

Awards



World Environmental & Water Resources Congress 2010

May 16-20 / Providence, Rhode Island

AWARDS PRESENTATION EVENTS:

Opening Ceremony, Keynote Breakfast & Lecture, and Lifetime Achievement and Service to the Institute Awards

Monday, May 17 • 8:30 – 10:15 am • CC Ballroom A

Congress Ice Breaker Reception – Section Welcome

Monday, May 17 • 6:30 – 8:00 pm • CC Exhibit Hall B

Planning & Management, Groundwater, and Irrigation & Drainage Councils Breakfast, Awards, and Lecture

Tuesday, May 18 • 7:30 – 9:00 am • CC Ballroom A

Environmental Council Breakfast, Awards, and Lecture

Wednesday, May 19 • 7:30 – 9:00 am • CC Ballroom A

Hydraulics & Waterways Council Breakfast, Awards, and Lecture

Wednesday, May 19 • 7:30 – 9:00 am • WP Narragansett

Student & New Professional Activities Council Luncheon and Awards

Wednesday, May 19 • 12:30 – 1:30 pm • WP Waterplace

Watershed Council Breakfast, Awards, and Lecture

Thursday, May 20 • 7:30 – 9:00 am • CC Ballroom A

The Environmental & Water Resources Institute (EWRI) of the American Society of Civil Engineers (ASCE) is proud to recognize the recipients of the EWRI 2010 Lifetime Achievement Awards, ASCE-EWRI National Career Achievement Society Awards, ASCE-EWRI National Paper Society Awards, EWRI Journal and Practice Periodical Awards, EWRI Service Awards, EWRI Visiting International Fellowship Awards, and EWRI Student & New Professional Activities Council Awards.

CC - Rhode Island Convention Center • WP - The Westin Providence

Opening Ceremony, Keynote Breakfast & Lecture, and Lifetime Achievement and Service to the Institute Awards

EWRI LIFETIME ACHIEVEMENT AWARDS

Established in 2001, the Environmental & Water Resources Institute Lifetime Achievement Award is presented to members who are judged to have advanced the profession, exhibited technical competence, and significantly contributed to public service, research, or practice in the environmental and water resources profession.

The 2010 Lifetime Achievement Award is presented to **Conrad G. Keyes, Jr., Sc.D., P.E., P.S., Dist.M.ASCE (Life), D.WRE, F.NSPE (Life); Daniel P. Loucks, Ph.D., Dist.M.ASCE; and Kyle E. Schilling, P.E., BCEE, D.WRE, Dist.M.ASCE** in recognition of their lifelong and eminent contribution to the environmental and water resources engineering disciplines through practice, research, and public service.

■ **Conrad G. Keyes, Jr., Sc.D., P.E., P.S., Dist.M.ASCE (Life), D.WRE, F.NSPE (Life)**



Conrad G. Keyes, Jr., has spent a lifetime serving the ASCE Irrigation & Drainage Division, MGD, ASCE Codes and Standards Committee, and other ASCE Divisions and committees, and has had continued outstanding service to EWRI over the years. He chaired a two-year

task committee to successfully form EWRI, was the first EWRI President (1999-2001) and was the first ASCE Institutes' representative to the ASCE Executive Committee. He also participates in the EWRI History & Heritage Committee.

Dr. Keyes was a faculty member at New Mexico State University (NMSU) and department head (1979-1987), served as Executive Director of the North American Interstate Weather Modification Council (1978-1987), Engineer Advisor to the Texas Rio Grande Compact Commissioner (1987-1989 and 1997-1999), Principal Engineer of Planning for the U.S. International Boundary and Water Commission (1989-1994), and member of the New Mexico Water Quality Control Commission (2000-2002).

Dr. Keyes served as President of the NM Engineering Foundation, President of the NM Society of Professional Engineers, President of the NM Professional Surveyors, President of the NM Academy of Civil Engineering, Honorary and Board Member the National Society of Professional Engineers (NSPE), President & Certified Manager of the Weather Modification Association, and three-year Board Member of ASCE. He is a registered P.E. in Texas, Colorado, and New Mexico, and a registered Professional Surveyor in New Mexico.

He has received the following awards from ASCE: Water Resources Service to the Profession Award (1993), Irrigation and Drainage Outstanding Service Award (1993), Zone III Government Civil Engineer of the Year Award (1993), and the Royce J. Tipton Award (1994). He was awarded the Outstanding Engineering Alumnus at NMSU (1988 and 1996) and NMSU Academy of CAGE Honorary Member (1996). He was also awarded the ASCE New Mexico Section Distinguished Service Award (October 2000 and September 2008).

He has worked for Boyle Engineering and as a consultant for Sandia National Laboratories, the U.S. Army Corps of Engineers, and the NM Interstate Stream Commission.

■ **Daniel P. Loucks, Ph.D., Dist.M.ASCE**



Since 1965, **Daniel P. Loucks** has served on the faculty of the School of Civil and Environmental Engineering, Cornell University, where he teaches and directs research in the development and application of economics,

ecology, and systems analysis methods to the solution of environmental and regional water resources problems. During periods of leave from Cornell, Loucks has been a Research Fellow at Harvard University (1968), an Economist at the Development Research Center of the World Bank (1972-73), a Research Scholar at the International Institute for Applied Systems Analysis (1981-1982), and a Visiting Professor at the Massachusetts Institute of Technology (1977-78), University of Colorado in Boulder (1992), University of Adelaide in South Australia (1992), Aachen University of Technology in Germany (1993 and 1995), Technical University of Delft in The Netherlands (1995), University of Texas in Austin (2000), and Technical University of Vienna, Austria (2010). Since 1969, he has also served as a consultant to private enterprises, government agencies, and various organizations of the United Nations, the

World Bank, and NATO involved in regional water resources development planning in Asia, Australia, Eastern and Western Europe, the Middle East, Africa, and South America. Since 1976, he has been a Visiting Professor in water resources/environmental systems engineering at the UNESCO International Institute for Water Education in Delft, The Netherlands.

