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Volume 49, Number 3
Summer 2013

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ISSN 2325-842X

Quarterly Periodical of
The American Academy of Environmental Engineers and Scientists®

Environmental Engineer and Scientist is published quarterly by the American Academy of Environmental Engineers and Scientists®. Address all communications on editorial, business and other matters to:

Editor-in-Chief,
Environmental Engineer and Scientist®
American Academy of Environmental Engineers and Scientists®
147 Old Solomons Island Road, Suite 303
Annapolis, Maryland 21401
410-266-3311

ENVIRONMENTAL ENGINEER & SCIENTIST

Volume 49, Number 3 Summer 2013

News and Features

Departments

AMERICAN ACADEMY OF ENVIRONMENTAL ENGINEERS & SCIENTISTS®

POSTMASTER: Send Address Change Form 3579 to American Academy of Environmental Engineers and Scientists, 147 Old Solomons Island Road, Suite 303, Annapolis, MD 21401.

POSTAL INFORMATION: Environmental Engineer and Scientist (ISSN 2325-842X) is mailed as third class matter from Annapolis, MD.

SUBSCRIPTIONS: Member dues are applied in part, as a subscription to Environmental Engineer and Scientist; additional subscriptions, sold only to those not eligible for AAEES membership, are $20 ($50 outside North America); single copies are $10.

CONTRIBUTIONS: Contributions in the form of news releases, manuscripts and photographs will be considered. Write for manuscript submission specifications. Every reasonable care is taken with contributions, but the Academy is not responsible for damage or loss.

PRESIDENT'S PAGE

Pasquale S. Canzano, P.E., BCEE
psc@dswa.com

A New Vision - A New Mission

In general, most people do not readily embrace change, because they tend to be more comfortable with the status quo and the certainty of their environment. However, in these challenging times, with change can come opportunity. And so it is the case with the Academy.

The most dramatic recent changes, obviously, are in the Academy's name and corresponding logo to reflect the exciting addition of the Academy's certification program for environmental scientists. This momentous change provided a unique opportunity for the Academy to not only grow its membership, but to expand the Academy's ability to achieve its Mission. I am pleased to report that the Academy's certification program for environmental scientists has moved into high gear in the new year and the number of Board Certified Environmental Scientists, BCESs, continues to grow. The BCES certification program has attracted our environmental science colleagues from a full spectrum of disciplines, such as aquatic biology, earth sciences, geology, marine biology, soil microbiology and zoology to name a few. The alliance between environmental engineers and environmental scientists further expands networking opportunities within our profession and promotion of the Academy. Accordingly, the Academy is the only national and international certification board for environmental engineers and scientists that will be duly recognized by CESB.

A change necessitated by the addition of the BCES certification program was the creation of two separate certification boards within the Academy unique to environmental engineers and environmental scientists respectively. The members of the two certification boards are appointed by the Academy's Board of Trustees (BOT) and they must fully meet the same qualifications criteria as BOT Trustees at Large. The BOT will continue its responsibility in overseeing the governance of the Academy. This change was in keeping with CESB guidelines and provided a clear distinction between the Academy's certification program for environmental engineers and that for environmental scientists. Therefore, the future certificates issued by the Academy will designate the appropriate Academy certification board as either the American Academy of Environmental Engineers Certification Board (AAEECB) or American Academy of Environmental Scientists Certification Board (AAESCB), as applicable.

Another change taking place within the Academy is a more aggressive attitude in reaching out to and welcoming new affiliate organizations, such as NAEM, NEHA and US-AIDIS (U.S. Water Partnership). Affiliate organizations along with our sponsoring organizations, that serve on the BOT, have presented several opportunities during the year to promote the Academy and board certification through workshops, seminars, breakfast meetings and webinars on topics that are of mutual interest to our profession. In addition, these cooperative efforts provide potential sources of revenue for the Academy.

In keeping with the changes experienced this year, it became evident that both the Academy's Vision and Mission statements required updating. Thanks to the efforts and guidance of Past President, Michael W. Selna, P. E., BCEE, the Board of Trustees adopted new Vision and Mission statements as follows:

Vision

Leadership and excellence in environmental engineering and science

Mission

Protecting public health and the environment by:

- Recognizing leadership and excellence through board certification of environmental engineers and scientists
- Providing professional development opportunities for students, engineers, and scientists

The updated Vision statement has been simplified and succinctly presents the Academy's vision for the present and into the future.

A noteworthy change to the Mission statement was in recognizing the Academy's responsibility to provide professional development opportunities not only for engineers and scientists, but the students who represent the future of our profession and that of the Academy.

The BOT has fully met its fiduciary responsibility to the Academy in developing and approving these important changes that will foster growth and progress for AAEES. I am especially pleased to have been a part of this groundbreaking effort and commend our Trustees for their foresight.

Change can be good!

As always, I welcome feedback from our members at psc@dswa.com.

The alliance between environmental engineers and environmental scientists further expands networking opportunities within our profession and promotion of the Academy.

ACADEMY NEWS

New AAEES Headquarters

The American Academy of Environmental Engineers and Scientists has new headquarters. Please update your address books with our new contact information:

AAEES
147 Old Solomons Island Road, Suite 303
Annapolis, MD 21401
410.266.3311, FAX: 410.266.7653
http://www.aaees.org

New Member Benefit PDH Online

The American Academy of Environmental Engineers and Scientists is partnering with PDH Online to provide members with professional development hour education. All AAEES certification holders and members who use the code AAEE25 receive a 25 percent discount from any of PDH Online's 2,000+ courses, including live webinars. Members can search courses and sign up at www.pdhonline.org or www.pdhcenter.com.

PDH Online is among the leading online course providers and underscores that it is an approved sponsor by many state licensing boards for professional engineers. More than 100 of its courses have been developed by BCEEs. AAEES has designated PDH Online as its Preferred PDH Provider to help AAEES colleagues meet their bi-annual PDH requirements.

Specialty Certification Renewal

The 2014 Specialty Certification Renewal cycle will be underway beginning in September. Notices will be emailed to all Board Certified individuals. Log in to the AAEES Center to view your up-to-date contact information. *Every member automatically has an account with the AAEES Center.* Log in using your primary email address (the same email address to which you receive AAEES notices, Highpoints, and announcements). If you are logging in for the first time, your password is Password1.

2013 Annual Meeting

The 2013 Annual Meeting of the Board of Trustees will be held at the Hotel DuPont, Wilmington, Delaware on November 8-9, 2013. President Canzano encourages the BOT to come in early Friday to attend the solid waste treatment facility tour that offers PDHs.

The BOT meeting begins at 8:00 a.m. Saturday, November 9, with the President's Reception at 6 p.m. followed by the Installation Dinner. A concurrent Spouse Program is planned. More details and registration information will follow soon.

2014 Election Results

Unofficial winners in the election of 2014 Officers and Trustees include:

James F. Stahl - President-Elect
Howard LaFever - Vice President
Sandy Tripp - Trustee-at-Large
Wendy Wert - Trustee-at-Large

Confirmation of their election will take place at the 2013 Annual Meeting. They will be installed November 9, 2013, along with the new Board of Trustees. Their official terms start January 1, 2014.

Leaving the Board December 31 are **Michael Selna**, Past President, **Joseph F. Malina**, Trustee-at-Large, **Richard J. Pope**, Trustee-at-Large, and **Tapas K. Das**, representing AIChE.

2014 Committee Appointments

Reminder to Committee Chairs

President-Elect Christian Davies-Venn is anxious to receive your recommendations for new committee members and/or chairs to replace those whose terms expire in December 2013. The Academy is seeking volunteers who are interested in helping the Academy through its network of committees. Committee appointments are for three-year terms. Please email your recommendations and letters of interest to the attention of President-Elect Davies-Venn either via email, at jsolmo@aaees.org or via postal mail to:

AAEES Headquarters
147 Old Solomons Island Road, Suite 303
Annapolis, MD 21401

Shining the Spotlight

The Academy has special features on its website and in electronic and print publications in recognition of you, **the Academy's honored professionals**. If you want to toot your own horn, or someone else's, here are two ways to do it:

Volunteer of the Month

Part of the Academy's success lies with the selfless work of its members. Do you know of a member that always goes above and beyond? Then send a nomination for **Volunteer of the Month**. Email the 350-word nomination to YMoulden@aaees.org.

Side Tracks

Interested in knowing about the extracurricular activities of your fellow Academy members? Or do you have fun (or possibly funny) stories you'd like to share? Side Tracks is intended to provide a vehicle for learning about the outside interests of your colleagues. Email your submissions to YMoulden@aaees.org for a chance to be featured in a future issue of *Environmental Engineer and Scientist.*

MEMBER NEWS

Awards and Honors

Andrew W. Richardson, P.E., BCEE, received the Outstanding Service Award from the American Water Works Association for his exceptional achievements and commitment to the water industry. Mr. Richardson has been a member of AWWA since 1983 and has served in several roles for the organization, including President. He was presented with the award during the 2013 AWWA annual meeting held this past June in Denver, CO.

