



AWARDS FOR EXCELLENCE

WaterReuse Association
Annual Awards Luncheon

September 10, 2018
JW Marriott

#WaterReuse18

The **WaterReuse Association's Awards for Excellence** recognize individuals and projects that have made significant contributions in support of water recycling. Recipients are successfully advancing the development of alternative water supplies or developing a novel approach to meet water needs through the use of water reuse systems and/or approaches.



Community Water Champion



The **Community Water Champion Award** recognizes utilities and/or local government entities that ensure a safe, reliable, locally controlled water supply through the development of water recycling treatment facilities, infrastructure, and/or other water reuse projects. Awardees in this category showcase exemplary water reuse projects, systems, and/or facilities that demonstrate the value of water reuse to the community served by them.

City of Los Angeles, LA Sanitation

In response to emerging challenges, including increased water demand, more stringent regulations, and threats of climate change, the City of Los Angeles developed the **One Water LA 2040 Plan**. The multi-agency plan takes a holistic and collaborative approach that seeks to integrate all water resources as “One Water” – including surface water, groundwater, potable water, wastewater, recycled water, dry-weather runoff, and stormwater. The Los Angeles Zoo (LA Zoo) is an example of this collaborative and integrated approach. The team overcame regulatory and public perception barriers to recycled water use for exhibit washdown, power washing, pond and tank filling, habitat enhancement, landscape irrigation and the uses, along with stormwater capture opportunities.



City of Modesto, City of Turlock, Del Puerto Water District, California



As one of the nation's—top agricultural regions, Stanislaus County in California's Central Valley produces more than \$3 billion in

agricultural exports annually. In response to water scarcity challenges, the cities of Modesto and Turlock in collaboration with Del Puerto Water District established the **North Valley Regional Recycled Water Program**. In December 2017, the program began delivering a new supply of reliable tertiary-treated recycled water to fields and orchards in the San Joaquin Valley. During its first year, the Modesto portion of the project is delivering 16,000 acre-feet per year (AFY) to the Delta-Mendota Canal, and anticipates expanding to 30,000 AFY when Turlock comes online in 2019.

Oregon Gardens, City of Silverton, Oregon

Like so many communities, the City of Silverton, Oregon (pop. 10,002) struggled for years to meet the challenge of protecting water quality in the face of increasingly stringent regulations and growing demand. In 1999, Silverton completed construction of a \$9 million wastewater treatment plant expansion and 17 acres of constructed wetlands to help treat wastewater and reduce nutrient discharge to Silver Creek. The wetlands make up the cornerstone of the **Oregon Gardens**, a 220-acre world-class botanical garden showcasing native plants and flowers from the Pacific Northwest. Beyond its importance as a wastewater treatment facility, Oregon Gardens has become a tourist destination as host to the Oregon Gardens Resort Hotel & Spa, a destination hotel providing guests breathtaking views of the Willamette Valley; and home to the Gordon House, a Frank Lloyd Wright Usonian-designed house representing Wright's interest in architecture that exists in harmony with nature. Oregon Gardens is an excellent example of



how constructed wetlands designed to treat wastewater can provide the foundation for unique community amenities and lead to the revitalization of a local tourism economy.

Excellence in Action



The **Excellence in Action Award** recognizes users of recycled water, including utility customers, commercial enterprises, government agencies, NGOs, or partnerships between utilities and their customers, that showcase how recycled water is used for commercial operations, watershed restoration projects, irrigation or other projects. Awardees in this category showcase exemplary water reuse projects, systems, and/or facilities that demonstrate the value of water reuse to the community served by them.

Anne Arundel County Department of Public Works, Maryland



In 2008, the Anne Arundel County Department of Public Works entered into an agreement with Raven Power to supply treated effluent from the Cox Creek Water Reclamation Facility to the **Brandon Shores Power Plant for cooling purposes**. The water reuse agreement was pivotal in meeting the needs of the power plant as groundwater was not available and potable water was deemed too expensive. Since the County began transferring effluent to the power plant in 2010, Brandon Shores has received over 5.7 billion gallons of recycled water for less than \$2.3 million, a cost-savings of \$13 million. The arrangement is a great example of a public/private partnership generating revenue for the county, reducing costs of electricity supply, and saving ratepayers money.