The American Society of Civil Engineers awarded Loucks the Walter L. Huber Research Prize (1970) and Julian Hinds Award (1986). He is an Honorary (Distinguished) Member of ASCE, as well as a Fellow in the American Geophysical Union (AGU) and International Environmental Modeling and Software Society. In 1975, he received a Fulbright-Hayes Fellowship to lecture in Yugoslavia. He has chaired various committees and professional societies in civil engineering, geophysical science, and operations research. He is a member of five honorary societies, including Sigma Xi and Phi Kappa Phi, and serves as an associate editor and member of editorial boards of several professional journals in the U.S. and Europe. He was elected to the National Academy of Engineering in 1989. He received Distinguished Lecture Awards by the National Research Council of Taiwan (1990 and 1999), an EDUCOM Award for software development (1991), the Senior U.S. Scientist Research Award from the German Alexander von Humboldt Foundation (1992), the Warren A. Hall Medal from the Universities Council on Water Resources (2000), the Grand Prix International de Cannes de l'Eau (2005), and the Biennial Medal of the International Environmental Modeling and Software Society (2008). He was designated an Honorary Fellow of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute of Water Education in 2010.

Loucks was commissioned in the U.S. Navy in 1955. He served as an aviator on active duty until 1959 and subsequently in the Naval Reserve until 1981. From 1979 to 1981, he commanded VR-52, the largest Naval Air Transport Squadron in the country having detachments at Naval Air Facility, Detroit, MI, Andrews Air Force Base, MD, and Naval Air Station, Willow Grove, PA. In 1981, he received the Navy's Commendation Medal from the Secretary of the Navy. The Secretary of the Army appointed him to the U.S. Army Corps of Engineers Environmental Advisory Board in 1994. He served as Vice Chair of the EAB in 1995 and as its Chair from 1996 to 1998, and received the Commander's Award for Public Service in 1998. He was given the first Maass/White Fellowship at the Corps' Institute for Water Resources in Alexandria, VA, in 2002.

Opening Ceremony, Keynote Breakfast & Lecture, and Lifetime Achievement and Service to the Institute Awards

■ **Kyle E. Schilling, P.E., BCEE, D.WRE, Dist.M.ASCE**



In 1963, **Kyle E. Schilling** graduated with a BSCE degree from the Pennsylvania State University, where he was an officer in the student chapter of ASCE and a member of the engineering student council. His first engineering jobs were as a summer intern for the Pennsylvania Highway Department while completing his degree. He worked with the Baltimore District of the U.S. Army Corps of Engineers after graduation and entered the Junior Engineer Training (JET) Program with an initial aspiration to become a construction engineer. As part of the program, he worked with dam construction, but also spent time working in the Basin Planning Branch on the Potomac River Study under Harry E. Schwarz. There, he began what would become a lifetime concentration on water resources planning management and policy. After completing the JET Program, he began work on the Susquehanna River Study just as the nation was building momentum toward the Water Resources Planning Act of 1965, which established the Water Resources Council (WRC) to provide for the establishment of River Basin Commissions and the multi-objective water planning approach. He worked for the state of Nebraska in the late 1960's as Head of Watershed Planning, producing PL 566 watershed work plans for federal implementation through the U.S. Department of Agriculture, and as a state representative to the Missouri River Basin Inter-agency Study.

He returned to the Corps of Engineers as Head of Plan Formulation for the North Atlantic Regional (NAR) Study involving all or part of the 13 Northeastern states and the District of Columbia. This effort, again under Harry Schwarz, responded for its plan formulation and technical approach to an Advisory Group with members such as Gilbert While, Abel Wolman, and Arthur Maass. At their urging along with that of strong state officials such as Francis Montanari of New York, the study developed and applied many innovative multi-objective, inter-governmental technical approaches to planning. After completing the NAR Study in the early 1970's, Mr. Schilling again worked for Warren Fairchild, then Assistant Commissioner of Reclamation and former WRC Director. This time, he worked for the Bureau of Reclamation as Plan Formulation Specialist for the Western U.S. Water Plan. He

returned to the Corps once again to work for Harry Schwarz in the early 70's as Senior Study Manager of the Northeastern U.S. Water Supply (NEWS) Study, a major water supply study responding to the Northeastern drought of the 1960's. This was the first major water resources study to seriously focus on water conservation.

Mr. Schilling considers himself fortunate to have had the opportunity to learn from his early mentors in academia, state government, and federal agencies. This experience, he believes, well suited him for his employment at the USACE Institute for Water Resources (IWR) from 1976 until his retirement in December 1999. The Institute was intended by the Corps to be its water resources planning, policy, and research "think tank" to help it adapt to the changing national water resources environment. In effect, Mr. Schilling was able to stay in place during his IWR years and raise a family while having a stimulating, constantly changing job anticipating and responding to new national natural and water resource issues. His work at IWR, heavily leveraged through the extensive contributions of expert private and academic sector consultants, along with continuing professional organization involvement, continued his opportunities for learning. Some of his IWR personal work, new at the time, is reflected in water conservation planning, wetland mitigation banking, risk and uncertainty, and national water resources infrastructure analysis approaches. He served as special advisor to the WRC Director for water demand forecasting and conservation for the second National Water Assessment. He was also seconded to the White House to lead the 1977 Drought Appraisal and to the National Council on Public Works Improvement (NCPWI) as the only government employee among its many consultants to lead the 1989 Water Resources Assessment of the NCPWI.

Since retirement, he has been active as a consultant, but has also devoted time to advancing the profession through EWRI and ASCE activities. He is a past president of EWRI and the American Public Works Association (APWA) Institute for Water Resources, a member of the Board of Trustees of the American Academy of Water Resources Engineers (AAWRE), and a Distinguished Member of ASCE. He is grateful to his early career mentors and many EWRI and ASCE public-, private-, and academic-sector friends and colleagues for the profound effects each has had on his career and on his receipt of this award.

