



The Trend of Reuse

How water reuse can impact your water footprint

Appplied Water Management (AWM), a subsidiary of American Water, offers design, construction, ownership and operation of community onsite water and wastewater treatment systems. AWM specializes in water reuse—particularly in water treatment systems that produce reuse water for irrigation, toilet flushing and groundwater recharge.

WWD Associate Editor Clare Pierson spoke with Tim Davies, CEO of AWM, about the trend and importance of water reuse, the challenges of conserving water resources and debating a public-private partnership.

Clare Pierson: Why are more utilities and municipalities—as well as public areas and industrial buildings—increasingly treating and using reclaimed wastewater?

Tim Davies: The drivers for the rapid increase in the use of reclaimed water range from wanting to be “green” to regulatory imperatives. Reducing the “water footprint” is part of sustainable design. A small portion of the water our society uses actually requires treatment to drinking water standards. With the advance in treatment technologies, wastewater can be reclaimed to meet the requirements for such uses as industrial cooling water, irrigation water and toilet flush water.

Water resource drivers include situations where future water supply availability is limited or suitable treated wastewater discharge points are limited. Using reclaimed water provides added supply, and reclaiming wastewater prior to discharge and reusing it reduces wastewater discharge.

Pierson: How does water resource management differ when designing and building projects in different areas of the U.S.?

Davies: There is a vast difference between working on water supply problems in a desert versus areas of abundant water supply. A common challenge is that water resources and available land are often geographically separated. Water quality in terms of natural substances such as radon, arsenic and salinity often vary widely with variation in geography. Other geographical considerations include earthquakes, tornadoes, hurricanes and other issues related to natural disasters.

Different states and governmental agencies tend to have regulations that vary. The federal government promulgated the Clean Water Act and the Safe Drinking Water Act, key legislation that is applied by many other governmental subdivisions, but local interpretations, special regulations, policies and practices are quite variable.

Pierson: If there's one thing water/wastewater utilities can do right this instant to conserve their water resources, what would you recommend?

Davies: Perhaps nothing is as instant as

turning off the water at the sink, but there are a number of conservation strategies that can work well and be readily implemented. Most new construction now uses water-conserving fixtures and newer, more efficient types of fixtures are available every day.

On a larger scale, we are taking steps to reduce water that is pumped from the supply but never makes it to the customer due to leaks in water mains. We are piloting systems where sensors attached to our water meters can detect sounds associated with small leaks under lawns or streets that may exist for a long time before they become larger leaks.

Reducing outdoor water use and replacing it with reclaimed wastewater or just scheduling the use differently is an important conservation step. While much of the country's water infrastructure is devoted to providing for peak usage, it is very common to reduce peak demand by scheduling irrigation during off-peak hours—i.e., early morning prior to sunrise.

Pierson: American Water specializes in public-private partnerships. Why would you recommend a public-private partnership to a small water utility?

Davies: Across the country, communities have very different views on PPPs. Some are very comfortable with discussions about the sale of public water infrastructure to responsible private entities, but many are passionate about maintaining public ownership. What many people don't know is how many types of PPPs exist. The involvement of the private sector can be small or significant. At one end of the spectrum, a private company may simply offer specific advice or assistance in some part of managing a water utility. Private sector involvement increases further if communities allow private entities to operate and maintain their systems.

For some small utilities and towns, access to state funds for infrastructure needs can be a problem. Concession agreements allow communities of all sizes to lease their systems to private water companies, who can offer assistance in the financing of infrastructure upgrades in exchange for long-term operating contracts. This way, communities continue to own and have ultimate control over their systems while unlocking private sector solutions and private sector finance at cost-effective rates for their customers. **WWD**

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U.S. EPA Provides Incentives for Clean Water Permit Fees



The EPA is issuing a new rule that will provide financial incentives for states to use fees when administering a clean water permit

program. EPA can give up to a total of \$5.1 million to states that have adequate permit fees for their National Pollutant Discharge Elimination System programs.

