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**Written Statement on Technology and Innovation to Increase Water
Security for Economic Development in the West**

Committee on Energy and Natural Resources

Subcommittee on Water and Power

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Patricia Sinicropi

Executive Director

WateReuse Association

Thank you for providing the opportunity to submit written testimony on the use of technology and innovation to increase water security and enable economic development in the West. I submit today on behalf of the WateReuse Association and its members to highlight the importance of water reuse and recycling across the nation and the West.

The WateReuse Association is a not-for-profit trade association for water utilities, businesses, industrial and commercial enterprises, non-profit organizations, and research entities that engage in and on water recycling. WateReuse and its state and regional sections represent more than 250 water utilities serving over 60 million customers, and over 350 businesses, research institutions, and organizations across the country. Our mission is to engage our members in a movement for safe and sustainable water supplies, to promote acceptance and support of recycled water, and to advocate for policies and funding that increase water reuse.

Safe and reliable water supplies for human use, agriculture, business, industry, recreation, and healthy ecosystems are critical to our nation's communities and economy. Because of various pressures, 80 percent of U.S. states anticipate water shortages in some parts of their states in the next decade. Communities, agriculture, and businesses are looking to diversify their supply portfolios to meet current and future needs. Water reuse (also commonly known as water recycling or water reclamation) represents a major opportunity to assure the quality of and supplement existing water supplies from sources such as industrial process water, agricultural return flows, municipal wastewater, oil and gas produced water, and stormwater.



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Water is critical to our nation's health, strength, security, and resilience, but the solutions available to manage water and its availability are often complex. Water reuse can be an important tool to enhance the availability and effective use of water resources. There are various names for integrated and collaborative water management approaches (e.g., "One Water" and "Total Water Solutions"). Regardless of the terminology, the concept works to replace the traditional, fragmented, approach often applied to water resources management with broader, more comprehensive solutions and strategies to meet diverse water quality and quantity needs. Because implementing water reuse often cuts across federal, state, and regional water programs and may involve multiple local jurisdictions, the decision to recycle water often requires some degree of integrated planning. EPA has kicked off a National Water Reuse Plan which works to bring federal agencies together to work with state, local, and private sectors to remove hurdles and bring innovation to the water reuse arena.

As you know, there has been a water reuse paradigm shift. For decades, drinking water and wastewater services have been siloed. Water supply is pumped from ground or surface water, and treated to comply with Safe Drinking Water Act. Wastewater is collected, moved quickly downstream, treated to acceptable standards, and disposed of without harming the environment. As we move forward, however, the trend for the future includes managing resources to maximize value for communities, citizens, the environment, and the private sector. "Waste" water and its constituents, such as nutrients, are now seen as a resource. The idea is to use a holistic "one water" approach to water management.

Today, water is recycled from coast-to-coast. For example, 6.5 billion gallons of recycled water is used for Idaho's agriculture. 92% of the recycled water Idaho produces is used to irrigate crops, a beneficial use that keeps 2000 tons of nitrogen and 500 tons of phosphorus out of Idaho rivers and streams. General Motors captures and reuses stormwater for cooling towers at the Detroit-Hamtramck assembly plant, saving \$2 million a year. Gillette Stadium in Foxboro, Massachusetts, home to the New England Patriots, uses on-site, decentralized water recycling to meet its water demands. This NFL team generates \$4 million annually for the local economy.

Orange County, California uses recycling to supply drinking water for 850,000 taps and one-third of its homes and businesses. In Nevada's desert, a planned 13 mile pipeline will provide 1.3 billion gallons of recycled water annually to Tahoe Reno Industrial Center, home of Tesla, Switch, and Google, as well as 20,000 new jobs. The Snowbowl, a ski resort in Arizona's San Francisco Peaks, uses recycled water for its slopes, sustaining a \$35 million tourism industry. Recycled water replenishes the Upper Trinity River in Texas and man-made wetlands--restoring a natural habitat for migratory birds and supplying drinking water for the Dallas/Ft. Worth area.

For non-potable reuse, 100 million gallons a year of Class A water is used to meet seasonal demands in Washington State. Uses include municipal parks, schools and athletic fields, golf courses, wetland recharge and restoration.

For direct potable reuse, the Big Spring Water Supply Augmentation Project in Texas blends advanced treated recycled water with lakes to produce a high-quality drinking water. It uses microfiltration, reverse osmosis and ultraviolet disinfection, and blends 16 MGD of advanced treated water with 21 MGD of traditional sources. In El Paso, Texas, its advanced water purification facilities are direct-to-distribution. When completed, the facility will produce up to 10 million gallons per day of water. It is unlike other potable reuse systems in the United States because the purified water will not go through a drinking water treatment plant.

Reuse is starting to mean new things, as well. For example, at the Santa Monica, California Stormwater Reuse Urban Runoff Recycling Facility, 500,000 gallons of dry season urban runoff are treated daily which eliminates pollution of Santa Monica Bay and produces high quality water for reuse in landscape irrigation.

And on the industrial side, there is Industrial Water Reuse at Frito Lay Snack Food Plant in Casa Grande Arizona. The plant runs almost entirely on recycled water while producing nearly zero waste. Wastewater is treated onsite with membrane bioreactors, granular activated carbon, ultraviolet light disinfection, and reverse osmosis technologies. The water meets EPA primary and secondary drinking standards for food contact.

We believe this is an exciting time for water reuse as the field is growing both on the public and private side driving innovation and new technologies to increase our water reliability, water security and driving the economies of our cities and states in the West and across the country. Water reuse has evolved from early irrigation applications to potable to industrial and on-site decentralized systems. There is a growing field of research and development around energy efficiency and brine management. We see a diverse water management portfolio developing across the country, which is increasing our water resilience. With industrial reuse, potable reuse, decentralized reuse, green infrastructure, purple pipe irrigation and tertiary treatment, watersheds across the country are significantly growing their water management portfolios. It is an exciting time for water innovation, and we're pleased to answer any questions you may have.

For more information, please contact the WaterReuse Association's Policy Director, Greg Fogel, at gfogel@watereuse.org.