City of Show Low, Arizona

The City of Show Low, Arizona completed a successful wastewater treatment plant upgrade allowing production of high-quality effluent for preservation of the **Show Low Wetlands**. As an example of its dedication to the preservation of its environment, the





city, in partnership with the U.S. Forest Service and the Arizona Game and Fish Commission, created the Show Low Wetlands, a 250-acre constructed wetland that uses effluent to establish a habitat for fish, waterfowl and other wildlife in the area. Keenly aware of changing environmental

guidelines, the City commissioned the upgrade to the facility in 2016. The successfully upgraded facility has consistently produced effluent with total nitrogen levels of less than 3 mg/L (and at times <1 mg/L) at a total cost of less than \$4 per gallon.

Hyatt House Irvine, Irvine Ranch Water District, California

Irvine Ranch Water District teamed up with Hyatt House Irvine as part of the district's ongoing WaterStar Certification program to plan for and construct a dual-plumbed hotel facility. As the first fully dual-plumbed hotel in California, the **Hyatt**



House Irvine project has the potential to change attitudes and encourage future recycled water projects in an industry that generates \$103 trillion annually nationwide. While other hotels have installed dual-plumbing in lobby areas, Hyatt's conversion to recycled water in guest rooms was a huge step for the industry. Hotel signage educates guests about the use of recycled water to conserve this valuable resource, and response so far has been positive. The project saves more than 500,000 gallons of potable water each year. Recycled water used for irrigation saves an additional million gallons annually.

Transformational Innovation



The **Transformational Innovation Award** recognizes technological advances, research breakthroughs, and/or innovative practices that advance the adoption, implementation and/or public

acceptance of recycled water. Awardees in this category can be pilot or full-scale projects, or research for which follow-on demonstration projects are planned.

Arizona Pure Water Brew Challenge - AZ Pure Brew Team



The Arizona Pure Water Brew Challenge generated a whirlwind of activity beginning with the design and construction of a fully

operational mobile advanced water purification facility. The challenge also included comprehensive water quality testing by five laboratories, and issuance of Arizona's first potable reuse permit - rescinding a multi-decade statewide prohibition against potable reuse. Twenty-six Arizona brewers embraced the effort, and participated in making high purity craft beer for entry into the AZ Pure Water Brew Challenge, competing for prizes at the 2017 Annual WaterReuse Symposium. In total, over 7,700 miles were logged by the mobile purification trailer, which transformed over 94,000 gallons of municipally treated wastewater into high purity bottled water and craft beer. More than 3,300 analytical tests were conducted to ensure that the recycled water met drinking water standards, including tests that screen for pathogens, metals, organics, and numerous unregulated compounds and pharmaceuticals to ensure optimal protection of public health.



Net-Zero Water Buildings, National Science Foundation/University of Miami, Florida



The National Science Foundation and the University of Miami collaborated on this Emerging Frontiers in Research and Innovation (EFRI) project entitled "Design for Autonomous Net-Zero Water Buildings," lead by Principal Investigator Dr. James Englehardt. The

\$2.75 million project involved design, construction, and demonstration of a 400 GPD (gallons per day) system to recycle 100% of raw sewage to meet potable water standards. The recycled water was returned to a university residence hall to meet 85% indoor and 15% outdoor demands, supplemented by rainwater. The project included the creation of the first sensor-based technology for detecting chemical health risk in treated water using machine learning and evidence fusion. After 12 months of operation, the recycled water exceeded all potable and non-potable water standards. This system can be located virtually anywhere, as it does not require a water source or sink, and can be introduced gradually in new developments and large buildings.

