

Allan Connolly



Aging Gracefully?

As U.S. water infrastructure continues to age, it is beginning to impact water quality. Jeff Zagoudis, contributing editor for *Water Quality Products*, spoke with Allan Connolly, vice president of operations and engineering at Culligan, about the problem and what is being done to solve it.

Jeff Zagoudis: How would you describe the current state of water infrastructure in the U.S.?

Allan Connolly: It is starting to show cracks. The classic statistic that a lot of people quote is that the maximum life expectancy of a lot of the major pieces of infrastructure is in the order of 50 years; the average age of U.S. infrastructure is 75.

Zagoudis: What are some of the factors contributing to the problem?

Connolly: The underlying problem here is there is a perception [that] water should basically be free; we as a society do not pay enough for what we get. If you look at the current amount we pay today for water in the U.S. per month, it is less than the average cell phone bill. That is enough money to run the operating expenses of water treatment facilities. What it does not cover is the cost to replace the infrastructure.

Zagoudis: How is drinking water quality impacted by aging infrastructure?

Connolly: You can imagine what it looks like on the inside of a pipe that is 75 years old. No one has been in there and no one has scrubbed it. At some point, when it starts to decay enough, you are going to start to get contamination. You also have capacity demands—a lot more people and a lot more industry demanding a lot more water through that same infrastructure.

Zagoudis: What is being done about aging infrastructure?

Connolly: That right now is the critical issue. Where people are reluctant to raise the price of water for residents because of political backlash, we are starting to see the price charged to industries escalate. Essentially, consumer and industrial customers are starting to bare the brunt of the cost. Now a lot of companies who have not invested a lot in water reuse or reclamation are suddenly very keen to do so. They are paying what they should for water, plus there is a really good economic incentive for them to improve.

Zagoudis: What options are available for treating water quality issues related to aging infrastructure?

Connolly: The good news is all the water we have today has been here for a long time and you can clean it. But in some parts of the country, where you have large, growing populations, what you cannot fix is the scarcity problem. We have started to see this—

the competing demands of agricultural, industrial and domestic use means you are literally running dry.

Atlanta had a huge scare in 2008. It came within three months of draining Lake Lanier in 2008 because of a prolonged drought. Other countries have gone through this. Australia did it through a combination of adding very, very expensive desalination plants in conjunction with changing people's behaviors.

Zagoudis: What is the U.S. doing about these situations?

Connolly: I think it is a mixed message. Las Vegas is held up as a poster child for water reuse. It has an incredibly sophisticated recycling program to take wastewater and sewage water, treat it and put it back into Lake Mead. Then you have the other end of the spectrum, where Atlanta was saved by some flooding rains.

Australia had to take the brute force option with the desalination plants and it spent a lot of money. If you run out of time, the solutions, if they exist, can be very, very, very expensive.

Zagoudis: Where do you believe the push needs to come from?

Connolly: It is a multi-level problem. The Las Vegas initiatives were driven by the local water authority. The converse example of Atlanta—that is a state/federal nightmare and no one knows how to solve it.

I would like to see the price structure of water change pretty aggressively. For example, in residential use, you pay a nominal amount for the first small piece because that is for basics. For the next piece you pay a little more. When you start using what most consider an excessive amount of water—if you have ornate gardens or you have lots of swimming pools—then the price per gallon really starts to escalate.

You also cannot treat a business or an industry the same way, but you need some sort of similar structure. Reward efficient users of water. Those that are really inefficient relative to what they do—they should pay accordingly. *wqp*

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Water Filters Donated to Kenya Flood Victims

Employees of Eastman Chemical and HTI LLC contributed to the donation of thousands of water filters to flood victims in western Kenya, where flooding along the Nzoia River has left homes and small farms under muddy water. Each single-use pouch filter contains an osmotic charge that is activated when the pouch is placed in a contaminated water source. After 10 to 12 hours, the pouch is full and ready to drink.



IFAT ENTSORGA 2012 to Provide New Perspectives

IFAT ENTSORGA, a trade fair for the environmental industry, will take place May 7 to 11 in Munich. The 2010 event attracted 2,730 exhibitors from 49 countries and 110,000 visitors from 185 countries. All relevant players in the industry will present their latest products and services for environmental solutions.



Development Becomes First All-WaterSense Community

A townhome development in Issaquah, Wash., is the first community in the U.S. in which every home has earned the U.S. Environmental Protection Agency's (EPA) WaterSense label. Each zHome unit also includes a rainwater harvesting tank ranging in size from 1,000 to 1,800 gal. The community received the Forest Stewardship Council's 2011 award for the best residential project in North America.

'Miracle Tree' May Provide Inexpensive Purification Method

Scientists reported that a natural substance obtained from seeds of *Moringa oleifera*, also known as the "miracle tree," could purify and clarify water inexpensively and sustainably in the developing world, where more than 1 billion people lack access to clean drinking water. Research on the potential of a sustainable water treatment process requiring only tree seeds and sand appears in the American Chemical Society's journal "Langmuir."

Lead Levels Reduced in Schools' Drinking Water

The U.S. EPA, working with the New Jersey Department of Environmental Protection and three New Jersey school districts, announced it successfully lowered lead levels in drinking water at elementary schools in Union City, Atlantic City and Weehawken, N.J., to below recommended levels. Initial sampling by EPA found elevated lead levels at 28 of the 343 school drinking water outlets sampled.



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