Mr. Richardson is currently CEO of Greeley and Hansen and has been a Board Certified Environmental Engineer in Water Supply and Wastewater Engineering since 1998.

R. Rhodes Trussell, Ph.D., P.E., BCEE, NAE, is the 2013 recipient of the NWRI Athalie Richardson Irvine Clarke Prize. Dr. Trussell was selected for this honor because of his extraordinary accomplishments in using fundamental scientific principles and current research findings to solve the most challenging water quality problems and improve the designs of new water treatment plants and technologies.

Dr. Trussell is currently Chairman and CEO of Trussell Technologies, Inc., and has been a Board Certified Environmental Engineer in Water Supply and Wastewater Engineering since 1990.

In Memoriam

Dr. John F. Ferguson, Ph.D., BCEEM, passed away suddenly on March 29, 2013. Dr. Ferguson was a loving husband, father, and grandfather, and a dedicated environmental engineer, teacher, and mentor of both students and colleagues. He will be dearly missed.

Dr. Ferguson was born in Stockton, CA, where he met and married his high school sweetheart, Lynn Stocking Ferguson. Both he and Lynn graduated from Stanford University, where he rowed varsity crew and majored in civil engineering.

He later went on to receive his Master's and doctoral degrees at Stanford, working for two years at the Los Angeles County Sanitation District between his graduate degrees. He then worked as a Research Fellow at Harvard before joining the faculty of the Department of Geography and Environmental Engineering at the Dr. Johns Hopkins University.

After four years at JHU, he joined the CEE faculty at the University of Washington, where he remained for the rest of his career. Although Dr. Ferguson retired from active teaching in 2007, he continued to direct research and advise students.

Dr. Ferguson served as Acting Chair of CEE at UW during 1986-87 and 2006-07, Associate Chair from 1987-92, and Chair from 1992-97. Under his leadership, the Department flourished and the Environmental Engineering program grew to international prominence. Dr. Ferguson's career spanned the 40 years of the Clean Water Act, during which time he made major contributions in the areas of phosphate removal, corrosion control in water distribution systems, and anaerobic wastewater treatment. In recent years, his work focused on the fate of endocrine disrupting chemicals in wastewater.

Dr. Ferguson was a member of several AAEES Sponsoring Organizations, including: AEESP, ASCE, AWWA, and WEF He had been a Board Certified Environmental Engineering Member in Water Supply and Wastewater Engineering since 2006.

Dr. Ferguson is survived by his wife Lynn; his children and their spouses: Kent and Reina of Seattle, Mary and Tim of Boston, and Sally and Bart of Chicago; seven adoring grandchildren: Nick, Nathan, Seth, Sage, Kayla, Celia, and Kira; his brother Jim Ferguson of Stockton; and many friends, students, and colleagues.

The Academy Speakers Bureau

The Academy is seeking volunteer speakers to form an Academy Speakers Bureau. Speakers will visit local agencies and consulting firms in their area at lunchtime and deliver a short presentation about the value of AAEES Board Certification and other programs. Presentations take the form of a brown bag lunch and a short power point about the Academy, encouraging qualified environmental engineers and scientists to seek certification, and compete in the E3 Awards.

The Academy will provide a power point and other materials for the get-together. This is a great opportunity to network, demonstrate your commitment to excellence in environmental engineering and science, support the Academy, provide leadership in the profession, and have some fun in the process!

Why Become a Speaker? Speaking of fun, for your efforts, the Academy is offering 1 PDH per hour, recognition in the monthly *Highpoints* and quarterly *Environmental Engineer and Scientist*.

Interested members can email Bob Elder at BElder@aaees.org.

While the nation reinvests in its infrastructure...

Are you reinvesting in the infrastructure of your organization?

Hiring the right people is key to your success. Bringing in qualified Environmental Engineering and Environmental Science candidates will strengthen your organization and provide you with the talent you need. Visit the AAEES Career Center today to find that perfect fit.

The American Academy of Environmental Engineers and Scientists can help move along your candidate search. By posting a job on the AAEES Career Center, you will get unparalleled exposure within the engineering and scientific communities. As a part of the Engineering & Science Career Network, AAEES ensures that your job posting will be seen by thousands of qualified candidates relevant to your industry. And with access to all resumes posted to the network, you can widen your reach to find the right candidate today!

When it comes to making career connections in the Environmental Engineering and Environmental Science industries, more and more job seekers are turning to the AAEES Career Center to find their next position. Where better to post a job and search for qualified candidates? Visit the AAEES Career Center to post your Environmental Engineering and Environmental Science jobs today!

The ESCN is a strategic industry alliance formed by AAEES and other top trade and professional associations that serve companies searching for engineering and science professionals.

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2014 Election Results

The ballots have been counted. The results will be official after the Teller's Report is confirmed by the Board of Trustees at the 2013 Annual Meeting. The following individuals have been elected for 2014: current President-Elect, Christian Davies-Venn, will succeed to the office of President; James F. Stahl will be President-Elect; and Howard B. LaFever will be Vice President. Sandra L. Tripp and Wendy A. Wert have been elected to the two open Trustee-at-Large positions. AAEES thanks the 2014 Election Teller's Committee for taking the time to tabulate the votes: Anne Marie Germaine, P.E., BCEE, Dennis M. Kamber, P.E., BCEE, and Amit Pramanik, Ph.D., BCEEM.

Christian Davies-Venn

James F. Stahl

Sandra L. Tripp

Howard B. LaFever

Wendy A. Wert

AMERICAN ACADEMY OF ENVIRONMENTAL ENGINEERS AND SCIENTISTS CONFERENCE AT THE UNIVERSITY OF CALIFORNIA IRVINE A SUCCESS

Panelists Judi Miller, David Prasifka, John Ciccotelli, Alex Mena, and Bruce Chow

Wendy A. Wert, P.E., BCEE

On March 28, 2013, the American Academy of Environmental Engineers and Scientists (AAEES) hosted their inaugural student conference at the University of California Irvine (UCI). Representative Wendy Wert initiated the proceedings by showing the Academy's value of certification video http://www.youtube.com/watch?v=P0Of8-NsLjU&feature=youtu.be.

As demonstrated through testimonials, the Academy is dedicated to excellence in the practice of environmental engineering and science to ensure the public health, safety, and welfare. The purpose of this event was to provide a forum for exceptional researchers, organizations, projects, and programs to carry the Academy's mission forward to train the next generation of environmental practitioners. The informal meet and greet event continued with a good natured Water Environment Federation (WEF) Water Bowl competition.

This event is modeled after the College Bowl television quiz show asking participants questions related to the water industry encompassing water chemistry, operations and design of treatment systems. The event was moderated by Josh Gisi, the AAEES UCI Student Chapter President. All student participants were awarded door prizes provided by the Sanitation Districts of Los Angeles County (Sanitation Districts), the Blue Planet Network, and AAEES.

The conference reconvened for a networking breakfast in the UCI Calit2 building on March 29, 2013. The technical portion of the program was initiated by AAEES 2012 President Mike Selna. Mr. Selna is the former Assistant Chief Engineer and Assistant General Manager for the Sanitation Districts the position from which he retired a few years ago. Mike served the Sanitation Districts for 36 years after earning a B.S. in Civil Engineering at UC Berkeley in 1970 and an M.S. in Environmental Engineering at UC Davis in 1973. A dedicated mentor, Mr. Selna was instrumental in the founding of and served as Chairman of Environmental Engineers of the Future (E2F), a non-profit organization providing funding for Masters Degrees in Environmental Engineering. E2F, a partnership among agencies and firms involved in water, wastewater, and solid waste management, is linked to 65 universities, and has provided $940,000 to students.

Mr. Selna provided a brief overview of the Academy. A primary objective of the Academy is to certify environmental engineers in their area of expertise, which include: Air Pollution Control, General Environmental Engineering, Hazardous Waste Management, Industrial Hygiene,

Radiation Protection, Solid Waste Management, Water Supply and Wastewater and Sustainability. Another objective of the Academy is to certify Environmental Scientists in their area of expertise, which include: Air Resources, Environmental Biology, Environmental Chemistry, Environmental Microbiology, Environmental Toxicology, Groundwater and the Subsurface Environment, Surface Water Resources, and Sustainability Science. Board Certification is the next step beyond Professional licensure. AAEES also offers membership categories that serve all levels from students to senior managers. To learn more about the organization, benefits of membership, and how to join, please go to AAEES website at www.aaees.org

Speaker Diego Rosso welcomed attendees to UCI. Dr. Rosso holds a joint appointment as an Assistant Professor in both the Civil and Environmental Engineering and Chemical Engineering and Materials Science in the Henry Samueli School of Engineering at UCI. Dr. Rosso opened his talk by asking "What do Environmental Engineers and Scientists do?" Dr. Rosso intrigued participants by suggesting that the most correct answer is to "drive a train." Dr. Rosso explained that the engineer had designed and built the locomotive and could not identify a volunteer to operate the machine so the engineer was forced to drive it himself. Dr. Rosso suggested that the ultimate challenge to the profession is to define environmental problems, systematically test solutions, and ultimately develop practical applications of this complex technology. Graduates can expect to apply science and engineering principles to improve the environment (air, water, and/or land resources), to provide clean water, air, and land for habitation, and to remediate polluted sites. It involves wastewater management and air pollution control, recycling, waste disposal, radiation protection, industrial hygiene, environmental sustainability, and public health issues as well as knowledge of environmental engineering law.

