

NATIONAL WATER RESEARCH INSTITUTE

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**DAVID SEDLAK, GLOBAL LEADER IN THE STUDY OF WATER CONTAMINANTS
AND MANAGING URBAN WATER, TO RECEIVE 2014 CLARKE PRIZE**

FOUNTAIN VALLEY, Calif. – The National Water Research Institute (NWRI) is pleased to announce that David Sedlak, Ph.D., civil and environmental engineering professor at the University of California, Berkeley, will be the twenty-first recipient of the NWRI Athalie Richardson Irvine Clarke Prize for excellence in water research. Sedlak is also Co-Director of the Berkeley Water Center and Deputy Director of the National Science Foundation's Engineering Research Center on Re-Inventing the Nation's Urban Water Infrastructure (ReNUWIt).

Consisting of a medallion and \$50,000 award, the NWRI Clarke Prize is given out each year to recognize research accomplishments that solve real-world water problems and to highlight the importance and need to continue funding this type of research. Sedlak was selected as the 2014 recipient because of his pioneering research on advancing the way water resources and urban water infrastructure are managed, including implementing water reuse and reducing the discharge of emerging contaminants (such as pharmaceuticals and personal care products). His work has served as the foundation for major policy and technical initiatives to reduce the effects of these contaminants and protect public health.

“Dr. Sedlak has had a profound influence on all aspects of the scientific and technical issues arising from the presence of trace organic contaminants in wastewater discharges that ultimately impact the quality of water provided to consumers,” said Michael Kavanaugh, Ph.D., P.E., BCEE, Principal at Geosyntec Consultants, Inc. and Sedlak's colleague. “His academic, research, and publication achievements, combined with his communication abilities, make him an outstanding choice for the Clarke Prize.”

Sedlak arrived at UC Berkeley in 1994. In 1996, he began studying wastewater-derived contaminants with a focus on natural and synthetic estrogens. His research on the presence of steroid estrogens in wastewater effluent raised concerns for public health and the aquatic environment, especially in situations when treated wastewater was reused or discharged to rivers in arid climates. From this study, he and his research group developed analytical techniques to detect these contaminants at low concentrations and also published one of the first papers on the topic.

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In 2000, Sedlak made another breakthrough in wastewater-derived contaminant research working with his student, William Mitch, when they identified the source and fate of N-nitrosodimethylamine (NDMA), a carcinogen formed during the disinfection of wastewater. Disinfectants, like chlorine, are used to control microbial contaminants, but these disinfectants can react with organic nitrogen-containing compounds to form NDMA. If the chlorinated wastewater is used for drinking water supplies, the formation of NDMA can cause serious health concerns. From their research, Sedlak and Mitch developed approaches for decreasing NDMA concentrations, quantifying the compounds that form NDMA, and adjusting the disinfection process. These approaches are now applied in efforts to control NDMA.

“Dr. Sedlak is perhaps the brightest mind in the world working on contaminants in treated wastewater and treatment processes necessary for potable water reuse,” wrote his nominator, Richard Luthy, Ph.D., P.E., DEE, Professor at Stanford University and the Director of ReNUWIt. “David was among the first environmental engineers to investigate the occurrence of endocrine-disrupting compounds in wastewater effluents and reuse systems, as well as the fate of such compounds in natural systems, and no one exceeds his standing in this arena. By being among the first in the field of environmental engineering and science to make an impact on our understanding of microcontaminants, David is on a wonderful trajectory for further path-breaking accomplishments.”

More recently, Sedlak focused his research on natural system processes, such as using engineered treatment wetlands to remove chemicals from wastewater-impacted waters. His research may change the way wetland treatment systems are enhanced and operated to eliminate micropollutants and improve water quality. As Deputy Director of ReNUWIt, a research center focused on advancing the way urban water is managed, he also has had the opportunity to lay the groundwork for improving water infrastructure, such as expanding water distribution systems, increasing planned water reuse, and reducing the amount of emerging contaminants released into the environment. Another notable achievement is Sedlak’s newly published book, *Water 4.0: The Past, Present, and Future of The World’s Most Vital Resource*, which discusses the evolution of the urban water system over the last two millennia and his perspective on the technologies and advancements needed to remake the system in the near future.

Because of his considerable knowledge and expertise, Sedlak has been invited to serve on numerous boards and committees throughout the water industry. For instance, in 2004 and 2012, he served as Chair of the *Gordon Research Conference on Environmental Science: Water*, the leading conference on exploring advancements in water quality science and technology. He was also a member of the Drinking Water Committee for the United States Environmental Protection Agency Science Advisory Board, panel member for the National Science Foundation, and member of the National Research Council Research Committee on Water Reuse. Currently, he serves as Associate Editor for both *Environmental Science & Technology* and *Water Research*, two prestigious journals in the scientific community. Sedlak also offers his expertise serving on an NWRI Expert Panel to advise the California Department of Public Health on scientific, technical, and public health issues regarding the development of uniform criteria and regulations for advanced treatment water reuse in California.

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The Clarke Prize will be presented to Sedlak on Friday, November 7, 2014, at the Twenty-First Annual NWRI Clarke Prize Lecture and Award Ceremony, to be held in Huntington Beach, California. The award ceremony is the highlight of the NWRI Clarke Prize Conference, a 1-day event that features a mix of innovative research by leading academics complimented with practical case studies by industry practitioners.

“I am deeply honored to receive the 2014 Clarke Prize,” said Sedlak. “To be recognized by my peers is simultaneously rewarding and humbling.”

Established in 1993 in honor of NWRI’s co-founder, the late Athalie Richardson Irvine Clarke, the Clarke Prize is one of only a dozen water prizes awarded worldwide and has been distinguished by the International Congress of Distinguished Awards as one of the most prestigious awards in the world.

Recent past recipients of the Clarke Prize include: civil and environmental engineer R. Rhodes Trussell, Ph.D., P.E., BCEE, NAE, of Trussell Technologies, Inc. (2013); environmental engineer Pedro J.J. Alvarez, Ph.D., P.E., DEE, of Rice University (2012); environmental engineer Mark R. Wiesner, Ph.D., P.E., of Duke University (2011); environmental engineer Jerald L. Schnoor, Ph.D., of the University of Iowa (2010); environmental biotechnologist Bruce E. Logan, Ph.D., of The Pennsylvania State University (2009); and aquatic scientist Nancy N. Rabalais, Ph.D., of the Louisiana Universities Marine Consortium (2008).

More information about the Clarke Prize Conference and Award Ceremony can be found at www.clarkeprize.com and more information about NWRI can be found at www.nwri-usa.org.

The National Water Research Institute (NWRI) was founded in 1991 by a group of Southern California water agencies in partnership with the Joan Irvine Smith and Athalie R. Clarke Foundation to promote the protection, maintenance, and restoration of water supplies and to protect the freshwater and marine environments through the development of cooperative research work. NWRI’s member agencies include Inland Empire Utilities Agency, Irvine Ranch Water District, Los Angeles Department of Water and Power, Orange County Sanitation District, Orange County Water District, and West Basin Municipal Water District. Please visit www.nwri-usa.org for more information.

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