your rental. This rate is good a week before through one week after the Congress.

Hertz Rental Car at Palm Springs International Airport: 760-778-5100

Terms and Conditions:

"Advance reservations required. Subject to availability, this offer is redeemable at participating Hertz locations in the U.S., Canada and Puerto Rico. This offer has no cash value, may not be used with Pre-Pay Rates, Tour Rates, or Insurance Replacement Rates and cannot be combined with any other certificate, voucher, offer, or promotion. Hertz age, driver, credit, and qualifying rate restrictions for the renting location apply. Taxes, tax reimbursement, age differential charges, fees, and optional service charges, such as refueling, are not included. Discounts apply to time and mileage charges only. Discounts in local currency on redemption. Offer valid for vehicle pickup one week before through one week after the meeting date and does not apply to any meetings starting January 1, 2012. Must present membership card at time of rental."

Weather

Congress week temperatures should average from a high of about 95 degrees during the day to around 57 degrees in the evening hours.

Spouse/Guest Information

Spouse/Guest Registration

Guests may attend all Congress functions but must purchase separate tickets for events not included in Spouse/Guest Registration. Events that are included in Spouse/Guest Registration are:

Sunday, May 22

5:00 – 6:00 p.m. Committee Open House and Past Chairs Cocktail Hour

Monday, May 23

8:00 a.m. – 5:00 p.m. Hospitality Lounge – International and Registered Guests

8:30 - 10:00 a.m. Orientation Breakfast for Spouses/Guests

5:30 - 7:30 p.m. Ice Breaker Reception – Section Welcome with Posters in the Exhibit Hall

Tuesday, May 24

7:30 – 9:00 a.m. Selection of either the Watershed Council or Water Distribution System Analysis (WDSA) Symposium Breakfast

8:00 a.m. – 5:00 p.m. Hospitality Lounge – International and Registered Guests

8:30 a.m. – 1:15 p.m. Recreational Tours: The Living Desert Safari, San Andreas Fault Jeep Tour, Palm Springs Aerial Tramway

5:30 – 7:30 p.m. Visiting International Fellows Reception with Posters in Exhibit Hall

Wednesday, May 25

7:30 – 9:00 a.m. Selection of either the Planning and Management Council or Irrigation and Drainage Council Breakfast

8:00 a.m. – 5:00 p.m. Hospitality Lounge – International and Registered Guests

Thursday, May 26

7:30 – 9:00 a.m. Selection of either the Environmental Council or Hydraulics and Waterways Council Breakfast

8:00 a.m. – 12:00 p.m. Hospitality Lounge – International and Registered Guests

Recreational Tours

TUESDAY, MAY 24

8:30 a.m. - 1:15 p.m.

RECREATIONAL TOUR #1: The Living Desert Safari

Come and enjoy a Safari Riding Tour and encounter 450 animals roaming freely through exhibits designed after their natural habitats. Visit giraffes and feed them their morning treats! View cheetah as they roam over one acre of habitat. Stroll through an African Village WaTuTu and see camels, hyenas, leopards, birds, and a petting kraal. Visit the North American section's Eagle Canyon, home to golden eagles, mountain lions, bob cats, foxes, and a walk-in bird aviary. Shop in the Kumbu Kumba Market, filled with one-of-a-kind African art.

Your tour will take you through desert gardens and give you the opportunity to learn how local Native Americans lived in the desert valley for so many generations.

The tour offers a leisurely tram ride narrated by a trained guide. Included in the tour is the live animal Wildlife Wonders Show, presented in the Living Desert's Tenuity Amphitheater (weather permitting).

After the tour, you will enjoy lunch at the Meerkat Patio.

Fee: \$50, includes bus transportation and lunch. Dress appropriately for hot sunny conditions and bring sunscreen and adequate water. Good footwear and hats are essential.



8:30 a.m. - 12:00 p.m.

RECREATIONAL TOUR #2: San Andreas Fault Jeep Tour

The adventure begins the moment you board your big red jeep and depart on an exciting jeep eco-tour of the San Andreas Fault. On your journey, you will learn about the desert's plants, animals, history, geology, and earthquakes. Ride through a natural palm oasis, spectacular box and slot canyons, and an ancient fossil bed as your 7-passenger open air, shaded-top jeep winds its way through the incredible labyrinth of geological cuts and canyons of the San Andreas Fault Zone.