Environmental engineers conduct hazardous waste management studies to evaluate the significance of such hazards, advise on treatment and containment, and develop regulations to prevent mishaps. Environmental engineers also design municipal water supply and industrial wastewater treatment systems as well as address local and global environmental issues such as the effects of acid rain, global warming, ozone depletion, water pollution and air pollution. At many universities, Environmental Engineering programs follow either the Department of Civil Engineering or the Department of Chemical Engineering. Environmental "civil" engineers focus on hydrology, water resources management, bioremediation, and water treatment plant design. Environmental "chemical" engineers, on the other hand, focus on environmental chemistry, advanced air, and water treatment technologies and separation processes. Dr. Rosso and his students study both.

Dr. Rosso challenged participants to develop innovative strategies to address the world's global water situation. For example, 97% of the world's water is contained in the oceans, leaving only 3% available as a fresh water source. Most of that 3% is tied up in the icecaps and glaciers (68.7%), another portion is located in groundwater basins (30.1%) leaving only 0.3% available as surface water. On a global scale we use 69% of this source for agricultural purposes, 22% for industrial applications, 8% for general household applications, leaving just 1% for recreational and environmental applications. The USGS reports that the United States consumed an average of 410 billion gallons per day in 2005 and the state of California is the number one consumer from a water use perspective.

The Program continued with UCI Undergraduate Senior Design Team speakers Hally Herra, Megan Lee, Stephani Torres, and

Speakers Dr. Diego Rosso and Michael W. Selna, P.E., BCEE

The University of California, Irvine, Calit2 Atrium

Christopher Carson presenting an overview and update of their ongoing research projects.

An industry professional, John Ciccotelli then presented statistics that sought to define the direction of environmental practice, changes in the field, and future trends. He also presented a global job outlook. According to Mr. Ciccotelli, consulting firms are being asked to address broader program issues such as sustainability and climate change. He discussed divers markets such as Australia, Singapore, and South America.

Moderator Mike Selna then convened an Industry Panel with more than 130 years of combined experience to discuss "Skills Developed at University that Lead to Professional Success." Panelists Judi Miller (CH2M Hill), Alex Mena (Sanitation Districts), John Ciccotelli (MWH), Bruce Chow (Black and Veatch), and David Prasifka (AECOM) discussed the definition of "professional success." It was agreed that "success" is a highly individual concept that varies not only due to personality types, but also with external factors such as age, professional experience, and financial situation. All agreed that status in the profession and reputation matter. Ms. Miller warned that "Once your reputation is gone you can never get it back." The panelists unanimously agreed that although money can be a motivator, the most successful practitioners are not solely influenced by fiscal gain. Professional success can be defined as connecting your day to day role with something larger. Mr. Ciccotelli observed that if you "love what you do, you'll never work a day in your life." Mr. Prosifka mentioned that professional success can be tied to status but he agreed with John, that contributing to projects and programs that challenge and enhance your professional skills on a daily basis leads to a satisfying life. Mr. Mena, has a background in both the consulting and agency fields, so he was in a unique position to compare environmental practice in both sectors. Mr. Mena agreed that intellectual stimulation is paramount, but that agencies can match your career goals to provide both development and security benefits.

The consensus was that however you define "professional success", the field of environmental engineering and science will afford candidates excellent prospects for finding it. Panelists also agreed that the desirable candidate is enthusiastic, positive, talented, and hard working. These projects and programs involve diverse teams and desirable candidates have a humble nature and are willing to serve in any capacity that helps to bring the mission to fruition. Technical qualifications matter. The environmental profession does not accommodate "smoke and mirrors." Genuine technical skills are needed and applied to solve real world problems on a daily basis.

Communication skills are paramount. As mentioned by Mr. Chow, "teams are distributed" in our global economy. Often, scientists and engineers work with others with limited opportunities for face to face interaction. Winning teams communicate well, are respectful, humble, supportive, and strategic. The number one obstacle for new team members is to get "shut down." Excellent communication skills can help to avoid this hurdle. Although business and organizational knowledge is important, this attribute was seen by panelists as something that can be developed. The successful candidate would be technically proficient and have the ability to work well in teams.

The Program continued with UCI Graduate researchers Pasha Ameli, Laura Weiden, and Matthew Jeung presenting an overview and update of their ongoing projects.

The program then focused on how local agencies are applying research to solve regional environmental challenges. Speaker Wendy Wert presented an overview of Sanitation Districts recently completed Capital Improvement Programs. The Sanitation

Jim Brittell conducting UCI Sustainability Tour.

Attendees with Speaker Wendy Wert, P.E., BCEE

Districts consists of approximately 1,900 employees. The annual budget for the agency is approximately $800 million for wastewater management and about $370 million for solid waste management.

The Sanitation Districts are a regional organization consisting of 23 independent special districts serving the wastewater and solid waste management needs of approximately 5.5 million people in Los Angeles County. The Sanitation Districts' service area covers approximately 810 square miles and encompasses 78 cities and unincorporated territory within the county. The 23 independent districts that compose the Sanitation Districts work cooperatively under a Joint Administration Agreement (JAA) with one administrative staff headquartered near Whittier, California. Each district has a separate board of directors consisting of the presiding officers of the governing bodies of the local jurisdictions situated within that district. Each district is required to pay its proportionate share of the joint administration costs, pursuant to the terms of the JAA.

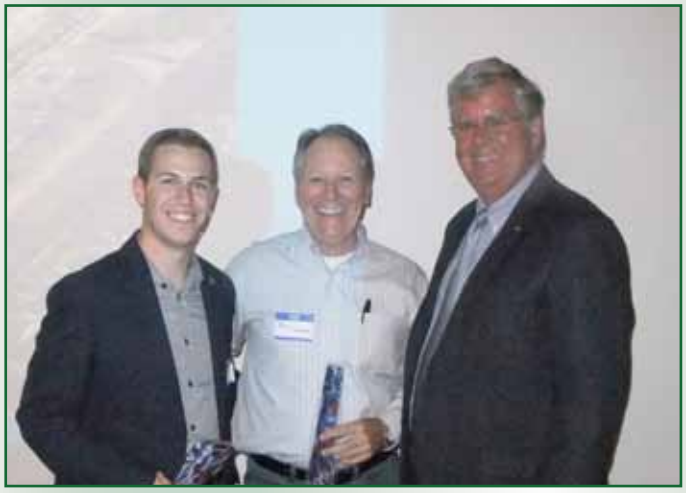
The Sanitation Districts have saved $33 million over the past two years through its energy management program that included development of renewal biogas resources, minimization of energy usage, and minimization of energy cost. The savings include $24 million from self-generation through biogas resources at the Joint Water Pollution Control Plant (JWPCP) located in Carson.

Renewable biogas resources are developed at seven of the Districts' eleven wastewater treatment plants that comprise the Joint Outfall System. Six of these seven plants are water reclamation plants (WRPs) that treat liquid streams only and discharge solids into the sewer for treatment downstream at the seventh and main plant, the JWPCP. Central solids processing at JWPCP greatly increases the energy efficiency of solids treatment and helps produce enough digester gas to generate power for the entire plant's needs. This contributes to the low average energy usage rate of 1,520 kWh per million gallons (MG) for plants in the Joint Outfall System. This is well below California's prototypical wastewater treatment energy intensity of 2,500 kWh per million gallons. The second way in which the savings are derived is through the integration of energy efficiency into the design of new treatment systems. The in-house design staff takes special care to ensure that the most cost-effective and energy efficient treatment processes are included in the design of new facilities. In addition, the Sanitation Districts constantly seek to improve the efficiency of its treatment processes through the installation of new energy efficient technology throughout the wastewater system. Savings also were earned through the minimization of energy costs.

Rebate incentives through regional electric utilities help to incentivize energy efficiency improvements. In the past two years, the Sanitation Districts received $1.3 million in energy efficiency rebate incentives for the Lancaster, Palmdale, and Whittier Narrows WRP projects. The Sanitation Districts' Energy Management Program is an environmentally sound and cost-effective approach to the operation and management of its wastewater treatment facilities. These multi-faceted energy management efforts have increased the reliability of the Sanitation Districts' treatment systems and made positive impacts on the environment, all while saving the agency many millions in ratepayer funds.

The arrangement of the JOS creates an efficient network of water reclamation plants that produce 135 mgd of recycled water with centralized solids treatment and energy production at JWPCP.

