



**Balancing Public Water Supply and In-stream
Flow Needs: A Public Water Supply Perspective**
John Herlihy and Peter Galant
**John Herlihy, Director, Water Quality and Environmental
Management, Aquarion Water Co.**
Peter Galant, Vice President, Tighe and Bond

By Nita Contreras '11

John Herlihy, of the Aquarion Water Company, is in charge of water quality and environmental management. His name has appeared quite frequently associated with company press releases to share important news with the Connecticut community and, with 30 years of experience in his field, it is Herlihy we trust. It is Herlihy we turn to when we want to know what is going on and into our water.

Herlihy's co-speaker, Peter Galant, also spoke about water but is not a part of the Aquarion Company. Galant, rather, spoke from the perspective of his previous position as president of the CT Water Works Association, which means he has close ties to Herlihy, vice president of CT Water Work Association. Galant has also specialized as a consultant to the state of Connecticut to decide on new regulations for water companies, which means he, in that respect, also has close ties to Herlihy. Between the two speakers, our ideas about water supply and water as a commodity took a very different perspective toward water scarcity and conflict. Though Herlihy is in charge of environmental management, the main priority of his company still lies in profit-making, therefore a large portion of their conservation depends on state regulations. Both Herlihy and Galant expressed business views about water conservation and juggling state expectations with consumer demands.

The basic structure of the company, Herlihy explained, runs through three components of the company. Currently, the company is owned privately by investors who had decided to make the first public water system in 1857. The water company had originally been created to supply water in the case of fire emergencies. The company has obviously grown since then, to now supply 580,000 customers with 180,000 connections in 36 communities using 23 systems. The system runs off 9 different reservoirs from a watershed that has kept most of the water they use as surface water with 260 employees that are in charge of managing the system.

Aquarion owns 29 dams, 43 treatment plants, and 2,842 miles of pipes that supply water from 34 well fields, 9 reservoir systems and 5 interconnections. That happens to be a lot of water to supply a large portion of the state of Connecticut – mostly the Southwest region. All of these aspects of the water system are maintained in order to meet the company's mission – to provide a reliable source of high quality drinking water sufficient to meet customer needs at a reasonable cost. Yet cost and supply are both objective factors. Aquarion, rather than setting supply limits, dictates its supply by the demand of its customers. Despite the fact that the state requests that adequate water is left in rivers to prevent drying them up, Herlihy acknowledges that Aquarion's customers demand more water – about 41 million gallons per day, on average.

From this perspective, trying to both own a business to make profit and ensuring that there is enough water being conserved is a difficult challenge. Yet, we see that conservation is possible, because the company does want to have enough water to be able to supply its customers for a period after the present, or it will no longer be able to make money.

The benefits that come from having a public water supply system include public health protection and job creation. Though we are very thankful to have a safe continuous supply of drinking water, the question is, does it really outweigh the costs of overusing our water sources to supply an exorbitant amount of water. Aquarion's use of water to supply its system causes damages to the environment during the extracting of water, in the emission of air pollution to heat its buildings/water, and the fuel it stores. The biggest worry though comes from the supply of water. The question is, are we running out, and what measures are we willing to take to ensure a continuous source of water?

Though the speakers did not make mention as to the future of Aquarion's water source, they admitted to the problems that accompany running a private water company. They touched on some of the regulations the state of Connecticut imposes on them, which helps to keep the company from taking too much water out of the reservoirs. The state too wants to protect its natural resource, and though watersheds collect much more rainwater than rivers supply sources, there is still the chance of extracting too much water. Aquarion tries to protect its resources by "owning the land directly, or by giving it to the Nature Conservancy, a nonprofit dedicated to protecting the environment," Burgeson (Connecticut Post) says. The protection of the land also limits the amount of pollution that gets into the water system.

Within the Connecticut state departments though, there are many offices that help to oversee not only the safety of the water, but that Aquarion is following regulations. The Department of Public Health (DPH) regulates the quantity and quality of the water from the reservoirs. The Department of Environmental Protection monitors the amount of water withdrawals and discharges, which is the main inspection for water sustainability. The Department of Public Utility Control monitors the price rates for the water and the services of a company, and Aquarion has been an award recipient for their excellence in service.

This aside, there are still many issues in the water service industry in general, not only at Aquarion, that need to be sorted out. The American Water Works Association reports every year the top ten issues in water source infrastructure, which every company must strive to fix. The largest of these problems, and probably the one that causes the most losses to our water, is in dealing with infrastructure. After large population booms, there has also been a large expansion in our infrastructure, but most of this now needs to be updated. In John Burgeson's article about Aquarion, he notes that of the 41 million gallons of water used per day that "15 percent is 'lost' on fire protection, leaks and theft." Despite how well we manage our water, there is always this loss from at least one source which we can control: leaks. This is huge when it is so easy to fix, especially as we hone in on our worry about the quantity of water while facing climate change and the price we pay for it in this economy.

To account for our impending water shortage, Aquarion has taken some important measures to ensure that scarcity does not play a major issue in the public water supply source. Aquarion has

implemented a four phase program to describe our water shortage: advisory, watch, warning and emergency. Under each of these phases, measures are taken throughout different parts of the distribution to ensure that water scarcity severity does not increase. The reservoir systems that Aquarion uses has different release rates in order to prevent water from reaching peaks in any of these cycles. There are daily release limits/requirements, which vary seasonally through the wet and dry periods, from providing for “the average household 245 gallons per day...less in the winter, more in the summer” (Burgeson). During drought, cutbacks to the supply system are made and groundwater withdrawal limits are also put in place. All of these restrictions are made to vary by stream class, season, and monthly limit, and then projected into a demand schedule, which is reviewed by the Department of Public Health.

John Herlihy has been very open about all of this information, both on record at our conference, and through interviews about the company. The company itself has a very clear, straightforward, and detailed website which allows viewers and customers to examine both sides of the picture. Though customers know they are getting charged for their water service, they are also told that they are charged for the regulations the company must follow in order to maintain good quality and a sustainable reserve. The next step Aquarion needs to face, Galant says, is a way to prioritize uses. Yes, we are getting more efficient with our water use, but we still need to understand how to better regulate our resources and communicate the ecological benefits and costs to our lifestyle. Though Connecticut has been very fortunate to have an ample supply of high quality water, if we cannot manage this precious resource properly, the future of our water supply will not be so hopeful.

References:

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