This tour includes a short guided nature walk (geared to the abilities of guests in each jeep), several opportunities to get out of the jeep and see the desert up close, and a tour of the Epicenter Earthquake Education Center, which features photos, displays, and interactive demonstrations of the San Andreas Fault, geology, and earthquakes.

Fee: \$125, includes transportation, and naturalist driver/guide. Dress appropriately for hot sunny conditions and bring sunscreen and adequate water. Good footwear and hats are essential.



9:30 a.m. - 1:00 p.m.

RECREATIONAL TOUR #3: Palm Springs Aerial Tramway

Opened in 1963, the Palm Springs Aerial Tramway was an engineering marvel. Traveling from the Valley Station (elevation 2,643 feet) to the Mountain Station (elevation 8,516 feet), the trams traverse five towers. During 26 months of construction, helicopters flew some 23,000 missions, hauling the workers and materials needed to erect the towers and Mountain Station.

In 2000, the Tramway reopened with the World's Largest Rotating Trams. In the winter, visitors can try their skills at cross-country skiing or snowshoeing. Rental equipment is available at the Adventure Center, snow conditions permitting. During the summer, camping and guided nature walks are available. Also at the top is Peaks Fine Dining Restaurant or the Pines Café, a cafeteria-style restaurant, many spectacular views, Natural History Museum, two documentaries on the history of the Tramway and State Park, and a gift shop.

Fee: \$35, includes transportation and lunch. Dress appropriately for hot sunny conditions and bring sunscreen and adequate water. Good footwear and hats are essential.



CONGRESS REGISTRATION

Advance Registration Discount

ASCE invites registrants to take advantage of an advanced registration discount. The deadline for advanced registration is April 11, 2011. Registration forms, including complete payment information, must be RECEIVED by this date to qualify for the advanced registration discount.

On-site Registration

Please do not mail registration forms through the U.S. Postal Service **AFTER** April 15, 2011 in order to ensure your registration is processed by the April 29, 2011 deadline. After this date, registrations must be secured with a credit card. If you are paying by credit card, please register online via the link on the Congress Web site or download the PDF registration form and submit it onsite along with your full credit card payment.

Badges

To receive a badge, you must register. Your name badge is your admission to the technical sessions and the Exhibit Hall. Pre-registered participants are to pick up their badges upon checking in at the Onsite Registration Counter at the Palm Springs Convention Center.

Badge Sharing Not Allowed

Registration is per individual and is not exchangeable between colleagues.

Cancellations/Refunds

Registration cancellations must be sent in writing or via email. A refund will be issued, minus a \$100 processing fee, if the cancellation notice is received by ASCE by **April 11, 2011**.

Event/course/tour tickets will be fully refunded if cancellation is received in writing by **April 11, 2011**. No refunds will be made for cancellations received after April 11, 2011, unless the event/course/tour is cancelled by EWRI. Send cancellations to registrations@asce.org or fax to 703-295-6144.

Confirmation of Registration

A confirmation will be emailed to all advance registrants within one week of registering for the Congress. Advanced registrants will receive their name badges and any tickets ordered at the on-site ASCE Registration Desk during Registration hours. If you do not receive confirmation within one week, please contact ASCE registration at 800-548-2723 and ask to speak with Customer Service, or email registrations@asce.org. Please reference the 2011 EWRI Congress in the subject line.

Daily Registration

Daily registration does not include Proceedings.

Group Discount

Four or more registrants from the same organization at the same address may receive a \$50 discount per registration when registering at the same time with one payment (by check or credit card). To be eligible for this discount, registration forms and payment must be received via mail by the Advance registration deadline. After the Advance deadline, the group discount is no longer available. The group discount is not available via online registration.

MEMBERS BENEFIT

Receive Member Rates

Not a member of ASCE? Join today and save on your Congress registration. Simply visit www.asce.org/join or call 800-548-ASCE (2723) to request an application and/or register for the Congress. For more information on member benefits, go to www.asce.org/membership. NOTE: You must be a member in good standing to qualify for the member rates.

EWRI Membership Included

Never been a member of EWRI? When you register for the Congress as a Full Non-Member, you will be enrolled in EWRI for the remainder of 2011 upon conclusion of the Congress. For more information on member benefits, go to www.content.ewrinstitute.org/membership/.