“Clean water permit fees can be a great tool for gaining and sustaining progress,” said EPA Assistant Administrator for Water Benjamin Grumbles. “EPA's voluntary incentive program is a modest but meaningful step to encourage market-based solutions with our state partners.”

WateReuse Association Presents Annual Awards

The WateReuse Association recognized the best and the brightest in water reuse

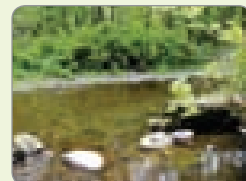


and desalination during the Annual WateReuse Awards Luncheon

held Sept. 8. The awards recognize projects and individuals who advance beneficial and efficient use of water resources through education, sound science and technology using reclamation, recycling, reuse or desalination for the benefit of the public and the environment. A list of award recipients is available at www.watereuse.org.

British Columbia to Invest \$16 Million in Flood Protection

Communities in British Columbia, Canada, will benefit from a variety of cost-shared flood protection initiatives recently announced.



Sixteen million dollars will be spent this year on 25 new flood protection initiatives

across the province. These initiatives include armoring existing dikes for erosion control and building new flood pumping stations and flood debris traps under the Building Canada infrastructure plan.

WQA Official Testifies About Pharmaceuticals Before Illinois Senate



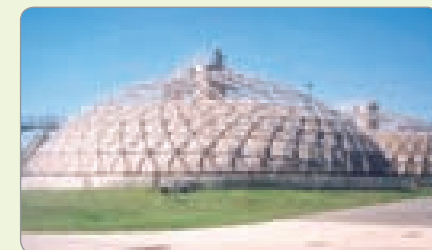
Joseph Harrison, technical director of the Water Quality Association (WQA),

testified on the issue of pharmaceuticals in drinking water before the Illinois Senate Committee on Public Health Sept. 9.

Harrison, former chief of the Safe Drinking Water Branch for Region V of the EPA, discussed a public opinion survey conducted for the WQA on public attitudes on the issue. He also talked about standards for treating contaminants.

To read Harrison's testimony, visit www.wqa.org.

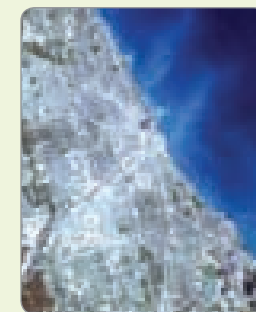
Jackson Pike WWTP Expands



The Jackson Pike WWTP in Columbus, Ohio, will expand from a wet-weather maximum flow of 102-mgd aeration operation to a 150-mgd step feed to comply with upcoming EPA wet-weather requirements. OTT diffusers were selected based on efficiencies, easy installation and maintenance. Construction is underway and the first tanks will be operating before Thanksgiving.

The project required clean water oxygen transfer testing to the latest ASCE 2-06 standard. OTT's Magnum diffuser design with FlexSil membranes, promoted by Hydro-Logic Environmental, met or exceeded every guarantee value. Future needs will be met with existing blowers, and air consumption and power costs are optimized for all operating requirements.

Projected Chicago Area Water Demand Could Lead to Shortages



A Chicago Metropolitan Agency for Planning (CMAP) report indicates that water shortages could be on the horizon for

the Chicago area, according to the *Business Ledger*. In 11 area counties, demand for water could increase as much as 64% by mid-century.

With this report, northeastern Illinois now has a clear picture showing implications of water consumption trends, said CMAP Executive Director Randy Blankenhorn.

American Water Awarded Contract For Fort Hood



American Water has announced that its Military Services Group has been awarded a contract for ownership, operation and maintenance of the water distribution system and wastewater collection system at the Fort Hood Army Installation in Texas. The award of this contract is estimated at approximately \$329 million over a 50-year period and is also subject to price re-determination.

American Water's Military Services Group currently operates and maintains water or wastewater networks at Fort A.P. Hill, Va.; Fort Bragg, N.C.; Fort Sill, Okla.; Fort Leavenworth, Kan.; Scott Air Force Base, Ill.; and Fort Rucker, Ala. **WWD**

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