Schilling has received numerous awards including WRSC Engineer of the Year (1987),

ASCE Water Resource Planning and Management Division Service to the Profession Award (1995), ASCE Zone II Government Engineer of the Year Award (1995), "Friend of UCOWR" (Universities Council on Water Resources) (1999), ASCE Julian Hinds Award (2000), and Distinguished Member, ASCE (2004). Additionally, Schilling was inducted into the Corps of Engineers, Institute for Water Resources Gallery of Distinguished Employees (2010).

EWRI SERVICE AWARD

EWRI Service to the Institute Award

The EWRI Service to the Institute Award is given in recognition of extensive and outstanding service to the Institute and/or its predecessor divisions.

■ **Michael A. Ports, P.E., P.H., D.WRE, F.ASCE**

The **2010 Service to the Institute Award** is presented to **Michael A. Ports, P.E., P.H., D.WRE, F.ASCE**, for his more than 42 years of service to ASCE and EWRI. He has served the Water Resources Planning and Management Division in every capacity, and in EWRI from task committee to president.

Keynote Breakfast included for all Full, Student, and Monday-Daily Registrants. Additional tickets: \$25.

Nominate a Peer Today!

Nominations are invited for awards to be presented in 2011. Do you know someone who deserves to be recognized? Colleagues, supervisors, and mentors who have contributed to the environmental and water resources engineering profession through outstanding leadership research or substantial career accomplishments merit the accolades of their peers. We encourage you to nominate a peer for an award to be presented next year. Below, please find a list of Awards for which you may submit nominations:

EWRI INSTITUTE AWARDS

Career and Service Awards

- EWRI Lifetime Achievement Award
- Service to the Institute Award
- Planning & Management Council Service to the Profession Award

EWRI Journal and Practice Periodical Awards

- Journal of Irrigation and Drainage Engineering: Best Research Paper, Best Applied Paper, and Best Reviewer
- Journal of Hydraulic Engineering: Best Technical Note
- Journal of Hydrologic Engineering: Best Paper Award and Best Technical Note
- Journal of Water Resources Planning and Management: Best Policy-Oriented Paper, Quentin Martin Best Practice-Oriented Paper, and Best Research-Oriented Paper
- Practice Periodical of Hazardous, Toxic, and Radioactive Waste Management: Best Theoretical Paper and Best Practice Paper

Nominations for the 2011 EWRI Institute awards cycle (except student awards) are due November 1. For more information, nomination criteria, procedures, and forms, please visit <http://content.ewrinstitute.org/inside/honorawards.html>

Or contact EWRI at ewri@asce.org or EWRI Awards Committee Chair Wayne Huber at uwayne.huber@oregonstate.edu.

Special Achievement and Appreciation

- Section & Branch Council Outstanding Technical Group/Institute Chapter Award
- Outstanding Achievement Award
- Task Committee Excellence Award
- EWRI Expressions of Appreciation
- Special Recognition of Codes & Standards

EWRI Student & New Professional Activities Council Awards

- Student and Younger Member Photography Contest
- PB Student Design Competition
- Student Technical Paper Competition

For more information on EWRI Student and New Professionals Activities Council Awards, please visit: http://content.ewrinstitute.org/committees/ewri_studacts.html

ASCE SOCIETY AWARDS

ASCE-EWRI National Career Achievement and National Paper Society Awards

EWRI is involved in the selection of several ASCE Society Awards. Recognition opportunities for ASCE Society Awards may be found on page 65. We encourage you to nominate a peer for an ASCE Society Award to be presented in 2011.

Congress Ice Breaker Reception – Section Welcome

EWRI Visiting International Fellowship Awards

The International Committee (IC) established the Visiting International Fellowship program to promote cultural and technical exchange between EWRI members and international colleagues from developing countries. This marks the program's tenth year.

Visiting International Fellows are competitively selected by the IC's Visiting International Fellowship Task Committee. The 2010 EWRI Visiting International Fellows will participate in the Congress and in additional professional and cultural exchange activities during their visit to the United States.

The 2010 Visiting International Fellows will be recognized during the Congress Ice Breaker Reception:



Dr. Seyed Saeid Eslamian, Department of Water Engineering, Isfahan University of Technology, Isfahan, Iran



Dr. Chandra Shekhar Prasad Ojha, Professor, Department of Civil Engineering, Indian Institute of Technology, Roorkee, India



Dr. Marine Nalbandyan, Senior Researcher, The Center for Ecological-Noosphere Studies, National Academy of Sciences, Yerevan, Armenia

Congress Ice Breaker Reception included for all Full, Student, and Spouse/Guest Registrants. Additional tickets: \$25.

Planning & Management, Groundwater, and Irrigation & Drainage Councils Breakfast, Awards, and Lecture

Lecture Title: The Global Water Crisis: Six Steps for Survival

PLANNING & MANAGEMENT COUNCIL AWARDS

ASCE-EWRI NATIONAL CAREER ACHIEVEMENT SOCIETY AWARD

Julian Hinds Award and Lecture

The Julian Hinds Award recognizes the author or authors of a paper judged to make the most meritorious contribution to the field of water resources development. The award may also be made to an individual for notable performance, long years of distinguished service, or specific actions that advanced engineering in the field of planning, development, and management of water resources.

■ Peter Phillips Rogers, Ph.D., M.ASCE

Peter Phillips Rogers, Ph.D., M.ASCE has been selected to receive the **2010 Julian Hinds Award** for four decades of pioneering leadership, beginning with the Harvard Water Program, in water resource systems engineering, infrastructure planning and management, and water policy with particular concern for economic development and problems in developing regions. He has authored one book, co-authored 14 more, authored 36 book chapters, and written 80 peer-reviewed papers. He has for 40 years been a leader in the development of water resource systems methods, and their application around the world, particularly in the context of economic development in the Third World. He was one of the first participants in the Harvard Water Program in the 1960s and went on to join the Harvard Faculty and its Center for Population Studies. He has worked extensively with the World Bank, the Ford Foundation, and the Organization for Economic Development. He has been an advisor for the governments of India, Pakistan, Bangladesh, Thailand, Puerto Rico, China, and Ethiopia. He has also worked extensively with the United States government, including in the North Atlantic Regional Water Resources Study in the late 1960's and the Intergovernmental Panel on Climate Change.