California has been using recycled water for groundwater recharge since 1962. The State Water Board's Recycled Water Policy (2009) recognizes water shortage problems and benefits of the recycled water to help



Josh Gisi, Bill Cooper, and Keynote Speaker Mike Markus

Attendees networking.

make up this deficit. The goal is to increase recycled water use by a million acre feet per year (afy) by 2020 and by 2 million afy by 2030, with an additional objective of substituting as much recycled water for potable water as possible by 2030. Southern California has developed several groundwater recharge programs that can contribute to this goal. These include: the 1962 Montebello Forebay Groundwater Recharge Project at 50,000 afy, the 1994 West Coast Basin Barrier Project at 14,000 afy, the 2005 Chino Basin Groundwater Recharge Project at 21,000 afy, the 2005 Alamitos Barrier Project 3,360 afy, the 2006 Dominguez Gap Barrier Project at 5,600 afy, and the 2008 Orange County Groundwater Replenishment System at 72,000 afy. These programs have led to a total of over 1.5 million acre feet of total recharge to the Central and West Coast groundwater basins since 1962.

Increasing water reclamation in Southern California requires long-term strategic planning efforts which must address: economics, infrastructure, technical feasibility, source water availability, public health protection, political realities, specific use requirements, environmental impact studies, and effective public outreach.

The Sanitation Districts' 1,400 miles of main trunk sewers and 11 wastewater treatment plants convey and treat about half of the wastewater in Los Angeles County. The total permitted capacity of the 11 wastewater treatment plants is 650 million gallons per day (MGD). The mission of the Sanitation Districts is to protect the public health and the environment through innovative and cost-effective wastewater and solid waste management, and in doing so, convert waste into resources such as recycled water, energy and recycled materials. This overriding goal aligns well with California's water reclamation goals. The benefits of water recycling include: additional supply, reliable sources, local control, reduced energy consumption, and reduced greenhouse gas production.

Ms. Wert continued with a comparison of water supply energy requirements for differing sources and treatment levels. According to the California Department of Public Health: Title 22 tertiary water requires 450 kilowatt hours per acre feet (kWh/af), reverse osmosis recycled water requires 1,250 kWh/af, State Water Project requires 3,000 kWh/af, and ocean desalination requires 4,700 kWh/af. The Sanitation Districts currently produces Title 22 tertiary water which is beneficially reused for groundwater recharge (58.6%), landscape irrigation (16.3%), agricultural irrigation (13.6%), environmental benefits (8.7%), and industrial application (2.8%). The largest recycled water application by the Sanitation Districts is for groundwater recharge (58.6%).

The 1962 Montebello Forebay Groundwater Recharge Project (Spreading Grounds) at 50,000 afy, is responsible for five decades of successful reuse for the Sanitation Districts. The Montebello Forebay is a surface spreading operation. The geology in the region allows for efficient replenishment of the Central Basin. Recharge through this facility supplies 40% of the water demand for a population of 3 million. Sources of recharge include: stormwater, imported water, and recycled water. The Montebello Forebay recharged 127,000 afy in 2010.

This project went on-line in 1962 and is the result of a partnership between three co-permittees (1) the Sanitation Districts, (2) the Water Replenishment District of Southern California, and (3) Los Angeles County Public Works. The permit was amended in April of 2009 with blending requirement not to exceed 35% recycled water sources as a 5 year average. Additional treatment is provided during recharge in the form of soil aquifer treatment (SAT). Challenges to water recycling in Los Angeles County include: economic constraints, operational constraints, permitting constraints, emerging contaminants, and public perception.

Panelist John Gerard Ciccotelli, P.E., BCEE

Panelist Judi Miller

The program continued with a sustainability tour of the UCI campus guided by Jim Brittell. UCI is committed to sustainable practices that minimize the campus' "ecological footprint" and conserve finite resources for future generations.

This commitment engages students, faculty, staff, the community, and other institutions in the pursuit of common solutions to address social, cultural, and economic needs while protecting the natural resources. There are three dimensions of sustainability: environmental, economic, and social health.

Leadership in Energy and Environmental Design (LEED®) is a third-party green building certification program and nationally accepted benchmark for the design, construction, and operation of high-performance green buildings. The UCI campus includes 4 LEED® platinum buildings and 12 LEED gold certified buildings.

LEED® gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance. LEED® promotes a whole-building approach to sustainability based on a "triple bottom line", which includes: economic prosperity, environmental stewardship, and social responsibility.

Projects certified under the LEED® rating system demonstrate, through compliance with a range of requirements, that they have addressed elements that balance and enhance all three areas of the triple bottom line, all three dimensions of sustainability.

In July 2003, the UC Regents approved the university-wide Policy on Green Building Design and Clean Energy Standards. This was a first step towards developing and implementing a larger comprehensive sustainability plan for the University of California, currently named the Policy on Sustainable Practices. University of California policy covers a wide range of issues, including green building design standards, clean energy guidelines, sustainable transportation practices, and much more.

In March 2007, the University of California signed the American College and University Presidents Climate Commitment, a pledge to eliminate greenhouse gas emissions over time. University of California, Irvine is committed to sustainable practices that minimize the campus' "ecological footprint" and conserve finite resources for future generations.

After the networking dinner, Josh Gisi introduced Mike Markus the keynote Speaker of the AAEES UCI conference. Mr. Markus is the General Manager of the OCWD. With more than 30 years of experience, he is well known for expertise in delivery of large projects, planning and water resource management. He obtained a B.S. degree in Civil Engineering from California State Polytechnic University at Pomona and an M.S. degree in Civil Engineering from the University of Southern California (USC). He is a registered Civil Engineer in the State of California and has taught engineering classes at USC. Mr. Markus was responsible for implementing the $481 million GWRS. This project creates 70 MGD of high quality water supplies from secondary treated wastewater using microfiltration, reverse osmosis and ultraviolet light treatment processes. The GWRS is a model for water agencies worldwide. He is responsible for the management of all operations in the District including a staff of 215. The District's primary role is to manage the local groundwater basin which provides approximately 350,000 afy of water supply to the area. OCWD's annual operating budget is $120 million. Mr. Markus recently received two notable honors: the American Society of Civil Engineers (ASCE) Government Engineer of the Year, and Engineering News Record (ENR) publication's Top 25 Newsmakers of 2007.

Mr. Markus continued the program with a discussion of the water supply sources and the District's operational recharge facilities.

Attendees participate in the Question and Answer Industry Panel Discussion.

Panelist Alex Mena

OCWD recharges approximately 308,000 afy to groundwater supplies. The breakdown is as follows: 102,000 afy from Santa Ana River base flows, 50,000 afy from Santa Ana River storm flows, 60,000 afy from natural incidental recharge, 20,000 afy from MWD untreated full service water, 4,000 afy from other sources, and 72,000 afy from the GWRS. The GWRS currently accounts for 23% of the overall supply. OCWD manages 1,100 acres of recharge facilities. Mr. Markus emphasized the need for the GWRS from OCWD's perspective. These drivers include: extended drought conditions, imported water shortages caused by increasing environmental restrictions and potential levee failures, and the knowledge that local projects lessen dependency on outside sources. The GWRS, operational since 2008, reclaims 70 MGD of advanced treated water from resources that otherwise would have been wasted to the ocean for beneficial reuse. This results in enough "new" water to provide adequate supply for over 500,000 people.

The GWRS advanced purification process consists of microfiltration, reverse osmosis, and advanced oxidation components. The microfiltration system has a capacity of 86 MGD and is composed of 0.2 micron Siemens hollow fiber polypropylene membranes. This system removes protozoa and suspended solids. Microfiltration is followed by reverse osmosis. The reverse osmosis system has a capacity of 70 MGD and is composed of a three-stage process that uses Hydranautics membranes. This high pressure system operates in a range of 150 to 200 pounds per square inch (psi) to remove dissolved minerals, viruses, and organic compounds including pharmaceuticals. Final disinfection is achieved using a direct photolysis advanced oxidation system. The advanced oxidation system has a capacity of 70 MGD and is composed of Trojan UVPhox lamps used in combination with hydrogen peroxide. After treatment, water is so pure that minerals (lime) must be added to balance the pH and protect the recharge distribution system.

The system is regulated by the Regional Water Quality Control Board (Santa Ana Region) through a water recycling permit. The California Department of Public Health regulates drinking water and establishes reclamation criteria to ensure that treatment, total organic carbon (TOC) levels, disinfection travel time, and blending requirements are achieved. Mr. Markus continued with a summary of the project funding sources. The $481 million capital cost of the project was shared equally between the OCWD and the OCSD. The system is expandable to 130 MGD. Costs are comparable to imported water. The project received $92 million in state and federal grants, and an operational and maintenance subsidy from MWD of $4 million per year for 21 years. The resulting cost is $480 per acre foot (af) or $850 per af without subsidies. Mr. Markus concluded with an overview of OCWD's future plans for the project. The GWRS will be expanded to a capacity of 100 MGD. Bids for construction of the expansion were received on July 18, 2011, and a contract for $115.1 million was awarded to the low bidder (McCarthy) on September 7, 2011. The 31,000 afy expansion is projected to be complete in October of 2014. The estimated unit cost for the expansion of $579 per af, which results in an overall "melded rate" of $512 per af.

Speaker Stephani Torres

Speaker Haly Herrera

An essential component of the Academy's mission is to recognize excellence in the practice of environmental engineering. The 2013 AAEES UCI conference provided the profession with an enlightened and inspired training opportunity. Through the exceptional contributions of organizations and individuals, the profession, continues its journey toward excellence in the practice of the expanding multi-disciplinary field of environmental engineering and science.

