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ADEQ News Release

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Finalists Selected for 2018 Environmental Awards

NORTH LITTLE ROCK— Finalists have been selected for the 2018 Arkansas Department of Environmental Quality (ADEQ) Environmental Awards. This year marks the 14th annual Arkansas Environmental Stewardship (ENVY) Award, the 3rd annual Arkansas Environmental Technology (TECHe) Award, and the 2nd annual Energy Efficiency (E2) Award. This is the first year that the ADEQuest Science Award will be presented.

The winners of these awards will be announced by Governor Asa Hutchinson and ADEQ Director Becky Keogh at a ceremony on April 24, 2018, beginning at 10:00 a.m. in the Governor's Conference Room at the State Capitol Building in Little Rock.

The 2018 ENVY Award finalists are: Arkansas Discovery Farms, Delta Plastics, and Union County Water Conservation Board. The ENVY Award recognizes a major effort by an individual or organization to enhance and protect Arkansas's natural resources through sustainability programs and commitments to stewardship of the environment.

The 2018 TECHe Award finalists are: City of Fayetteville, EAST Initiative, and Little Rock Water Reclamation Authority. The TECHe Award recognizes the advances or innovative use of technology that breaks new ground in protecting resources or improving the environment by going beyond traditional environmental control measures, approaches, or outcomes.

The 2018 E2 Award finalists are: Arkansas Rural Internet Service (ARIS), Arkansas State University—Newport, and Clarksville Light and Water Company. The E2 Award recognizes organizations that demonstrate outstanding leadership by implementing forward-thinking initiatives in areas of energy efficiency and resilience.

The inaugural ADEQuest Science Award will be presented to Meghana Bollimpalli and Little Rock Central High School. The ADEQuest Science Award showcases the next generation's quest for advancements in environmental protection and sustainable energy.

Last year, Goodwill Industries of Arkansas was awarded the 13th annual ENVY Award, L'Oréal USA of North Little Rock took home the 2nd annual TECHe Award, and Arkansas State University–Jonesboro was the recipient of the E2 Award.

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Below is additional information about the ENVY, TECHe, and E2 Award finalists, as well as the ADEQuest Science Award recipient.

ENVY Award Finalists:

Arkansas Discovery Farms

Arkansas Discovery Farms (ADF) is a program that provides an opportunity for privately owned farms to test conservation practices and evaluate their impact on soil and water resources. The overall goal of ADF is to conduct on-farm research and monitoring to assess the effectiveness of conservation practices, and document nutrient and sediment loss reductions in runoff water and water conservation. The program also delivers educational programs and assists farmers in achieving production and environmental stewardship goals. There are currently twelve Discovery Farms in Arkansas.

Delta Plastics

Since Dhu and Mary Ellen Thompson purchased Delta Plastics over twenty years ago, the company has grown from a one-facility operation in Stuttgart to become the largest manufacturer of polytube in the world—a multinational organization with eight locations across the United States and South America.

Farmers use polytube to deliver irrigation water to their crops. Until the late 1990s, there was no collection and recycling system for the used plastic at the end of the growing season. Delta Plastics established a collection and recycling service to growers at no cost. To date, the company has diverted more than one billion pounds of waste plastic from landfills and become the largest recycler of heavily soiled plastic in Arkansas, and one of the largest in the world.

In 2014 Delta Plastics partnered with agricultural and conservation leaders to establish a water conservation coalition known as the Delta Plastics H2O Initiative. The goal of the coalition is to reduce irrigation water usage across the Mississippi Delta by twenty percent before 2020. To accomplish this goal, Delta Plastics developed software technology called the Pipe Planner that farmers can use to maximize the efficiency of their polytube irrigation systems and reduce water consumption by an average of twenty-five percent. Delta Plastics has donated the Pipe Planner and technical assistance and training to farmers free of charge.

Union County Water Conservation Board

In the mid-1990s, Union County was pumping an unsustainable twenty-one million gallons per day (mgd) from the Sparta aquifer. By 1997, the Sparta was declining as much as seven feet per year. One of the state's five critical groundwater areas, Union County's groundwater situation was identified as the state's most critical by the Arkansas Natural Resources Commission and the U.S. Geological Survey.

In order to preserve the Sparta, the US Geological Survey recommended decreasing water consumption from twenty-one mgd to seven mgd, a seventy-two percent reduction. Stakeholders throughout Union County and the state worked together to find a solution. Through legislation, the Union County Water Conservation Board (UCWCB) was born and given unprecedented authority over the groundwater in Union County. Today, through the work of the UCWCB and the collaboration of the local community, Union County is pumping a sustainable rate from the Sparta and delivering an average of fourteen mgd from the Ouachita River.

TECHe Award Finalists:

City of Fayetteville

The HyDOZ (hyper-concentrated dissolved ozone) Disinfection System is a proprietary technology for ozonating water and wastewater that was developed by BlueInGreen, an Arkansas company in Northwest Arkansas. Looking for a replacement for the aged ultraviolet disinfection system at the Paul R. Noland Water Resource Recovery Facility (WRRF), the City of Fayetteville allowed a large-scale pilot of the HyDOZ system at the Noland WWRF. The pilot study was a success and in June 2017 the City of Fayetteville celebrated the successful installation and operation of a full-scale HyDOZ Disinfection System. The HyDOZ Disinfection System is the first of its kind to be installed in a wastewater treatment facility.