On-site Registration Hours

Sunday, May 22 7:00 a.m. – 7:00 p.m.
Monday, May 23 6:30 a.m. – 6:30 p.m.
Tuesday, May 24 6:30 a.m. – 6:30 p.m.
Wednesday, May 25 7:00 a.m. – 5:00 p.m.
Thursday, May 26 7:00 a.m. – 1:00 pm

**Hours are subject to change.*

The on-site Registration Desk will be closed for no more than one hour each day for lunch. Please come back at the appropriate time so we can better serve you. Thank you.

Substitutions

Substitutions are allowed. Re-submit the original registration form with the original registrant's name crossed out. Write "Substitution" at the top of the form. Complete ALL the information for the new registrant. Substitutions must be made by **May 12, 2011**. After that date, substitutions are to be made at the On-site Registration Counter.

Payment Information

Acceptable forms of payment include:

CHECK: Payable to EWRI 2011 Congress (In U.S. dollars, drawn on a U.S. bank. Include attendee's name in the memo area of the check.)

CREDIT CARD: VISA, MasterCard, American Express, Diners Club, and Discover

PURCHASE ORDER: P.O. #, company name and address or other billing address (This includes Government P.O. use)

Mail registrations to: EWRI 2011 Congress, P.O. Box 79668, Baltimore, MD 21279-0668 OR register online: www.asce.org/conferences/ewri2011/registration.html

Full payment **MUST** accompany all registration forms. Forms will not be processed without payment or copy of purchase order.

Registration Questions

For registration questions contact registrations@asce.org or call 800-548-2723 or 703-295-6300 and ask to speak with a Registration Customer Service Representative.

Senior Discount

If you are 70 years or more, you may register at a deeply discounted rate. Proof of age is required. See the registration form for details.

Speaker/Moderator Registration

All speakers and moderators are required to register for the Congress and to submit payment for respective registration fees by **February 9, 2011**.

Student Registration

If you are a full-time student, you can register at a deeply discounted rate. Proof of full-time student status and valid ID are required.

INCLUDED IN YOUR REGISTRATION		Sessions and Exhibit Hall	Sunday Committee Open House	Monday Keynote Breakfast	Monday Spouse/Guest Orientation Breakfast	Monday Congress Ice Breaker Reception	Choice of Tuesday Breakfasts	Tuesday VIF Reception with Posters	Choice of Wednesday Breakfasts	Wednesday Student Luncheon	Choice of Thursday Breakfasts	Proceedings
FULL REGISTRATION:												
EWRI/ASCE Member		●	●	●	●	●	●	●	●	●	●	●
Coop Org Member		●	●	●	●	●	●	●	●	●	●	●
Speaker		●	●	●	●	●	●	●	●	●	●	●
Moderator		●	●	●	●	●	●	●	●	●	●	●
Track Chair		●	●	●	●	●	●	●	●	●	●	●
Non-Member		●	●	●	●	●	●	●	●	●	●	●
Senior (70+)*		●	●	●	●	●	●	●	●	●	●	●
Student Full*		●	●	●	●	●	●	●	●	●	●	●
Student Basic*		●	●	●	●	●	●	●	●	●	●	●
DAILY REGISTRATION:												
Monday		●	●	●	●	●	●	●	●	●	●	●
Tuesday		●	●	●	●	●	●	●	●	●	●	●
Wednesday		●	●	●	●	●	●	●	●	●	●	●
Thursday (Exhibit Hall Closed)		●	●	●	●	●	●	●	●	●	●	●
SPOUSE/GUEST REGISTRATION												
		●	●	●	●	●	●	●	●	●	●	●

**Proof of age for Seniors or proof of full-time Student status required*

WORLD ENVIRONMENTAL & WATER RESOURCES CONGRESS 2011

REGISTRATION FORM May 22-26, 2011 Palm Springs Convention Center Palm Springs, California



ENVIRONMENTAL & WATER RESOURCES INSTITUTE

Please complete the registration form including signature and payment information. Use one registration form per person. Registrations will not be processed without full payment and registrant's full name. PLEASE PRINT OR TYPE ALL INFORMATION.