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The 43rd Annual AAEES Awards Luncheon & Technical Conference

The 43rd Annual AAEES Awards Luncheon and Technical Conference was held on April 25, 2013. The venue for the Academy's premier event was the prestigious National Press Club in Washington, D.C.

The all-day event began with six morning sessions for the technical conference.

The first presentation, **Determining Atmospheric Plume Opacity Using Low-Cost Digital Still Cameras**, was conducted by Mark J. Rood, Ph.D., BCEEM, of the University of Illinois. Adam Sommers, P.E., conducted the presentation for AquaWorks DBO, Inc.'s **Mountain Water & Sanitation District Radionuclide Mitigation Project**. Next, Elizabeth Hill, P.E., of CH2M Hill presented **Belfair Wastewater and Water Reclamation Facilities.** CMA Engineers, Inc.'s **Landfill Based Geothermal Heating System** was presented by Jeffrey S. Murray, P.E. Timothy Lafond, P.E., Johnson Controls, and Paul Sinisgalli, CDM Smith, conducted the presentation for **Johnson Controls, Inc. Recycling Center Stormwater and Wastewater Treatment Facility**. Thomas L. Smith, Ph.D., P.E., BCEE, Green and Sustainable Services, LLC, completed the morning session with **Baltimore County Public Schools Water Treatment Program**.

Nancy Sutley, Chair of the White House Council on Environmental Quality (CEQ), served as the 2013 Keynote Speaker and was an Honorary Member recipient.

Daniel Oerther presents the inaugural Student Team Award to Oregon State University students, Miri Goldade and Jordan Machtelinckx.

2013 Honorary Member recipient, Dr. Bruce Rittmann.

New Board Certified Environmental Engineer, Senator David B. McBride (Delaware).

Following the morning sessions, AAEES held a champagne reception, providing a networking opportunity for the attendees of the upcoming luncheon. David Gaddis, P.E., BCEE, Chair of the Excellence in Environmental Engineering and Science Awards Committee, served in his inaugural year as Master of Ceremonies.

The awards program celebrates and recognizes both people and projects for their leadership in the continuum of more than 170 years of environmental engineering and science innovation and quality service.

Among the AAEES leadership and other dignitaries from engineering, science, and government on hand included: Tracy Kolian, representing the American Public Health Association; Stephanie Glyptis, representing the Air & Waste Management Association; Michael Milligan, Executive Director of the Accreditation Board for Engineering and Technology (ABET); Alan Roberson, representing the American Water Works Association; Jamiyo Mack, representing the National Society of Black Engineers; Carol Singer Neuvelt, Executive Director, NAEM, the association for environmental health and safety management; Ken Kirk, Executive Director, National Association of Clean Water Agencies; and Peter King, Executive Director, American Public Works Association.

Delaware Governor Jack Markell presented Delaware Senator Thomas J. McBride his certificate for Board Certified Environmental Engineer.

Before the presentation of the awards, AAEES Vice President James Stahl, P.E., BCEE, welcomed the 2013 Keynote Speaker, Nancy Sutley. Ms. Sutley serves as Chair, White House Council on Environmental Quality, and serves as the principal environmental policy adviser to the President. Mr. Stahl presented Ms. Sutley with an AAEES Honorary Member Award. Following the presentation, AAEES President-Elect Dr. Christian Davies-Venn, P.E., BCEE, presented to Dr. Bruce Rittmann an Honorary Member Award. Dr. Cecil Lue-Hing presented the third Honorary Member Award for Lisa Jackson. Glenn Paulson, Science Advisor at the US EPA, accepted the award on her behalf. Following his acceptance of Ms. Jackson's Honorary Member Award, Dr.

Steven Highter, P.E., BCEE, displaying the Grand Prize in Planning for Sanitation Districts of Los Angeles County's Clearwater Program - Beyond Tunnel Vision.

Dr. Christian Davies-Venn, P.E., BCEE *(center)* presents the Grand Prize in Research to Dr. Sudhir Murthy, P.E., BCEE, (DC Water) *(left)* and Dr. Charles Bott, P.E., BCEE, (Hampton Roads Sanitation District) *(right)* for their project, Unlocking the Mysteries of Mainstream Deammonification - A Paradigm Shift in the Wastewater Industry.

Governor Jack Markell (Delaware) presents Senator McBride with his certificate for Board Certified Environmental Engineer.

Dr. Terry Johnson, P.E., BCEE, 2012 President Michael Selna, P.E., BCEE, and James H. Clark, P.E.

Kent Sorenson and Ryan Wymore displaying the Honor Award in Research for CDM Smith's Innovative Multi-Component Technology for Effective DNAPL Cleanup at Building 134, Hunters Point Naval Shipyard.

Jeanette A. Brown, P.E., BCEE, presented the Excellence in Environmental Engineering Education Award to Dr. John T. Novak, P.E., BCEE.

Dr. Christian Davies-Venn, P.E., BCEE presenting Cliff Pomerantz, P.E., with the Grand Prize in Design for Greeley and Hansen's Newtown Creek South Battery Upgrade.

Dr. Mark Rood, BCEEM, displaying the Grand Prize in University Research for University of Illinois/ERDC-CERL's Determining Atmospheric Plume Opacity Using Low-Cost Digital Still Cameras.

2013 Stanley E. Kappe Award recipient, Richard W. Corneille, P.E., BCEE.

Andrew Grubbs and Douglas M. Owen, P.E., BCEE, display ARCADIS' award for Grand Prize in Operations/Management for HaulPass® Automated Debris Management System.

Lue-Hing presented Dr. Paulson with his certificate for Board Certified Environmental Scientist. Also on hand to receive their certificates were Ned Paschke, for Board Certified Environmental Engineer, and Geeta Rijal, for Board Certified Environmental Scientist.

Five awards were presented to recognize individuals for their excellence and leadership in the environmental engineering and science professions.

Dr. James Mihelcic, BCEEM, and AEESP Trustee, presented the William Brewster Snow Award to Dustin Bales. The Snow Award is awarded to an outstanding engineering student currently pursuing or recently completing a Masters degree in Environmental Engineering or closely related degree program. Mr. Bales, who is also part of the Peace Corps Master's International Program at USF, began his training and two years of engineering Peace Corps service in Uganda at the time of the event and was unable to accept his award in person.

AAEES Past President and AAEES-WEF Trustee, Jeanette A. Brown, P.E., BCEE, presented the Excellence in Environmental Engineering Education Award to John T. Novak, Ph.D., P.E., BCEE, the Nick Prillaman Professor of Civil and Environmental Engineering at Virginia Tech. The E4 Award, jointly administered by AAEES and AEESP, is granted annually to an educator who has made a significant contribution to the profession in the area of educating practitioners. Dr. Novak is a Board Certified Environmental Engineer in Water Supply and Wastewater Engineering.

Trustee Hunter Nolen, P.E., BCEE, presented the Edward J. Cleary Award to Alan H. Vicory, Jr., P.E., BCEE, a Principal in Stantec. The Cleary Award is given to an individual who is an outstanding performer in the management of environmental protection enterprises conducted under either public or private auspices who have demonstrated exemplary professional conduct, personal leadership, originality in devising new environmental protection techniques and sensitivity and responsiveness to social, economic, and political factors in environmental protection. Mr. Vicory is a Board Certified Environmental Engineer in Water Supply and Wastewater

2013 Edward J. Cleary Award recipient, Alan H. Vicory, Jr., P.E., BCEE.

Nancy Sutley and AAEES Vice President, James F. Stahl, P.E., BCEE.

Dr. Glen T. Daigger, P.E., BCEE, Elizabeth Hill, P.E. (CH2M Hill), and Jamiyo Mack (National Society of Black Engineers) displaying CH2M Hill's Grand Prize in Environmental Sustainability for the project Belfair Wastewater and Water Reclamation Facilities. Ms. Hill served as Engineer in charge.

Dr. Christian Davies-Venn presenting the Honor Award in Design to Thomas Ramsey, P.E., BCEE, for Geosyntec Consultants' Cherry Island Landfill Vertical Expansion Project.

Engineering. He also serves as Chair of the Environmental Engineering and Science Foundation.

Past President Michael W. Selna, P.E., BCEE, presented the Stanley E. Kappe Award to Richard W. Corneille, P.E., BCEE, PMP. The Stanley E. Kappe Award is presented to the Board Certified Environmental Engineer or Board Certified Environmental Scientist who has performed extraordinary and outstanding service contributory to significant advancement of public awareness to the betterment of the total environment and other objectives to the Academy. Mr. Corneille, who has served as the AAEES State Representative for Southern California for the past 20 years, is Board Certified Environmental Engineer in Water Supply and Wastewater Engineering and is an AAEES Life Member.