EWRI SERVICE AWARD

Service-to-the-Profession Award

The Planning & Management Council Service-to-the-Profession Award is given to recognize and honor a person or persons for outstanding leadership, activities, and achievement in service to the profession in the field of water resources planning through the Institute, councils, local sections, or other organizational units of the Society.

■ Lindell E. Ormsbee, Ph.D., F.ASCE

The **2010 Planning & Management Council Service-to-the-Profession Award** is presented to **Lindell E. Ormsbee, Ph.D., F.ASCE** for sustained and valued contributions through research on water distribution systems; service through EWRI including as Emerging & Innovative Technologies Council Chair; and leadership as Director of the Kentucky Water Resources Institute and President of the Kentucky ASCE Section.

EWRI JOURNAL AWARDS

Journal of Water Resources Planning and Management

2010 QUENTIN MARTIN BEST PRACTICE-ORIENTED PAPER AWARD

The Quentin Martin Best Practice-Oriented Paper Award was established in 2009 to honor the memory of Dr. Quentin Martin, an innovative and successful water resource planner and frequent contributor to ASCE water resources planning and management committees, conferences, and journals. The award is presented to the author or authors of the outstanding practice-oriented paper in the ASCE Journal of Water Resources Planning and Management judged to be of superior merit and to demonstrate the application of advanced or advancing civil engineering technology solutions to a real-world problem.

David Yates, David Purkey, Jack Sieber, Annette Huber-Lee, Hector Galbraith, Jordan West, Susan Herrod-Julius, Chuck Young, Brian Joyce, and Mohammad Rayej, Ph.D., P.E.

"Climate-Driven Water Resources Model of the Sacramento Basin, California"

September/October 2009 **continued on next page**

Support EWRI Endowed Awards

Quentin Martin Award Endowment

Quentin Martin 1946-2003

An **EWRI Endowed Award** has been initiated to honor the memory of **Dr. Quentin Martin**, innovative and successful water resource planner and frequent contributor to ASCE water resource planning and management committees, conferences, and journals.



At his death, Dr. Martin was Chief Water Resources Planner of Texas's Lower Colorado River Authority (LCRA). Among his many contributions in 18 years at LCRA, he led development of the first water management plan in Texas in 1989, followed by the first drought management plan in 1991. In the late 1990s, Dr. Martin was instrumental in developing a regional long-term water plan under a statewide planning process required by the Texas Legislature. Prior to joining the LCRA, he was employed

for 13 years by the Texas Water Development Board and its predecessor, the Texas Department of Water Resources. Dr. Martin also served as a consultant on UN water resource projects in Brazil, Spain, and India, and generously shared his knowledge and experience with the US Army Corps of Engineers.

Naming the award for the best practice-oriented paper in the *Journal of Water Resources Planning and Management* after Dr. Martin is appropriate, because he won this award for his paper, "Drought Management Plan for Lower Colorado River in Texas" (1991). He later served as Associate Editor and then Editor of the Journal. In 2001, he received ASCE's Hinds Award for his distinguished service and contributions advancing the field of planning, development, and management of water resources.

To make a donation to the Quentin Martin Award, please visit: <http://content.ewrinstitute.org/applications/quentin-martin-award.html>

Donations are also being accepted for ASCE-EWRI Society Awards (See page 65.). For more information, please contact the ASCE Honors & Awards Department at awards@asce.org. Thank you for your support!

Planning & Management, Groundwater, and Irrigation & Drainage Councils Breakfast, Awards, and Lecture

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2010 BEST RESEARCH-ORIENTED PAPER

Emily M. Zechman and S. Ranji Ranjitha
 “Evolutionary Computation-based Methods for Characterizing Contaminant Sources in a Water Distribution System”

September/October 2009

2010 BEST POLICY-ORIENTED PAPER

Stacy M. Langsdale, Allyson Beall, Jeff Carmichael, Stewart J. Cohen, Craig B. Forster, and Tina Neale

“Exploring the Implications of Climate Change on Water Resources through Participatory Modeling: Case Study of the Okanagan Basin, British Columbia”

September/October 2009

GROUNDWATER COUNCIL AWARD

EWRI SERVICE AWARD

EWRI Outstanding Achievement Award

The EWRI Outstanding Achievement Award acknowledges exceptional performance of an important task or series of activities over a short period of time that advances the work of the environmental and water resources profession.

■ **Ni-Bin Chang, Ph.D., P.E., D.WRE, F.ASCE**

The **2010 EWRI Outstanding Achievement Award** is presented to **Ni-Bin Chang, Ph.D., P.E., D.WRE, F.ASCE**, in recognition for his leadership in two important publications for EWRI: 1) the special issue, “Low Impact Development, Sustainability Engineering, and Hydrological Impacts;” and 2) the book, *Effect of Urbanization on Groundwater: A Case-based Engineering Approach*.

IRRIGATION & DRAINAGE COUNCIL AWARDS

ASCE-EWRI NATIONAL CAREER ACHIEVEMENT SOCIETY AWARD

Royce J. Tipton Award

The Royce J. Tipton Award recognizes contributions to the advancement of irrigation and drainage engineering in teaching, research, planning, design, construction, or management.

■ **Wesley W. Wallender, Ph.D., P.E., M.ASCE**

The **2010 Royce J. Tipton Award** is presented to **Wesley W. Wallender, Ph.D., P.E., M.ASCE** for significant contributions to the advancement of irrigation through research, teaching,



and international consulting. Dr. Wallender has 26 years’ experience in irrigation and water resources research and teaching. He has an extensive record of research and leadership in graduate education. Since 1982, he has been employed by the University of California where he is presently a professor of hydrology in biological and agricultural engineering. He has obtained in excess of \$10 million in research funding to support 40 graduate students and leading to more than 140 peer-reviewed publications. His research has focused on hydraulics of surface irrigation. More recently, he has focused on modeling and measurement of precipitation and irrigation in watersheds from the submeter to the kilometer scale. He was editor of the ASABE Soil and Water Division 2004 – 08 and ASCE Manual 71, Agricultural Salinity Assessment and Management. He serves on a number of journal editorial boards and has consulted internationally on irrigation topics.