Pilot Testing of Ozone Biofiltration for Direct Potable Reuse, Gwinnett County, Georgia



Many utilities consider direct potable reuse (DPR), but find that standard treatment technologies such as reverse osmosis (RO) are capital and energy intensive. **Gwinnett County Department of Water Resources** partnered with CDM Smith and Stantec

to evaluate more economical alternatives through a collaborative Water Research Foundation project, *Direct Potable Reuse Pilot Testing of Ozone-Biofiltration* (Reuse 15-11). The team evaluated an alternative treatment train using two-stage ozone-biofiltration to achieve potable quality water. The team demonstrated that the two-stage ozone-biofiltration treatment process, operated in a DPR scenario with a 15% blend ratio of advanced treated wastewater effluent to raw surface water, provided water of equal or higher quality than Gwinnett County's currently planned indirect potable reuse scenario. The process was also 2.5 times less expensive than traditional full advanced treatment. This finding has significant implications for the economic feasibility of DPR, particularly for inland facilities where disposal of RO concentrate is cost-prohibitive.



Advocacy Achievement



The **Advocacy Achievement Award** recognizes individuals and organizations for significant achievements in advancing policy reforms that facilitate greater adoption, implementation or acceptance of recycled water, and/or has provided exemplary service to the water reuse sector. Awardees in this category have demonstrated leadership, creativity and persistence in supporting recycled water projects.

Michael Graves, Reclaimed Water Planner, Garver, Oklahoma



Michael Graves has been successful in both setting the pace for legislative and regulatory guidance as well as demonstrating leadership, creativity and persistence in supporting water reuse across Oklahoma. As Chair of the Oklahoma Department of Environmental Quality Water Reuse Workgroup for Water Quality Standards, Mr. Graves is leading

the State's efforts to develop direct potable reuse regulations proposed for adoption in 2019. His assistance with the State's 2012 regulations on non-potable reuse lead to his recent efforts for Oklahoma to adopt indirect potable reuse regulations in 2018. Mr. Graves has assisted many communities, served on numerous water committees at state and local levels, and participated in educating the public and municipal utilities about the benefits of water recycling.

Rick Warner, Senior Engineer, Washoe County, Nevada

Rick Warner has been at the forefront of potable water reuse advocacy within the U.S. and around the world in his roles as past president of the Water Environment Federation and as senior engineer for Washoe County, Nevada. In Nevada, Mr. Warner organized meetings between stakeholders, regulators, and experts to support the



development and adoption of water reuse regulations. He convened an expert panel of national leaders in water reuse to help Nevada adopt indirect potable water reuse regulations in 2016. He also led six northern Nevada public utilities and the University of Nevada, Reno in conducting Nevada's first demonstration scale indirect potable reuse project. As a senior engineer for Washoe County, Mr. Warner is directly responsible for engineering a 100% reuse water reclamation facility.

WaterReuse Colorado and the PureWater Colorado Direct Potable Reuse Demonstration Project



When the State of Colorado began work on a water plan in 2015, WRCO led advocacy efforts to elevate the important role water recycling can play in Colorado's overall water management strategy. A showcase example of WRCO's contribution to statewide advocacy is the PureWater Colorado Direct Potable Reuse project, which led to the development of a state DPR regulatory framework and a DPR demonstration project.

Hosted by Denver Water, the **PureWater Colorado DPR Demonstration Project** was a collaboration between WRCO, Carollo Engineers, Xylem, PALL Corporation, and Calgon Carbon. The project educated stakeholders about advanced treatment technologies, offered tours that concluded with an opportunity to sample the water, and generated significant media coverage. Together WRCO and the PureWater Colorado DPR demonstration project are recognized for their role in advancing policy reforms that facilitate greater adoption, implementation or acceptance of potable reuse throughout the State of Colorado. In addition, WRCO's state advocacy efforts included regular briefings with Colorado lawmakers, testifying at legislative hearings, and contributing key legislative proposals to advance water reuse.



Outreach and Education



The **Outreach and Education Award** recognizes significant success in advancing public acceptance of recycled water. Short-term campaigns, educational programs, and events are eligible.

Pure Water Soquel Mobile Educational Trailer, Soquel Creek Water District, California



On a shoestring budget and with only eight weeks to debut at an open house event, the Soquel Creek Water District's outreach team created the **Pure Water Soquel Mobile Educational Trailer**, a colorful, interactive and engaging community outreach tool designed to educate the community about water

reuse and the district's proposed water purification/groundwater recharge project, Pure Water Soquel. Thus far, the Pure Water Soquel Mobile Educational Trailer has visited twenty-one community sites, and reached over 2,500 kids and adults. The trailer has also garnered television and print media coverage, and inquiries from other water agencies requesting the trailer visit their facilities.