Presenting the most prestigious individual honor, the Gordon Maskew Fair Award, was Past President Bryan Flynn, P.E., BCEE. The 2013 recipient, Alonzo W. Lawrence, Ph.D., P.E., BCEE, has a career in environmental engineering and management including corporate level environmental and occupational health management, consulting engineering, university teaching and research, and military environmental engineering that has spanned more than 53 years. In establishing the Fair Award, the Academy sought to identify Board Certified Environmental Engineers and Board Certified Environmental Engineering Members who have contributed to the status of the environmental engineering profession by: exemplary professional conduct; recognized achievements in the practice of engineering; and significant contributions to the control of the quality of the world's environment. Dr. Lawrence is a Board Certified Environmental Engineer in Water Supply and Wastewater Engineer and is an Emeritus Member.

Following the individual awards, winners of the 2013 Environmental Communications Awards were recognized. The Honor Award in Environmental Communications was presented to Orange County Water District for Groundwater Replenishment. Michael Markus was on hand to accept the award. The Grand Prize was presented to Altanta Partnership for Atlanta Beltline. Accepting the award was Ethan Davidson.

AAEES Trustee (APWA) Lamont "Bud" Curtis, P.E., BCEE, with Grand Prize-Small Projects award winners, Charlotte Smith and Thomas Smith, P.E., BCEE, of Green and Sustainable Services for their project, Baltimore County Public Schools Water Treatment Program.

New AAEES Board Certified Environmental Scientist, Geeta Rijal, BCES, and Dr. Cecil Lue-Hing, P.E., BCEE.

Robert Grillo and Jeffrey Murray, P.E., displaying CMA Engineers' Grand Prize award for their project, Landfill Based Geothermal Heating System.

Britt D. Bassett, P.E., BCEE (Bassett Engineering) *(left)*, and Mark Glenn, P.E., BCEE (Gwin, Dobson & Foreman) *(right)*, won the Superior Achievement Award for their project, Altoona Westerly WWTP Biological Nutrient Removal Upgrade & Expansion Project.

Next, the awards for the 2013 Excellence in Environmental Engineering and Science Competition were presented.

For Research in Environmental Engineering and Science, two awards were presented. CDM Smith won the Honor Award for their research of Innovative Multi-Component Technology for Effective DNAPL Cleanup at Building 134, Hunters Point Naval Shipyard, San Francisco, CA. On hand to accept the award were Kent Sorensen and Ryan Wymore.

Grand Prize was presented to DC Water and Hampton Roads Sanitation District for their research titled Unlocking the Mysteries of Mainstream Deammonification – A Paradigm Shift in the Wastewater Industry, Washington, DC, Engineer in Charge, Sudhir Murthy, Ph.D., P.E., BCEE, DC Water, and Dr. Charles Bott, P.E., BCEE, Hampton Roads Sanitation District accepted the award.

For Planning in Environmental Engineering and Science, two awards were presented. The Honor Award went to Greeley and Hansen for their Holistic CSO Long-Term Control Plan Update, Lynchburg, Virginia. Accepting the award was Lin Liang. The Grand Prize was presented to Sanitation Districts of Los Angeles County for their planning of the Clearwater Program – Beyond Tunnel Vision, Whittier, CA. Accepting the award was Steven Highter, P.E., BCEE.

For Design in Environmental Engineering and Science there were two Honor Awards and a Grand Prize.

The first Honor Award was presented to Black & Veatch, for the design of the Secondary Activated Sludge Facility 2 at Plant No. 1, Fountain Valley, CA. Engineer in Charge, James H. Clark, P.E. was on hand to accept the award. The second Honor Award went to Geosyntec Consultants for the design of the Cherry Island Landfill vertical Expansion Project, Wilmington, DE. Accepting were Engineer in Charge, Thomas Ramsey, P.E. BCEE, and Mary DeFlaun.

The Grand Prize in the Design was presented to Greeley and Hansen for the design of the Newtown Creek South Battery Upgrade, Corona, New York. Engineer in Charge, Cliff Pomerantz, P.E., was on hand to accept the award.

Dr. Christian Davies-Venn, P.E., BCEE, presented the Honor Award-Small Projects to Dr. Tim Shea, P.E., BCEE, who accepted it on behalf of CH2M Hill for their project, Onondaga County Save the Rain Water Street Gateway Project.

New Board Certified Environmental Engineer, Ned W. Paschke, P.E., BCEE, was presented with his certificate by Dr. Cecil Lue-Hing, P.E., BCEE.

The prestigious awards all on display.

Anthony Mack, Dr. Sudhir Murthy, Joseph Bastian, and Charles Bott enjoy the champagne reception.

One award was presented for Operations/Management in Environmental Engineering and Science. The Grand Prize was presented to ARCADIS for the HaulPass Automated Debris Management System, Independence, MO. Accepting the award was Andrew Grubbs.

For University Research in Environmental Engineering and Science, there were three awards.

The Honor Award was awarded to the Illinois Institute of Technology for their research titled Improving Energy Sustainability of Wastewater Treatment by Low DO Nitrification Process, Chicago, Illinois. Engineers in charge, Krishna Pagilla, Benjamin Stark, Marina Arnaldos, and Stephanie Kunkel.

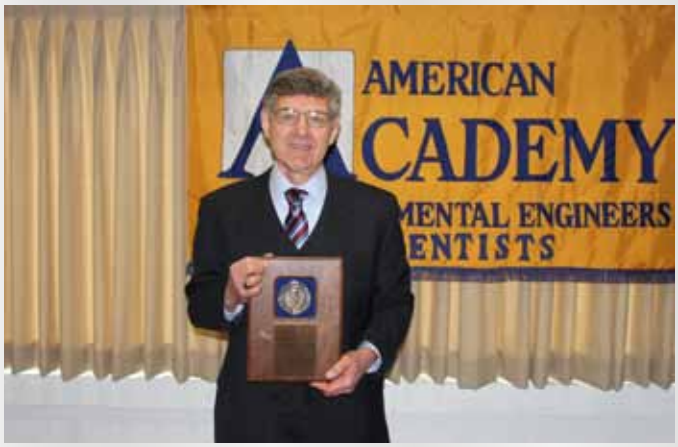
There was a tie for Grand Prize for University Research. The first Grand Prize for University Research went to the Carnegie Mellon University and the University of Pittsburgh for their research in Use of Treated Municipal Wastewater as Power Plant Cooling System Makeup Water: Tertiary Treatment versus Expanded Chemical Regimen for Recirculating Water Quality Management. Accepting the award were Engineer in Charge, Dr. David Dzombak, P.E., BCEE, of Carnegie Mellon University and Dr. Radisav Vidic of the University of Pittsburgh.

The second Grand Prize for University Research was presented to the University of Illinois/ERDC-CERL for their research in Determining Atmospheric Plume Opacity Using Low-Cost Digital Still Cameras, Urbana, Illinois. Persons in charge, were Dr. Mark Rood, BCEEM and Dr. Byung J. Kim. Dr. Rood was on hand to accept the award.

Small Projects are those costing less than $5 million in capital cost or less than $500,000 in annual costs. Any type of project meeting these limitations may enter this category. There were three awards in this category.

The Honor Award was presented to CH2M Hill for the Onondaga County Save the Rain Water Street Gateway project, Syracuse, New York. Dr. Tim Shea, P.E., BCEE, accepted the award.

The Small Projects category also had a tie for Grand Prize. The first Grand



2013 Gordon Maskew Fair Award recipient, Dr. Alonzo W. Lawrence, P.E., BCEE.

Geosyntec Consultants' panel for their project, Cherry Island Landfill Vertical Expansion Project on display during the champagne reception.


Sandy L. Tripp, P.E., BCEE, and Wendy Wert, P.E., BCEE.


Ken Kirk, Executive Director, National Association of Clean Water Agencies, and AAEES President-Elect, Dr. Christian Davies-Venn.

Prize was awarded to CMA Engineers for the Landfill Based Geothermal Heating System, Bethlehem, NH. Engineer in Charge, Jeffrey Murray was on hand to accept the award.

The second Small Projects Grand Prize was presented to Green and Sustainable Services for their Baltimore County Public Schools Water Treatment Program, Baltimore, MD. Accepting the award was Engineer in Charge, Dr. Thomas Smith, P.E., BCEE.

The Small Firms category is any project entered by a firm that has annual gross revenue of $5 million or less. There were two awards in this category.

The Honor Award was presented to American Engineering Consultants for their City of Cayce 25.0 MGD Regional WWTP project, Cayce, SC. Engineer in charge was William Bingham, P.E. The Grand Prize was awarded to AquaWorks DBO for their Mountain Water & Sanitation District Radionuclide Mitigation Project, Conifer, CO. Engineer in Charge, Adam Sommers was on hand to accept the award.

Two awards were presented in the Environmental Sustainability category. The Honor Award was presented to the Hampton Roads Sanitation District for the HRSD York River Treatment Plant DEMON Sidestream Deammonification, Seaford, VA. Accepting the award was Engineer in Charge, Dr. Charles Bott, P.E., BCEE. The Grand Prize was awarded to CH2M Hill for their Belfair Wastewater and Water Reclamation Facilities, Belfair, WA. Engineer in Charge, Elizabeth Hill, P.E., was on hand to accept the award.