EWRI JOURNAL AWARDS

Journal of Irrigation and Drainage Engineering Awards

2010 BEST PAPERS

John D. Valiantzas, Ph.D.
 “Explicit Power Formula for the Darcy-Weisbach Pipe Flow Equation: Application in Optimal Pipeline Design”
 July/August 2008

A. Martínez-Cob, Ph.D., E. Playán, Ph.D., M.ASCE, N. Zapata, Ph.D., J. Cavero, Ph.D., E. T. Medina, and Mariam Puig
 “Contribution of Evapotranspiration Reduction during Sprinkler Irrigation to Application Efficiency”
 November/December 2008

2010 BEST HONORABLE MENTION PAPERS

S. Irmak, Ph.D., M.ASCE, Ayse Irmak, Ph.D., M.ASCE, Terry A. Howell, Ph.D., M.ASCE, D.L. Martin, Ph.D., M.ASCE, J.O. Payero, Ph.D., M.ASCE, and K.S. Copeland, Ph.D.
 “Variability Analyses of Alfalfa-Reference to Grass-Reference Evapotranspiration Ratios in Growing and Dormant Seasons”
 March/April 2008

Ayse Irmak, Ph.D., M.ASCE, Suat Irmak, Ph.D., M.ASCE, and D.L. Martin, Ph.D., M.ASCE
 “Reference and Crop Evapotranspiration in South Central Nebraska. I: Comparison and Analysis of Grass and Alfalfa-Reference Evapotranspiration”
 November/December 2008

Ayse Irmak, Ph.D., M.ASCE and Suat Irmak, Ph.D., M.ASCE
 “Reference and Crop Evapotranspiration in South Central Nebraska. II: Measurement and Estimation of Actual Evapotranspiration for Corn”
 November/December 2008

2010 BEST REVIEWERS

Thomas Wöhling, Ph.D.
 Lincoln Venture Ltd., Ruakura Research Center, Hamilton, New Zealand

Jiang Li, Ph.D., M.ASCE
 Department of Civil Engineering, Morgan State University, Baltimore, MD

Environmental Council Breakfast, Awards, and Lecture

Lecture Title: Environmental Grand Challenges

ASCE-EWRI NATIONAL CAREER ACHIEVEMENT SOCIETY AWARDS

Simon W. Freese Environmental Engineering Award and Lecture

The Simon W. Freese Environmental Engineering Award and Lecture is awarded to a distinguished environmental engineer whom the ASCE Executive Director will invite to deliver a lecture at a given meeting of the Society.

■ Jerald Schnoor, Ph.D., P.E., M.ASCE, NAE

The **2010 Simon W. Freese Environmental Engineering Award and Lecture** is presented to **Jerald Schnoor, Ph.D., P.E., M.ASCE, NAE** for pioneering research and philosophy in global air pollution issues and the linkage to surface water acidification and quality and for advancing the theory and practice of hydrologic sciences, including watershed and reservoir modeling. Professor Schnoor is the Allen S. Henry Chair in Engineering and the Co-Director of the Center for Global and Regional Environmental Research at the University of Iowa. He is a member of the National Academy of Engineering (elected in 1999) for his research using mathematical models in science policy decisions. Professor Schnoor chaired the U.S. Environmental Protection Agency's ORD Board of Scientific Counselors (2000-2004), and is a member of EPA's Science Advisory Board and the National Institutes of Health (NIH) National Advisory Environmental Health Sciences (NAEHS) Council. He is considered one of the founding fathers of phytoremediation. He serves as Editor-in-Chief of *Environmental Science and Technology*.



Walter L. Huber Civil Engineering Research Prize

The Walter L. Huber Civil Engineering Research Prizes are awarded to members of the Society, in any grade, for notable achievements in research related to Civil Engineering. Preference is given to younger members (generally under 40 years of age) of early accomplishment who can be expected to continue fruitful careers in research.

■ Thorsten Wagener, Ph.D., A.M.ASCE

Thorsten Wagener, Ph.D., A.M.ASCE is honored for pioneering research on rainfall-runoff modeling in gauged and ungauged catchments that has significantly advanced engineering practice and research related to flood forecasting and the sustainability of water resources systems under the risks posed by climate change. His software tools are being used around the world in flood prediction. His national and international collaborative research has directly influenced operational flood forecasting in the U.S. National Water Service and in South Africa.

ASCE-EWRI NATIONAL PAPER SOCIETY AWARDS

Rudolph Hering Medal

The Rudolph Hering Medal recognizes outstanding papers that contribute to the advancement of the environmental branch of the engineering profession.

■ Sybil Sharvelle, A.M.ASCE

■ Mazdak Arabi, A.M.ASCE

■ Scott McLamore, S.M.ASCE

■ M. Katherine Banks, Ph.D., P.E., F.ASCE

Sybil Sharvelle, A.M.ASCE; Mazdak Arabi, A.M.ASCE; Scott McLamore, S.M.ASCE; and M. Katherine Banks, Ph.D., P.E., F.ASCE have been

selected to receive the **2010 Rudolph Hering Medal** for the paper, "Model Development for Biotrickling Filter Treatment of Graywater Simulant and Waste Gas: I," *Journal of Environmental Engineering*, 134(10), 813-825. In this work, a mathematical model was developed to simulate a biotrickling filter for simultaneous treatment of graywater stimulant and waste gas contaminated with ammonia and hydrogen sulfide. The model accounts for mass transfer of gas phase contaminants into the liquid phase and subsequent transfer into a biofilm where microbial conversions of contaminants are modeled by Monod kinetics. The work involved a set of lab-scale tests to estimate parameters for each of the two components of the model. Separation of parameter estimation both decreased the total number of parameters estimated simultaneously and ensured that each component of the system was adequately represented. Process performance, as predicted by the calibrated model, was compared to results from the operation of bench-scale reactors. The model was capable of accurately predicting contaminant removal and thus was used to make a preliminary assessment on the feasibility of a proposed dual treatment biotrickling filter system. This model is a valuable tool to not only describe and predict process performance, but also to identify relevant design parameters.