The HyDOZ supersaturated ozonation system produces excess dissolved oxygen to help the treated water meet disinfection requirements, increase dissolved oxygen in the receiving stream, and eliminate the need and cost of post aeration. It also reduces emerging contaminants of concern, such as compounds from pharmaceuticals and personal care products. With the HyDOZ system, the footprint of an ozone contactor basin and associated equipment can be minimized, decreasing the project's overall cost. The controlled delivery and efficient transfer of the ozone into the water stream lowers operating costs. In addition, generating ozone on site eliminates the costs and safety issues associated with trucking chemicals on city roads and highways.

EAST Initiative

Environmental and Spatial Technology, Inc., known as the EAST Initiative, is a Little Rock-based nonprofit organization devoted to project-based service learning that encourages students in elementary through high school to apply sophisticated technology in solving problems. EAST was born as an idea more than twenty years ago. Today it includes more than 250 schools in four states.

Some examples of EAST projects include: building better transportation models for school districts and municipal bus routes; Schoolhouse Farms in which fresh produce is grown locally to supply hunger relief organizations; the Freight Farm in which lettuce is grown year-round in a refurbished shipping container that employs a hydroponic growing system; A River Runs Through It: Preserving Water Quality and Protecting the Land Along the Muddy Fork River; and the EAST Global Classroom, a partnership with a school in Romania in which the Romanian students have been taught to use 3D modeling and printing programs to design hydroponic growing bays for gardening.

Little Rock Water Reclamation Authority

In January 2017, Little Rock Water Reclamation Authority (LRWRA) fully incorporated the Sewer Line Rapid Assessment Tool for its preventative maintenance program for pipes with a twelve inch diameter and smaller. The technology, known as Acoustic Inspection, provides a fast, low cost assessment of blockage conditions in a collection system.

Acoustic inspection technology has provided LRWRA a method of assessing blockage conditions on 1100 miles or 100 percent of the small diameter collection system every twelve months. The ability to rapidly assess which pipes require cleaning versus which pipes do not conserves valuable resources. It also reduces the need for closed-circuit televising methods, which is a time-intensive and more expensive inspection. In addition, LRWRA implemented the Acoustic Inspection program without adding any staff to the Collection System Maintenance Department. As a result of this new technology, in 2017 LRWRA reduced non-capacity sanitary sewer overflows by thirty percent from the previous year.

E2 Award Finalists

Arkansas Rural Internet Service

Arkansas Rural Internet Service (ARIS) is the first partnership in the United States between an electric company, Ouachita Electric Cooperative (OECC), and a local telephone and internet provider, South Arkansas Telephone Company (SATCO). Together, the utilities are bringing high-speed internet to a rural, five-county area of South Arkansas that has been largely unserved. Having access to high-speed broadband will allow residents in these rural counties to improve their lives and compete for better jobs. ARIS expects to provide high-speed internet service to 4000 plus area residents by 2021.

Through the collaboration, SATCO built a three-acre, 120 kilowatt solar farm, and OECC is providing its existing electric poles to run the fiber optic cable. Due to the low cost of the solar power and the avoidance of the need to trench and bury the fiber optic cable, costs to the customers are kept to a minimum. In fact, prices for ARIS's high-speed internet service is half of what providers are charging in Arkansas cities where one-Gigabyte per second service is available.

Arkansas State University-Newport

On January 21, 2018, Arkansas State University—Newport (ASUN) "flipped the switch" on a 739 kilowatt photovoltaic system—an array consisting of 2112 solar panels. The array is the largest publicly owned solar array in Arkansas that is not owned by a utility. It is expected to generate over one million kilowatt hours annually. The total energy cost avoidance over a 20 year period is expected to total more than \$2.64 million. ASUN is now using solar power to support fifty percent of the electric consumption of its campus.

In addition, ASUN made \$2.2 million in energy-efficient upgrades and improvements across its three campuses. Every interior and exterior light has been upgraded to LED technology—6591 fixtures. Older HVAC (heating, ventilation and air conditioning) units were replaced with high-efficiency units. Every building on the campus is now connected by an integrated control system that can be monitored and adjusted from any location. The energy management and control system incorporates automatic daily and weekend temperature setbacks.

Clarksville Light and Water Company

Clarksville Light and Water Company (CLW) partnered with Scenic Hill Solar to build a 6.5 megawatt solar array. Completed in December 2017, the array has 20,000 solar panels that track the sun throughout the day. It produces approximately eleven million kilowatt hours annually, and supplies twenty-five percent of CLW's residential electricity load.

The project uses technology that helps CLW reduce its peak electricity demand, and because the array is generating electricity within CLW's service territory, the company avoids transmission charges. The power plant will save Clarksville about \$500,000 a year on electricity costs. The array is also displacing power from a provider that is using primarily coal and natural gas fired power plants. The solar plant will reduce the generation of 7607 metric tons of carbon dioxide per year.

ADEQuest Science Award Recipient

Meghana Bollimpalli and Little Rock Central High School are the first recipients of this prestigious award and scholarship. Bollimpalli's project addressed the growing global energy demand through the development of supercapacitators. In her experiment, she was able to make the design of supercapacitors more environmentally friendly through the use of waste byproducts and the use of a commercial microwave. Central High School will receive an award of \$500.00 to the school science program and Bollimpalli will receive \$500.00 to use for educational purposes.

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