The Industrial Waste Practice category had one award. The Grand Prize for Industrial Waste Practice in Environmental Engineering and Science was presented to CDM Smith for their Johnson Controls, Inc. Recycling Center Stormwater and Wastewater Treatment Facility, Florence, SC. On hand to accept the award were Timothy Lafond and Paul Sinisgalli. The Grand Prize winner in this category also receives the W. Wesley Eckenfelder Industrial Waste Management Medal, sponsored by Veolia Water. Richard DiMassimo of Veolia Water was on hand to present the medal.

AAEES Member, Adam Sommers, P.E., displays AquaWorks DBO's award for Grand Prize in Small Firms for their project, Mountain Water & Sanitation District Radionuclide Mitigation Project.

Dr. Christian Davies-Venn presents James Clark, P.E., with the Honor Award in Design for Black & Veatch's Secondary Activated Sludge Facility 2 at Plant No. 1.

AAEES Trustee-at-Large, Hunter C. Nolen, P.E., BCEE, presents Alan H. Vicory, Jr., P.E., BCEE, with the 2013 Edward J. Cleary Award.

AAEES Trustee-at-Large Dr. Michael C. Kavanaugh, P.E., BCEE, AAEES Trustee-AEESP Dr. James R. Mihelcic, BCEEM, and Ryu Suzuki.

The Academy's Superior Achievement for Excellence in Environmental Engineering and Science was awarded to Gwin, Dobson & Foreman and Bassett Engineering for Altoona Westerly WWTP Biological Nutrient Removal Upgrade & Expansion project, Altoona, PA. Engineer in Charge, Mark Glenn, P.E., BCEE, Gwin, Dobson & Foreman, and Britt Bassett, P.E., BCEE, Bassett Engineering, were on hand to accept the award.

Next, Daniel B. Oerther, Ph.D., P.E., BCEE, awarded the inaugural Student Team Award. The Engineers Without Borders Student Chapter from Oregon State University was selected as the winner for their efforts in bringing clean water to an impoverished Kenyan village. Accepting were Miri Goldade, Jordan Machtelinckx, Sean Gertz, Nick Musanto.

The technical sessions resumed following the completion of the awards luncheon. Starting things off for **Altoona Westerly WWTP Biological Nutrient Removal Upgrade & Expansion** were Mark Glenn, P.E., BCEE, Gwin, Dobson & Foreman and Britt Bassett, P.E., BCEE, Bassett Engineering. David A. Dzombak, Ph.D., P.E., BCEE, of Carnegie Mellon University presented **Use of Treated Municipal Wastewater as Power Plant Cooling System Makeup Water**. **Clearwater Program – Beyond Tunnel Vision**, was presented by Steven W. Highter, P.E., BCEE, of Sanitation Districts of Los Angeles County. Next was Andrew Grubbs, ARCADIS, for **HaulPass Automated Debris Management System**. Greeley and Hansen's **Newtown Creek South Battery Upgrade**, was presented by Cliff Pomerantz, P.E. The final session, **Unlocking the Mysteries of Mainstream Deammonification – A Paradigm Shift in the Wastewater Industry**, was presented by Charles B. Bott, Ph.D., P.E., BCEE, Hampton Roads Sanitation District (HRSD) and Sudhir Murthy, Ph.D., P.E., BCEE, DC Water.

AAEES would like to thank all of our attendees and participants for making this event a success. We would also like to thank AAEES Trustee-at-Large Richard Pope and AAEES Accounting Manager Lisa Pike for contributing the photos for this article.

New Board Certified Environmental Scientist, Dr. Glenn Paulson of the USEPA is presented with his certificate by Dr. Cecil Lue-Hing, P.E., BCEE.

Jeff Jendryk, Timothy Lafond, Paul Sinisgalli, and 2013 Master of Ceremonies, David Gaddis, P.E., BCEE.

AAEES Treasurer Howard B. LaFever, P.E., BCEE, AAEES Trustee-WEF Jeanette A. Brown, P.E., BCEE, and AAEES Past President Dr. Timothy Shea, P.E., BCEE.

Participants of the technical conference.

UPCOMING EVENTS

August, 27, 2013

AAEES/APWA Breakfast at the APWA Congress, August 25-28, McCormick Place, Chicago, IL, starting at 7:00 a.m. To register, go to http://www.apwa.net/Congress

September 1, 2013

Committee and Sponsoring Organization Reports are Due

October 3-4, 2013

SWANA Annual Conference - The Academy is pleased to announce our involvement in this year's annual SWANA Conference! The Chapter's 2013 Annual Conference will be held in Estes Park, October 3rd & 4th. Conference sessions will be held in the spacious Estes Park Conference Center and the adjoining Rocky Mountain Park Inn will serve as our lodging headquarters. And, of course the picturesque Rocky Mountain National Park is right next door. For more details please visit: www.swana.org

October 6-9

WEFTEC 2013 - The Academy will be exhibiting again in 2013. Stop by Booth #3753 to receive your ribbon. The Academy will need volunteers to help staff the booth. Email your commitment to Sammi at jsolmo@aaees.org.

October 7, 2013

AAEES/AIDIS/WEF Breakfast at WEFTEC 2013, October 5-9, 2013, McCormick Place, Chicago, IL. The Breakfast will be held on Monday, October 7 from 7:00 to 8:30 a.m. All are invited! This year's breakfast features Adam Faschand, CDM Smith; Michael DeNicola, Hazen and Sawyer; and Garry McDonald. The topic is "Disaster Preparedness and Resiliency". Details forthcoming. Sponsorship by PE Consulting. Earn one Academy PDH for attending. Register here: http://www.weftec.org/registration/

October 23-25, 2013

AAEES at NAEM's 2013 EHS Management Forum. The Academy is very happy to have been welcomed to this year's NAEM Management Forum. The EHS Management Forum is the largest annual gathering of EHS and sustainability managers, directors and vice presidents. With two days of peer-led interactive sessions and keynote presentations, this is the premier event dedicated to showcasing best practices in EHS and sustainability management. The conference takes place from October 23rd through October 25th in Montreal, Canada at the Fairmont Queen Elizabeth. Please visit: ehsforum.naem.org for registration details.

December 31, 2013

2013 Specialty Certification renewal Deadline

February 1, 2014

Entry deadline for the Excellence in Environmental Engineering and Science Competition

March 1, 2014

Entry deadline for the Environmental Communications Awards

March 31, 2014

Application deadline for Board Certification

For the full AAEES Events Calendar, go to http://www.aaees.org/aaeescalendar.php

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AAEES thanks the following individuals, companies, and organizations for their donations and sponsorships during 2012. It is an honor to recognize the following:

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Kennedy, David D. ..... San Francisco, CA
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Kosteck, Garry O. ..... Dunellen, NJ
Lagnese, Joseph F. ..... Allison Park, PA
Lanyon, Richard F. ..... Evanston, IL
Licht, Charles A. ..... Olympia Fields, IL
Lindmark, Ulf M. ..... Westlake Village, CA
Loven, Andrew W. ..... Kennesaw, GA
MacDonald, David V. ..... Laguna Hills, CA
Magee, Richard S. ..... Florham Park, NJ
Martenson, Dennis R. ..... Medina, MN
Marti, Jose A. ..... San Juan, PR
Mbachu, Frank C. ..... Sugar Land, TX
McQuade, Robert E. ..... Andover, MA
Melton, Lyndel W. ..... Lafayette, CA
Modjeski, Dorian ..... Palm Harbor, FL
Mohanka, Shyam S. ..... Schenectady, NY
Morgan, James M. ..... Lexington, VA
Nichol, George D. ..... Carmichael, CA
Pickard, Barry L. ..... Liverpool, NY
Rashidi, Abdul S. ..... La Verne, CA
Reid, Leroy C. ..... Anchorage, AK
Robertaccio, Joseph S. ..... Marcy, NY
Robinson, Peter E. ..... Hollywood, FL
Ruggiero, Dominick D. ..... Mamaroneck, NY
Ryder, Robert A. ..... Kentfield, CA
Sauer, Steven K. ..... Sevierville, TN
Schneider, Robert J. ..... Yonkers, NY
Schoenberger, Robert J. ..... Downingtown, PA
Seagle, Edgar F. ..... Rockville, MD
Shea, Paul R. ..... Denver, CO

Sherburne, John W. ..... Pittsford, NY
Sorg, Thomas J. ..... Cincinnati, OH
Stahl, James F. ..... Rancho Palos Verdes, CA
Stander, Leo H. ..... Cary, NC
Stevens, Prescott Allen ..... Rolle, Switzerland
Stonerook, Henry R. ..... Westerville, OH
Stover, Enos L. ..... Stillwater, OK
Tchobanoglous, George ..... Davis, CA
Thoesen, Richard C. ..... South Riding, VA
Thompson, J. Dwight ..... Cincinnati, OH
Tischler, Lial F. ..... Round Rock, TX
Tow, Harry A. ..... Visalia, CA
Vasuki, Nuggehalli C. ..... Dover, DE
Wallace, Alfred T. ..... Moscow, ID
Watt, J. Thomas ..... York, PA
Weaver, Steven M. ..... Anchorage, AK
Wendle, Jeffrey G. ..... Harrisburg, PA
Whitman, Ira L. ..... East Brunswick, NJ
Wolkstein, Melvin ..... Springfield, NJ
Zaslavsky, Yury J. ..... Irvine, CA
Zeyghami, Hooshang ..... Weston, WI