CONTACT INFORMATION (*Indicates required information)

*First Name _____ MI _____ *Last Name _____
 Credentials _____ Badge Nickname _____
 Title _____ *Company/Organization/University _____
 *Street Address/PO Box _____
 *City _____ *State _____ *Postal Code _____ *Country _____
 *Work Phone _____ Cell Phone _____
 *Email _____
 In Case of Emergency, Congress week contact phone number (IMPORTANT) _____
 ASCE/EWRI Member Number _____ If Cooperating Org Member, Name Org _____

FOR COMPLETE CONGRESS INFORMATION & TO REGISTER, visit www.asce.org/conferences/ewri2011

FOR CREDIT CARD PAYMENT
 Register Online: www.asce.org/conferences/ewri2011
 Or by Fax: 703-295-6144

FOR CHECK OR PURCHASE ORDER (P.O.) PAYMENT Mail to:
 ASCE (EWRI Congress 2011)
 PO Box 79668
 Baltimore, MD 21279-0668 USA
 NO Registrations by phone.

REGISTER BY APRIL 11, 2011 AND SAVE!

Please answer these questions so that we may serve you better:

- The organization I work for is: Private Government Education Military Other
- My position is: Partner/Principal Senior Manager Middle Manager Technical/Professional Staff Faculty Student Retiree
- How many previous ASCE Conferences have you attended? 0 1 2 3 or more
- My age group: Under 25 25-34 35-49 50-65 Over 65



Check here if you require Vegetarian Lacto-vegetarian Ovo-vegetarian Vegan meals

Check here if you have allergies to the following: Peanuts Tree nuts Seafood Other

Check here if you require specific aids or services: Deaf or Hearing Impaired Blind or Visually Impaired Wheelchair Bound Other

Full Registration

Registration Categories

	ADVANCE By 4/11/11	ONSITE After 4/11/11
EWRI/ASCE Member	<input type="checkbox"/> \$695	<input type="checkbox"/> \$795
Cooperating Organization Member	<input type="checkbox"/> \$695	<input type="checkbox"/> \$795
Speaker	<input type="checkbox"/> \$595	<input type="checkbox"/> \$695
Moderator	<input type="checkbox"/> \$595	<input type="checkbox"/> \$695
Track Chair	<input type="checkbox"/> \$595	<input type="checkbox"/> \$695
Non-Member	<input type="checkbox"/> \$795	<input type="checkbox"/> \$895
Senior (70+ years) Proof of DOB to accompany registration form.	<input type="checkbox"/> \$250	<input type="checkbox"/> \$305
Full-Time Student Full Package ** Incl Student Luncheon/Proceedings	<input type="checkbox"/> \$250	<input type="checkbox"/> \$305
Full-Time Student Basic Package ** Incl Student Luncheon/No Proceedings	<input type="checkbox"/> \$150	<input type="checkbox"/> \$205

** Copy of Student ID to accompany registration form.

Full Registrants, check functions you plan to attend to receive ticket for your registration category:

- Committee Open House (Sunday) Yes, I will attend No
- Opening Ceremony, Keynote Breakfast (Monday) Yes, I will attend No
- Congress Ice Breaker Reception (Monday) Yes, I will attend No
- Breakfast (Tuesday) Watershed Council or WDSA Yes, I will attend No
- Visiting International Fellows Reception (Tuesday) Yes, I will attend No
- Breakfast (Wednesday) Planning and Mgmt or Irrigation and Drainage Yes, I will attend No
- Breakfast (Thursday) Environmental Council or Hydraulics Yes, I will attend No

Daily Registration Monday Tuesday Wednesday Thursday

Includes for day of registration only: Sessions, Exhibit Hall, Monday: Keynote Breakfast and Congress Ice Breaker Reception, Tuesday: Choice of Breakfasts and VIF Reception, Wednesday: Choice of Breakfasts, Thursday: Choice of Breakfasts

	ADVANCE	ONSITE
EWRI/ASCE Member	<input type="checkbox"/> \$345	<input type="checkbox"/> \$395
Cooperating Organization Member	<input type="checkbox"/> \$345	<input type="checkbox"/> \$395
Speaker	<input type="checkbox"/> \$345	<input type="checkbox"/> \$395
Moderator	<input type="checkbox"/> \$345	<input type="checkbox"/> \$395
Non-Member	<input type="checkbox"/> \$375	<input type="checkbox"/> \$425

Spouse/Guest Registration

Guest Name: _____
 Includes Hospitality Lounge and Sunday: Committee Open House, Monday: Spouse/Guest Orientation Breakfast and Congress Ice Breaker Reception, Tuesday: Choice of Breakfasts and VIF Reception, Wednesday: Choice of Breakfasts, Thursday: Choice of Breakfasts

Spouse/Guest	<input type="checkbox"/> \$225	<input type="checkbox"/> \$250
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Recreational Tours