Wesley W. Horner Award

The Wesley W. Horner Award recognizes papers that have contributed to the areas of hydrology, urban drainage, or sewerage.

■ Marcelo Cerucci, P.E., A.M.ASCE

■ Gopi K. Jaligama, P.E., A.M.ASCE

Marcelo Cerucci, P.E., A.M.ASCE and Gopi K. Jaligama, P.E., A.M.ASCE have been selected as the **2010 Wesley W. Horner Award** recipients for the paper, "Hydrologic and Water Quality Integration Tool: HydroWAMIT," *Journal of Environmental Engineering*, August 2008. The nominated work developed a spatially distributed and continuous hydrologic model focusing on total maximum daily load (TMDL) projects. The hydrologic and water quality integration tool (HydroWAMIT) is a spatially distributed and continuous time model that incorporates some of the features of previously developed and widely used models and tools to

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Choice of the Environmental Council or Hydraulics & Waterways Council Breakfasts included for all Full, Student, Spouse/Guest, and Wednesday-Daily Registrants. Additional tickets: \$25.

Environmental Council Breakfast, Awards, and Lecture

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provide a robust modeling structure for TMDL projects. HydroWAMIT assumes that the soil profile is divided into saturated and unsaturated layers. The water available in the unsaturated layer directly affects the surface runoff from pervious areas. Surface runoff from impervious areas is calculated separately according to precipitation and the impervious fractions of the watershed. Baseflow is given by a linear function of the available water in the saturated zone. The utility of HydroWAMIT is illustrated for a watershed in New Jersey. The model was calibrated, validated, and linked to the WASP. The results show that HydroWAMIT is a feasible alternative to HSPF and SWAT, especially for large-scale TMDLs that require particular processes for water quality simulation and minor hydrologic model calibration effort.

EWRI PRACTICE PERIODICAL AWARDS

Practice Periodical of Hazardous, Toxic, and Radioactive Waste Management

BEST PRACTICE-ORIENTED PAPER

**S.P. Hsu, Ph.D. and Wen-Pei Sung,
Ph.D., P.E.**

**“Evaluating the Fireproof Quality
of Building Interior Using Recycled
Materials”**

April 2009

BEST THEORETICAL-ORIENTED PAPER

**Dwarikanath Ratha, Ph.D., Kotnoor
Suryanarayana Rao Hari Prasad,
Ph.D., and Chandra Shekhar Prasad
Ojha, Ph.D., M.ASCE**

**“Analysis of Virus Transport in
Groundwater and Identification of
Transport Parameters”**

April 2009

Hydraulics & Waterways Council Breakfast, Awards, and Lecture

**Lecture Title: Hydrodynamics of Waterway Ecosystems:
Challenges and Future Directions**

ASCE-EWRI NATIONAL CAREER ACHIEVEMENT SOCIETY AWARDS

Hunter Rouse Hydraulic Engineering Award

The Hunter Rouse Hydraulic Engineering Award is presented, upon recommendation of the Executive Committee of the Environmental & Water Resources Institute Hydraulics and Waterways Council, to a distinguished person who will deliver the Hunter Rouse Hydraulic Engineering Lecture at an appropriate meeting of the Society.



■ Vladimir Nikora, Ph.D., A.M.ASCE

Vladimir Nikora, Ph.D., A.M.ASCE is the recipient of the **2010 Hunter Rouse Hydraulic Engineering Award** for his contributions to understanding turbulent flow, flow resistance, and sediment transport in open channels; fluid mixing processes; interactions between flow and biota; and the use of advanced measurement and statistical techniques.

Dr. Nikora has an appreciation for the history, leaders, and forefathers of his field. He is actively engaged in various educational efforts and contributes to writing texts and short courses.

Dr. Nikora began his research career in 1980 in Odessa (Ukraine) when he entered a Ph.D. program to study turbulence and sand dunes in rivers under the supervision of Professor D.I. Grinvald, a leading Russian expert on waterway turbulence and sediment transport. After earning his Ph.D., Dr. Nikora enjoyed an accelerated career trajectory. In 1987, he was chosen to lead a fluvial hydraulics research unit at the Institute of Geophysics and Geology, and a year later was appointed Deputy Director of the Institute, becoming the youngest Research Director in the Academy of Sciences of Moldova (a former Republic of the Soviet Union). In 1995, Dr. Nikora was invited to join the National Institute of Water and Atmospheric Research (NIWA) in New Zealand where he established a new research group that was prolific in bringing new insights into fluvial hydrodynamics and flow-biota interactions in waterways. After 11 successful years with NIWA, he returned to Europe in 2006 to lead the Environmental Hydraulics Research Group (which is now the Institute of Environmental and Industrial Fluid Mechanics) at the University of Aberdeen. Although he started his career as an environmental hydraulics engineer, over the years he has extended his interests and expertise towards interfacial areas between hydraulics and aquatic ecology, fluvial geomorphology, and physics.

Dr. Nikora's main research accomplishments relate to improved understanding of waterway turbulence, development, and applications of the double-averaging methodology for describing and predicting rough-bed turbulent flows, new sediment dynamics concepts related to erosion and transport of cohesive and non-cohesive sediments, new concepts of flow-biota interactions including those for periphyton, mosses, vascular plants, mussels, and fish communities. Dr. Nikora has also contributed to the advancement of measurement techniques and instruments for field and laboratory studies of flow turbulence and sediment dynamics. He has published extensively on these topics and initiated informal research networks to promote novel ideas in waterway hydraulics such as the double-averaging methodology for studying rough-bed flows. A growing part of his current research work relates to development of the Hydrodynamics of Aquatic Ecosystems as an interfacial branch of fluid mechanics, biomechanics, and ecology. Dr. Nikora serves as an Associate Editor of the *ASCE Journal of Hydraulic Engineering* and *AGU Water Resources Research*, and is a member of the Editorial Board of *Springer's Acta Geophysica*. He has also served as Secretary, Chair, and Past Chair of the IAHR Hydraulic Instrumentation Section.