Up and Comer



The **Up and Comer Award** recognizes a water reuse professional with less than 10 years in the recycled water sector for his/her leadership and commitment to pursuing water recycling as a career path.

Pranjali S. Kumar, Environmental Engineer, Carollo Engineers

Only four years into her professional career, Pranjali Kumar of Carollo Engineers has been a key staff member of three industry leading potable reuse pilot projects: Altamonte Springs, Florida pureALTA direct potable reuse demonstration pilot project; San Diego Pure Water potable reuse pilot project; and the ongoing Toho Water Authority (Florida) indirect



potable reuse pilot project. In addition to a strong work ethic, Kumar is respected by her colleagues for her communication skills and willingness to be an ambassador for projects she has helped succeed. Pranjali's long list of volunteer activities includes participating in public outreach events with WateReuse California, participating in the Water Environment Federation Water Reuse

Committee, and serving as the founding member of WateReuse Florida's Young Professionals group.

WateReuse President's Award



The **President's Award** recognizes significant contributions to the advancement of water reuse through exceptional service and leadership. It is given at the discretion of the WateReuse Association president.

City of Wichita Falls, Texas

Wichita Falls is being recognized for its successful engagement of the City's medical community to effectively address the public's concerns over the safety of its direct potable reuse system. In 2014, faced with catastrophic drought, record high temperatures, and a rapidly depleting reservoir, the City of Wichita Falls implemented the first high profile direct potable reuse project in the United States. Wichita Falls was able to develop a DPR project rapidly, while simultaneously educating the public and planning for a long-term solution to add purified water to its drinking water reservoir, Lake Arrowhead. The team used innovation to avert a catastrophe, turned skeptical citizens into project proponents, worked closely with regulators to ensure the project would protect public health and the environment. Engagement by the medical community vouching for the safety of the water was critical to winning public support. The emergency DPR project helped the community get through a year in which it was in danger of running out of water.





Tom Taggart, Executive Director, Public Services, City of San Marcos, Texas

Thomas P. Taggart is immediate past President of WateReuse Texas and Executive Director of Public Services for the City of San Marcos where he leads and directs the city's water, electric, and transportation

services divisions. A vocal advocate for water reuse in Texas, Mr. Taggart represented WateReuse Texas on the national board of the WateReuse Association and was instrumental in growing membership for the association while in office. Tom's career in water began in 1972, and while no longer President of WateReuse Texas, Tom continues to be actively engaged in the water recycling sector and serves on numerous water-related association boards and councils.

Lifetime Achievement



Margie Nellor

Margaret H. Nellor has had a tremendous impact on advancing water reuse, including service as President of the WateReuse Association. A native Texan, Ms. Nellor relocated to Southern California to work at the Sanitation Districts of Los Angeles County for many years before returning to

her hometown of Austin to work as a consultant and support a number of important water reuse research projects in both California and Texas. Nellor is the author or co-author of numerous technical publications and has contributed to books and manuals of practice in the field of water pollution control, pollution prevention and water recycling. She is nationally recognized as an expert on clean water issues dealing with the development and implementation of water quality standards, total maximum daily loads, and pretreatment regulations. Her professional career, which has spanned more than 27 years, has focused on wastewater reclamation, wastewater quality management, and industrial source control and pollution prevention.

WateReuse Texas Ed Archuleta Reuse Award

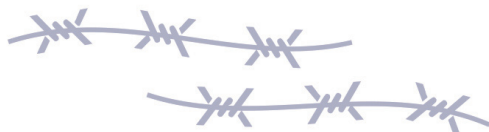


WateReuse Texas established the **Ed Archuleta Award** in 2013 in honor of Edmund G. “Ed” Archuleta for his years of expertise in managing water resources. Ed’s service and guidance at El Paso Water propelled the utility into the role of a respected industry leader in water conservation, water reuse and desalination. The purpose of the Ed Archuleta Award is to encourage and recognize water reuse leaders and those who have made outstanding contributions in the field of water reuse within the State of Texas.