Environmental Engineer and Scientist Journal Fund (AAEES)

Buescher, Charles A. ..... Chester Field, MO
Canzano, Pasquale S. ..... Dover, DE
Corson, John T. ..... Kingsford, MI
DeStefano, Eugene C. ..... Martinsville, NJ
Dharmarajah, Herman A. ..... Mankato, MN
Flanagan, Matthew J. ..... Westmont, NJ
Getting, Thomas M. ..... Pittsburgh, PA
Haug, R. Tim ..... Torrance, CA
Kelly, Harlan G. ..... Canada
Kennedy, David D. ..... San Francisco, CA
Mbachu, Frank C. ..... Sugar Land, TX
Middlebrooks, E. Joe ..... Superior, CO
Mohanka, Shyam S. ..... Schenectady, NY
Rezek, Joseph W. ..... Lake Suzy, FL
Stenstrom, Michael K. ..... Los Angeles, CA
Trussell, R. Rhodes ..... Pasadena, CA
Vasuki, Nuggehalli C. ..... Dover, DE
Wallace, Robert E. ..... Tampa, FL

Environmental Engineering and Science Foundation Fund

Al-Ani, Walid ..... Canton, MI
Arora, Madan L. ..... Glendora, CA
Barua, Sanat K. ..... Worthington, OH
Bell, Frank Arundel ..... Upper Marlboro, MD
Bentwood, Richard W. ..... Glendora, CA
Bolton, Charles H. ..... Charlestown, MA
Braswell, Philip P. ..... Washington, DC
Cach, Stanley V. ..... Hamilton Square, NJ
Carns, Keith E. ..... Oakhurst, CA
Dedovic-Hammond, Slavica ..... Redondo Beach, CA
Dencker, Donald O. ..... Sun Prairie, WI
Dominy, Matthew ..... Gilbert, AZ
Ewing, Lewis J. ..... Irvine, CA
Fahey, Richard J. ..... New York, NY
Fennerty, Herbert ..... Canada
Foster, John H. ..... Weston, CT
Goodrich, Robert R. ..... Convent Station, NJ
Grady, C.P. Leslie ..... Harrisonburg, VA
Holt, Leonard L. ..... Santa Rosa, CA
Klemm, David Lawrence ..... Middletown, NJ
Kohlhoff, Karl F. ..... Gilbert, AZ
Kuhn, Paul A. ..... Maple Grove, MN
Lindmark, Ulf M. ..... Westlake Village, CA
Mohanka, Shyam S. ..... Schenectady, NY
Najm, Issam N. ..... Canoga Park, CA
Noel, Jim S. ..... Lee's Summit, MO
Redding, Bobby R. ..... Clinton, MS
Rodenbeck, Sven E. ..... Lawrenceville, GA
Sapienza, Frank C. ..... Brookline, MA
Sharma, Ranjit K. ..... Lorton, VA
Stahl, James F. ..... Rancho Palos Verdes, CA
Vasconcelos, John J. ..... So. Pasadena, CA
Vasuki, Nuggehalli C. ..... Dover, DE
Vicory, Alan H. ..... Villa Hills, KY
Whitman, Ira L. ..... East Brunswick, NJ
Willis, Charles A. ..... Charlotte, NC

Excellence in Environmental Engineering and Science (E3) Fund - Individuals (AAEES)

Bentwood, Richard W. ..... Glendora, CA
Burgess, Mark A. ..... Heathrow, FL
Canzano, Pasquale S. ..... Dover, DE
Corson, John T. ..... Kingsford, MI
Decker, Thomas E. ..... Aldie, VA
DeHart, Robert E. ..... Matthews, NC
Eklund, Carl W. ..... Kirkwood, MO
Flanagan, Matthew J. ..... Westmont, NJ
Kennedy, David D. ..... San Francisco, CA
Lindmark, Ulf M. ..... Westlake Village, CA
Mohanka, Shyam S. ..... Schenectady, NY
Oguntimein, Gbekeloluwa Babatunde ..... Rosedale, MD
Rimer, Alan E. ..... Chapel Hill, NC
Schneider, Robert J. ..... Yonkers, NY
Seagle, Edgar F. ..... Rockville, MD
Vasuki, Nuggehalli C. ..... Dover, DE
Wallace, Alfred T. ..... Moscow, ID
Whitman, Ira L. ..... East Brunswick, NJ

Excellence in Environmental Engineering and Science (E3) Fund - Corporate (AAEES)

AECOM
American Public Health Association
ARCADIS
Black & Veatch
CDM Smith
CH2M Hill
Environmental Engineering & Science Foundation

Geosyntec
Greeley and Hansen
International Water Association
MWH Global
National Association of Clean Water Agencies
PDH Online
SCS Engineers
Veolia Water

Excellence in Environmental Engineering Education Award

Accreditation Board for Engineering and Technology (ABET)
Brown and Caldwell
MWH Global
Parsons

Frederick George Pohland Medal (EESF)

Aitken, Michael D. ..... Chapel Hill, NC
Kelly, Harlan G. ..... Canada
Loven, Andrew W. ..... Kennesaw, GA
Shelton, Stephen P. ..... Albuquerque, NM
Trussell, R. Rhodes ..... Pasadena, CA
Vasuki, Nuggehalli C. ..... Dover, DE

K-12 Student Competition (EESF)

Adamski, Robert E. ..... Brooklyn, NY
Banerjee, Kashinath ..... Moon Township, PA
DellaValle, Anthony M. ..... White Plains, NY
Gordon, Helen T. ..... Islington, MA
Magee, Richard S. ..... Florham Park, NJ
Novotny, John F. ..... Bemus Point, NY
Pope, Richard J. ..... White Plains, NY
Vasuki, Nuggehalli C. ..... Dover, DE
Whitman, Ira L. ..... East Brunswick, NJ

Kappe Lecture Series Fund (AAEES)

Abernathy, Calvin G. ..... Tupelo, MS
Buescher, Charles A. ..... Chester Field, MO
Dolan, Roger J. ..... Carmel, CA
Hungerford, Michael D. ..... Edwardsville, IL
Kavanaugh, Michael C. ..... Oakland, CA
Lindmark, Ulf M. ..... Westlake Village, CA
Liu, Charles (Xiaosha) ..... Dix Hills, NY
Monroe, Edward W. ..... Pittsburgh, PA
Novotny, Vladimir ..... Newton, MA
Rosenkranz, William A. ..... Alexandria, VA
Symons, James M. ..... Lakewood Ranch, FL
Trussell, R. Rhodes ..... Pasadena, CA
Vasuki, Nuggehalli C. ..... Dover, DE
Whitman, Ira L. ..... East Brunswick, NJ
Xie, Yuefeng ..... Middletown, PA

Student Team Award

Oerther, Daniel B. ..... Rolla, MO

Students & Young Professionals Fund (EESF)

Bhayani, Kiran L. ..... Salt Lake City, UT
Boller, Philip R. ..... Cape Coral, FL
Fahey, Richard J. ..... New York, NY
Foulke, Randall L. ..... Raleigh, NC
Johnston, Robert S. ..... Westfield, NJ
Magee, Richard S. ..... Florham Park, NJ
Mohanka, Shyam S. ..... Schenectady, NY
Murthy, Prahlad N. ..... Larksville, PA
Oerther, Daniel B. ..... Rolla, MO
Selna, Michael W. ..... Huntington Beach, CA
Silverstein, JoAnn ..... lder, CO
Vasuki, Nuggehalli C. ..... Dover, DE
Velazquez, Jose F. ..... Denver, CO

W. Wesley Eckenfelder Industrial Waste Management Medal (EESF)

Veolia Water

W. Wesley Eckenfelder Memorial Fund (EESF)

Burrows, W. Dickinson ..... Frederick, MD
DellaValle, Anthony M. ..... Larchmont, NY
Dewling, Richard T. ..... Chatham, NJ
Fangmann, Steven A. ..... Woodbury, NY
Hendricks, David W. ..... Arvada, CO
Kane, Donald A. ..... San Antonio, TX
Krill, William P. ..... Nashotah, WI
Ramaswami, Dharmarajan (Ram) ..... Centennial, CO
Rollins, Richard M. ..... Portola Valley, CA
Shea, Timothy G. ..... Fairfax Station, VA
Stein, Robert M. ..... Charlotte, NC
Thompson, Terrence P. ..... Washington, DC
Vasuki, Nuggehalli C. ..... Dover, DE
Wallace, Alfred T. ..... Moscow, ID

William Brewster Snow Fund (EESF)

Graef, Stephen P. ..... Greenville, SC
Vasuki, Nuggehalli C. ..... Dover, DE
Wallace, Alfred T. ..... Moscow, ID

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