Choice of the Hydraulics & Waterways Council or Environmental Council Breakfasts included for all Full, Student, Spouse/Guest, and Wednesday-Daily Registrants. Additional tickets: \$25.

Hydraulics & Waterways Council Breakfast, Awards, and Lecture

Hydraulic Structures Medal

The Hydraulic Structures Medal is awarded to an individual or individuals for significant contributions to the advancement of the art and science of hydraulic engineering as applied to hydraulic structures.

■ **Charles C.S. Song, Ph.D., P.E., M.ASCE**

The **2010 Hydraulic Structures Medal** is awarded to **Charles C.S. Song, Ph.D., P.E., M.ASCE** for achievement in analysis of tunnel filling transients and design of transient relief measures. Dr. Song is an Emeritus Professor at the University of Minnesota where he also had an appointment at the St. Anthony Falls Hydraulic Structures Laboratory. Dr. Song is a recognized expert in analysis of tunnel filling transients and design of transient relief measures. In addition to teaching and mentoring many future hydraulic engineers, he has made many significant contributions to the advancement of hydraulic evaluation and design.

ASCE-EWRI NATIONAL PAPER SOCIETY AWARDS

Karl Emil Hilgard Hydraulic Prize

The Karl Emil Hilgard Hydraulic Prize is presented to the author or authors of the paper that is judged to be of superior merit in dealing with a problem of flowing water, either in theory or in practice.

- **Alan J.S. Cuthbertson, Ph.D.**
- **David D. Apsley, Ph.D.**
- **Peter A. Davies, Ph.D.**
- **Giordano Lipari, Ph.D.**
- **Peter K. Stansby, Ph.D.**

The **2010 Karl Emil Hilgard Hydraulic Prize** is presented to **Alan J.S. Cuthbertson, Ph.D., David D. Apsley, Ph.D., Peter A. Davies, Ph.D., Giordano Lipari, Ph.D., and Peter K. Stansby, Ph.D.** for the paper, "Deposition from Particle-Laden, Plane, Turbulent, Buoyant Jets," *Journal of Hydraulic Engineering*, August 2008. The authors performed a comprehensive set of laboratory experiments and applied a computational fluid dynamic (CFD) model to the problem of particles settling from a submerged two-

dimensional buoyant jet released horizontally into quiescent water as in the discharge of wastewater from ocean outfalls. Particle deposition patterns showed a large deposit near the source of the rising jet with gradually decreasing deposits with distance from the source due to the gravity current formed at the water surface. Good agreement was obtained between the experimental data and the CFD model with respect to the amount of deposition as influenced by inertia, gravity, buoyancy, and particle settling velocity.

J.C. Stevens Award

The J.C. Stevens Award is given to the best discussion of a paper, the discussion having been published by the Society in a journal overseen by EWRI during the twelve-month period ending with June of the year preceding the year of award.

- **Craig Jones, A.M.ASCE**
- **Joseph Gailani, Ph.D.**

The **2010 J.C. Stevens Award** is presented to **Craig Jones, A.M.ASCE and Joseph Gailani, Ph.D.**, for the discussion of "Comparison of Two Techniques to Measure Sediment Erodibility in the Fox River, Wisconsin," *Journal of Hydraulic Engineering*, May 2009. The discussers compared two flume-based methods for measuring sediment erodibility and explained the differences in device methodology, measurement procedures, and the influence of spatial and temporal variation of erosion rates in the Fox River. They concluded that these two methods of measurement of erodibility should not be expected to produce the same results and thus justified the differences in erosion rates of Fox River sediments observed by the original authors.

EWRI JOURNAL AWARD

Journal of Hydraulic Engineering

2010 BEST TECHNICAL NOTE

Vladimir Nikora, Ph.D., Scott Larned, Ph.D., Nina Nikora, Ph.D., Koustuv Debnath, Ph.D., Glenn Cooper, and Michael Reid

"Hydraulic Resistance Due to Aquatic Vegetation in Small Streams: Field Study"

September 2008

ASCE Journals enjoy the reputation of being the most highly-read, highly-cited publications in the field, and are the leading source of research and its practical application for civil engineering professionals worldwide. EWRI produces five journals and one practice periodical:

- *Journal of Environmental Engineering*
- *Journal of Hydraulic Engineering*
- *Journal of Hydrologic Engineering*
- *Journal of Irrigation and Drainage Engineering*
- *Journal of Water Resources Planning and Management*
- *Practice Periodical of Hazardous, Toxic, and Radioactive Waste Management*

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Student & New Professional Activities Council Luncheon and Awards

EWRI STUDENT TECHNICAL PAPER COMPETITION

UNDERGRADUATE DIVISION

FIRST PLACE

Tara M. Martin, University of Alabama – Huntsville, Huntsville, AL

“The Rivers of Madison County: Determination of Bacterial Contamination in the Flint River during Winter Flood Stage”

SECOND PLACE

Wendy Rodriguez, California State University – Pomona, Pomona, CA

“Reclamation of Tile Effluent: Denitrifying Woodchip Bioreactors”

THIRD PLACE

Elizabeth Gilbert, University of Alabama, Tuscaloosa, AL

“Comparison of Water Quality Data to Determine Effects of Urbanization on the Flint River, Madison County, Alabama”

GRADUATE DIVISION

FIRST PLACE

John J. Ramirez-Avila, Mississippi State University, Starkville, MS

“Suspended Sediment Transport in a Southeastern Plains Watershed”

SECOND PLACE

James Montgomery, University of Alabama – Huntsville, Huntsville, AL

“Study of the Effects of Ozonation and Flow on Corrosion of Cement Mortar Lined Water Pipe”

RECOGNITION OF STUDENT CONTEST SPONSORS

EWRI acknowledges with very sincere thanks the contributions received from these sponsors to support the 2010 EWRI Student and New Professional Activities and Student Technical Paper Competition.