Tuesday, May 24

	REGISTRANT (SELF)	GUEST #1	GUEST #2
#1: The Living Desert Safari	<input type="checkbox"/> \$ 50	<input type="checkbox"/> \$ 50	<input type="checkbox"/> \$ 50
#2: San Andreas Fault Jeep Tour	<input type="checkbox"/> \$125	<input type="checkbox"/> \$125	<input type="checkbox"/> \$125
#3: Palm Springs Aerial Tramway	<input type="checkbox"/> \$ 35	<input type="checkbox"/> \$ 35	<input type="checkbox"/> \$ 35

Technical Tours

Tuesday, May 24

	REGISTRANT (SELF)	GUEST #1	GUEST #2
#1: Salton Sea Environmental Restoration Project	<input type="checkbox"/> \$ 60	<input type="checkbox"/> \$ 60	<input type="checkbox"/> \$ 60
#2: Coachella Valley Water District Control Room	<input type="checkbox"/> \$ 40	<input type="checkbox"/> \$ 40	<input type="checkbox"/> \$ 40
#3: Desert Hot Springs, Mission Springs, and Levees	<input type="checkbox"/> \$ 40	<input type="checkbox"/> \$ 40	<input type="checkbox"/> \$ 40
#4: Oak Glen Creek Detention Basin Project	<input type="checkbox"/> \$ 40	<input type="checkbox"/> \$ 40	<input type="checkbox"/> \$ 40
#5: Thousand Palms Preserve on the San Andreas Fault	<input type="checkbox"/> \$ 40	<input type="checkbox"/> \$ 40	<input type="checkbox"/> \$ 40
#6: Sustainability Tour of Downtown Palm Springs	<input type="checkbox"/> \$ 40	<input type="checkbox"/> \$ 40	<input type="checkbox"/> \$ 40

Special Events/Additional Tickets

	ADVANCE/ONSITE	QUANTITY	AMOUNT
Sunday, May 22			
Committee Open House and Past Chairs Cocktail Hour	<input type="checkbox"/> \$ 45		
Monday, May 23			
Keynote Breakfast	<input type="checkbox"/> \$ 35		
Congress Ice Breaker Reception with Posters in Exhibit Hall	<input type="checkbox"/> \$ 45		
Tuesday, May 24			
Watershed Council Breakfast	<input type="checkbox"/> \$ 35		
Water Distribution System Analysis (WDSA) Breakfast	<input type="checkbox"/> \$ 35		
Visiting International Fellows Reception with Posters in Exhibit Hall	<input type="checkbox"/> \$ 45		
Wednesday, May 25			
Planning and Management Council Breakfast	<input type="checkbox"/> \$ 35		
Irrigation and Drainage Council Breakfast	<input type="checkbox"/> \$ 35		
Key Social Event	<input type="checkbox"/> \$ 90		
Thursday, May 26			
Environmental Council Breakfast	<input type="checkbox"/> \$ 35		
Hydraulics & Waterways Council Breakfast	<input type="checkbox"/> \$ 35		
PROCEEDINGS (Full and Full Student Registrants receive 1 copy)	<input type="checkbox"/> \$TBD		

Short Courses (Does not include Congress Registration)