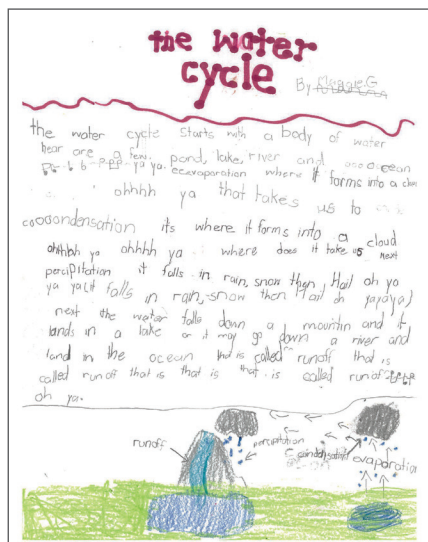
Ellen McDonald, PhD, PE, Alan Plummer Associates, Inc.

Ellen McDonald, PhD, PE is an extraordinary water reuse science expert and vocal advocate for common sense approaches to water supply management. For nearly 30 years, McDonald has used her analytical skills as a water resource engineer to provide communities with safe, reliable supplies. Ellen is a principal at Alan Plummer Associates (APAI) where she leads the water resources group. Through her work at APAI, McDonald has assisted a number of cities and water districts in the development and implementation of water reuse projects, relating to both direct and indirect reuse. She co-authored the report *Direct Potable Reuse Resource Document* prepared in 2015 for the Texas Water Development Board and was on the Independent Advisory Panel for the Framework for Direct Potable Reuse, a collaborative effort by WateReuse, AWWA, WEF and NWRI.

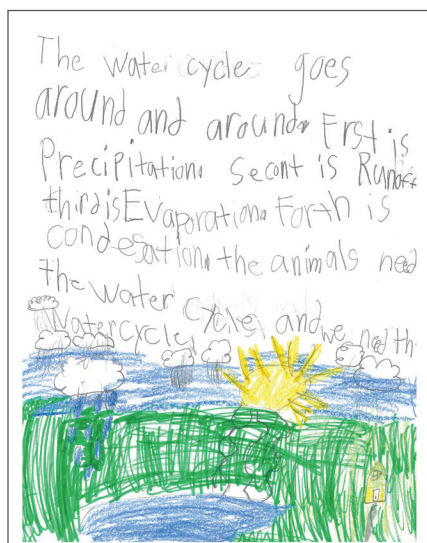


Lone Star Recycled Water Contest for K12 Students

WaterReuse Texas and the WaterReuse Association partnered to present the student art and writing contest to raise awareness about the importance of recycled water among K12 students in the Austin metropolitan area.



Clare "Maggie" Gaines
(First Grade),
Patton Elementary
— Art



Levi Macaluso
(First Grade),
Patton Elementary
— Writing

WaterReuse Awards Committee

Dawn Taffler, *Kennedy/Jenks Consultants, CA (Chair)*

Pamela Kenel, *Loudoun Water, VA (Vice Chair)*

Ty Bereskie, *Denver Water, CO*

Keli Callahan, *Carollo Engineers, NV*

Lesley Dobalian, *San Diego County Water Authority, CA*

Marilyn Hall, *Athens-Clarke County Public Utilities, GA*

Brad Hill, *City of Flagstaff, AZ*

Todd Miller, *City of Springfield, OR*

Shannon Rodriguez, *City of Houston, TX*

Amy Tracy, *Hydro Solutions Consulting, FL*

Gilbert Trejo, *El Paso Water Utilities, TX*

Micah Vieux, *Loudoun Water, VA*

Kids Art/Writing Contest Judges

Caroline Russell, *Carollo Engineers, TX (Chair)*

Martin Rumbaugh, *AECOM, TX*

Mary Zambrano, *Austin Water Utility, TX*

2019 WaterReuse Awards for Excellence

Call for Nominations
March 1, 2019





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