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PB STUDENT DESIGN COMPETITION

2010 COMPETITORS

California State Polytechnic University – Pomona, Pomona, CA

“Valley Generating Station Stormwater Capture and Groundwater Recharge”

Teni Mardirosian, Eric L. Geissinger, Johana Silva

Temple University, Philadelphia, PA

“Stormwater Management Practices at Temple University Main Campus”

Sachin Pandey, Rupal Patel, Jesse Minsky

University of Alabama – Huntsville, Huntsville, AL

“Out with the Retro, In with the Retrofit: Increasing Sustainability of Technology Hall”

Joshua Bruce, Kevin Edmundson, Justin Shelton

STUDENT & YOUNGER MEMBER PHOTOGRAPHY COMPETITION

The winner of the 2010 **Photography Competition** for students and younger members that is sponsored by the Environmental & Water Resources Institute of the American Society of Civil Engineers is **Kelly Donmoyer, EIT**, American Water, for her image titled “Without a Bridge, Crossing the Currents of Rio Chamelecon.” (See page 17.)

Student Luncheon included for all Student Registrants.

Watershed Council Breakfast, Awards, and Lecture

Lecture Title: Stochastic Hydrology in the Framework of Climate Variability and Change

ASCE-EWRI NATIONAL CAREER ACHIEVEMENT SOCIETY AWARDS

Ven Te Chow Award

Established in 1995, the Ven Te Chow Award recognizes individuals whose lifetime achievements in the field of hydrologic engineering have been distinguished by exceptional achievement and significant contributions in research, education, or practice.

■ Jose D. Salas, Ph.D., M.ASCE



Jose D. Salas, Ph.D., M.ASCE is the winner of the 2010 Ven Te Chow Award for his extensive contributions in the field of stochastic hydrology and time series analysis, physically-based hydrology, and drought characterization, and for his contributions to education

through books and publications. Over almost four decades, Professor Salas and his team have made significant contributions in diverse areas such as time series analysis, multivariate models, aggregation and disaggregation of hydrologic data, and on the use of non-parametric methods in hydrology. Of note is the use of these techniques to better understand and model the Colorado River, the Nile, and Great Lakes Basins. His early work suggested that sudden shifts observed in some geophysical processes may be forced by major oceanic atmospheric processes such as El Niño and changes in the inter-tropical convergence zone. Professor Salas has conducted extensive studies in characterizing droughts and introduced the concept of return period and risk in connection to droughts. His concepts on spatial analysis of hydrologic data have been applied to a variety of hydrologic processes including infiltration, precipitation, groundwater water contamination, regional drought identification, and crop yield. His work on regional frequency analysis of floods and extreme precipitation is noteworthy and he is credited with the concept of the “population index flood” approach that is useful for characterization of homogeneous regions. He has devised methods to study nonlinear and intermittent processes of streams in Arizona and California. In the process, he has been an excellent educator and mentor as evidenced by his books and the numerous students who have benefitted from his guidance.

Arid Lands Hydraulic Engineering Award

The Arid Land Hydraulic Engineering Award is given in recognition of original contributions in hydraulics, hydrology including climatology, planning, irrigation and drainage, hydroelectric power development, navigation specially applicable to arid or semi-arid climates, or contributions to the understanding and development of new technology in river basins.

■ Donald K. Frevert, Ph.D., P.E., D.WRE, F.ASCE



The 2010 Arid Lands Hydraulic Engineering Award is presented to Donald K. Frevert, Ph.D., P.E., D.WRE, F.ASCE for contributions to water management in arid and semi-arid areas, including development of RiverWare and SAMS

software for efficient water management, and service to the profession through ASCE and federal agency committees such as the Federal Interagency Subcommittee on Hydrology. Dr. Frevert has had the vision to organize, support, and complete in an efficient and timely manner projects leading to significant contributions to our understanding of the hydrology and management of water systems in arid and semi-arid environments. Two major examples are his leadership role in the development of the popular RiverWare and SAMS (Stochastic Analysis, Modeling, and Simulation) software for more efficient water management in major river basins, such as the Rio Grande, Colorado, Truckee, and Yakima, in the arid and semi-arid West. Dr. Frevert participated with development teams from the University of Colorado and Colorado State University to secure funding, technical monitoring, and agency oversight. Of particular importance was assurance that the software would be useful to Dr. Frevert’s own Bureau of Reclamation (USBR) and its partnering agencies. Despite the heavy demands of his job at the USBR, Dr. Frevert has displayed an unusual ability to remain active in research and scholarly work through his authorship or co-authorship of many technical publications and books, which made major contributions to hydrologic modeling. His work on evapotranspiration, leakage detection in irrigation canals, and irrigation return flow modeling is particularly noteworthy. His

work on the Hydrologic Modeling Inventory is also an important contribution, as many of the tools listed there are useful in water management in arid and semi-arid regions. Dr. Frevert’s devotion to his profession is amply demonstrated through his multitude of unselfish service activities within the federal government and ASCE.

EWRI EXPRESSION SPECIAL ACHIEVEMENT & APPRECIATION AWARD

Special Recognition of Codes & Standards

EWRI Standards Development Council Chair Award

Hugo A. Laoiciga, Ph.D., P.E.

The 2010 EWRI Standards Development Council Chair Award is presented to Hugo A. Laoiciga, Ph.D., P.E., for outstanding achievement in chairing the development of the KSTAT standard.

EWRI JOURNAL AWARDS

Journal of Hydrologic Engineering Awards

2010 BEST PAPER

Chang-Hee Park and Prof. Mustafa M. Aral

“Saltwater Intrusion Hydrodynamics in a Tidal Aquifer”

September 2008

2010 BEST TECHNICAL NOTE

Md. Rashedul Islam and Prof. Peter F. Rasmussen

“Improved High Resolution Radar-based Rainfall Estimation”

September 2008

The Watershed Council Breakfast is included for all Full, Student, Spouse/Guest, and Thursday-Daily Registrants. Additional tickets: \$25.