	ADVANCE	ONSITE
Sunday, May 22		
#1: Numerical Modeling of Estuarine Systems Using ADH	Member <input type="checkbox"/> \$245	<input type="checkbox"/> \$295
	Non-Member <input type="checkbox"/> \$275	<input type="checkbox"/> \$325
#2: Principles of Streambank Analysis and Stabilization	Member <input type="checkbox"/> \$245	<input type="checkbox"/> \$295
	Non-Member <input type="checkbox"/> \$275	<input type="checkbox"/> \$325
#3: Assessment and Modeling of River Migration: Introducing a GIS-based Toolbox for River Restoration	Member <input type="checkbox"/> \$245	<input type="checkbox"/> \$295
	Non-Member <input type="checkbox"/> \$275	<input type="checkbox"/> \$325
#4: Low Impact Development (LID)	Member <input type="checkbox"/> \$245	<input type="checkbox"/> \$295
	Non-Member <input type="checkbox"/> \$275	<input type="checkbox"/> \$325
#5: Introduction to CUAHSI Hydrologic Information System	Member <input type="checkbox"/> \$150	<input type="checkbox"/> \$200
	Non-Member <input type="checkbox"/> \$185	<input type="checkbox"/> \$235
#6: Advanced Topics with the CUAHSI Hydrologic Information System	Member <input type="checkbox"/> \$150	<input type="checkbox"/> \$200
	Non-Member <input type="checkbox"/> \$185	<input type="checkbox"/> \$235
Special Price to attend both Short Courses #5 and #6:	Member <input type="checkbox"/> \$245	<input type="checkbox"/> \$295
	Non-Member <input type="checkbox"/> \$275	<input type="checkbox"/> \$325
Tuesday, May 24		
#7: Lessons Learned from Southwestern U.S. Stream Restoration	Member <input type="checkbox"/> \$190	<input type="checkbox"/> \$240
	Non-Member <input type="checkbox"/> \$220	<input type="checkbox"/> \$270
#8: Rainwater Harvesting for Water Supply and Stormwater Management	Member <input type="checkbox"/> \$190	<input type="checkbox"/> \$240
	Non-Member <input type="checkbox"/> \$220	<input type="checkbox"/> \$270
#9: Effective Use of the International Stormwater BMP Database	Member <input type="checkbox"/> \$190	<input type="checkbox"/> \$240
	Non-Member <input type="checkbox"/> \$220	<input type="checkbox"/> \$270
#10: AAEE Carbon Footprint Workshop	Member <input type="checkbox"/> \$190	<input type="checkbox"/> \$240
	Non-Member <input type="checkbox"/> \$220	<input type="checkbox"/> \$270

Full Non-Member Registration includes FREE 2011 EWRI MEMBERSHIP.
 YES, I want to take advantage of my EWRI benefits, active upon the conclusion of the Congress for New Members ONLY.

PAYMENT

Full Registration	\$ _____
Daily Registration	\$ _____
Spouse/Guest Registration	\$ _____
Recreational Tours	\$ _____
Technical Tours	\$ _____
Additional Tickets	\$ _____
Short Courses	\$ _____
GRAND TOTAL (pay this amount)	\$ _____

Full payment must accompany this registration form.

FOR PURCHASE ORDER (P.O.) or CHECK PAYMENT MAIL TO:

ASCE (EWRI Congress 2011)
 PO Box 79668
 Baltimore, MD 21279-0668 USA

- P.O. # _____
 (Provide copy of P.O. form with your registration form)
- CHECK Payable to ASCE (EWRI Congress 2011). Check must be issued in U.S. dollars, drawn on a U.S. bank. Include attendee's name in the memo area of the check.

Registrations cannot be processed by phone. NO REFUNDS granted for cancellations after April 11, 2011.

FOR CREDIT CARD PAYMENT REGISTER ONLINE:

www.asce.org/conferences/ewri2011 OR BY FAX: 703-295-6144

CREDIT CARD

AMEX VISA MC DISC DINERS

Card Number _____

Expiration Date (MM/YY) _____

Cardholder Name _____

Signature _____

TOTAL TO BE CHARGED \$ _____

2011 | WORLD ENVIRONMENTAL & WATER RESOURCES CONGRESS

Bearing Knowledge for Sustainability

Destination

PALM SPRINGS, CALIFORNIA

Palm Springs typically has 354 sunny days per year! Come to the EWRI 11 Congress and you can expect to enjoy equally ideal weather, with highs in the low 90s and overnight temperatures just shy of 60.

Palm Springs is located in the Coachella Valley Desert Region. The region has a long history. Native Americans began living here nearly 500 years ago. Today, it is a mecca for Hollywood stars and other celebrities. While here, you can enjoy the Palm Springs Walk of Stars and the dozens of art galleries, chic boutiques, outlets, and specialty stores that provide unique opportunities to dally and shop in style.

The region boasts other wonders, including some unique-to-the-desert options:

- **Joshua Tree National Park**
- **Salton Sea Recreation Area**
- **125 Golf Courses and Numerous Tennis Courts**
- **Palm Springs Aerial Tramway (elevation 8,516 feet)**
- **Palms Springs Air Museum, Art Museum, and Agua Caliente Cultural Museum**
- **Hot Springs and Spas**
- **Casinos and Other Entertainment**

Come early or stay later to enjoy this rich variety of scenic and recreational opportunities!

But come!!! Palm Springs International Airport (PSP) is served by 10 airlines that connect to hundreds of cities worldwide. Nearby airports in Ontario, Los Angeles, and San Diego provide additional travel options. Don't delay... book your travel today to EWRI's premier 2011 event!

For additional information, visit: www.palmspringsusa.com

