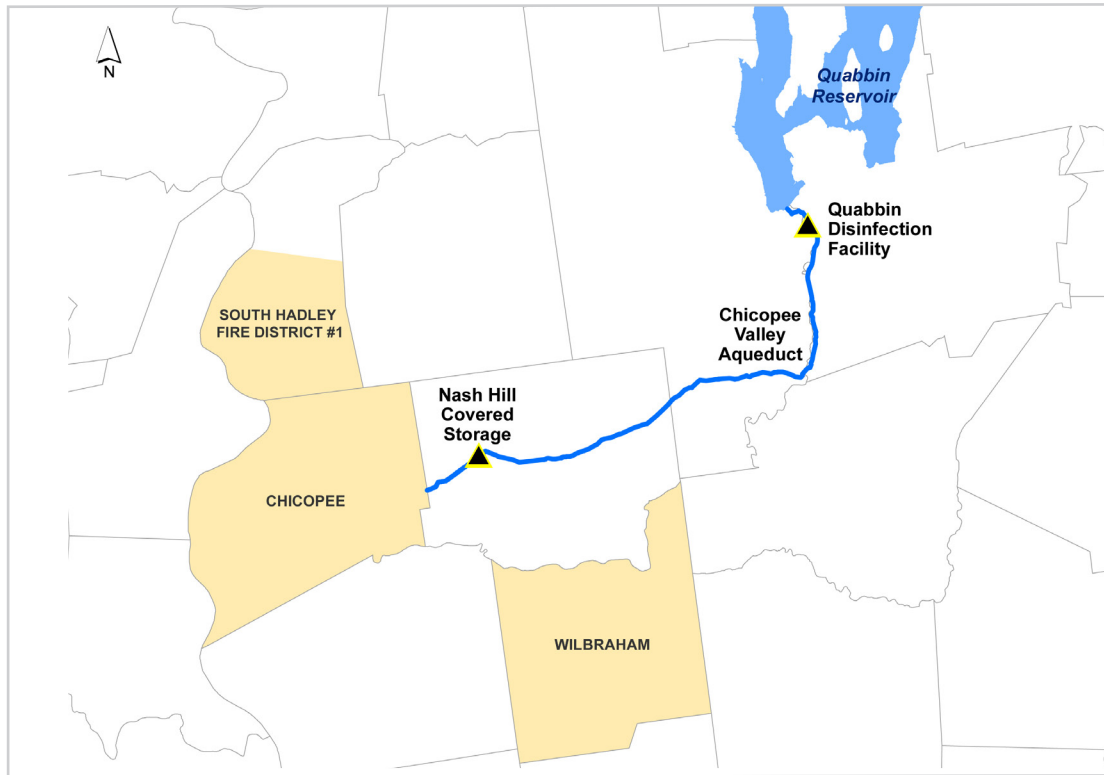




Massachusetts Water Resources Authority

Ultraviolet Light Water Treatment at the Quabbin Disinfection Facility



MWRA's Chicopee Valley Aqueduct (CVA) Water System

About the CVA Water System

MWRA's Chicopee Valley Aqueduct (CVA) Water System provides drinking water for three communities: Wilbraham, Chicopee and South Hadley Fire District No. 1. Combined, CVA communities use an average of approximately 7.7 million gallons of water per day.

The water is supplied by the Quabbin Reservoir and delivered by gravity to CVA communities through the Chicopee Valley Aqueduct. Along the way, it is stored in the Nash Hill Covered Storage Tank in Ludlow.

How Water at the Quabbin Facility is Treated

Water at the Quabbin Disinfection facility is currently treated with sodium hypochlorite (a form of chlorine) for primary and residual disinfection. Primary disinfection kills any pathogens that may be present; residual disinfection protects the quality of the water

as it travels through local pipelines. Each community provides further corrosion control treatment to protect the water against leaching lead from home plumbing.

Ultraviolet Light Treatment to be Added

While the current water treatment process is safe and effective, MWRA must add a second means of primary disinfection at the Quabbin facility by October 1, 2014 in order to comply with a new Environmental Protection Agency regulation, the *Long-Term 2 Enhanced Surface Water Treatment Rule*.

Based on the findings of pilot testing and other research, MWRA and the CVA communities concluded that the addition of UV light disinfection is the best solution for meeting the new requirements because it is cost-effective and will provide added public health benefits.

Benefits of UV Light Water Treatment

Ultraviolet light, a component of sunlight, is a safe, strong disinfectant that inactivates pathogens such as bacteria and viruses. It also inactivates chemical-resistant, illness-causing parasites such as *Cryptosporidium* and *Giardia* by damaging their DNA, which prevents them from multiplying. Because UV water treatment is effective without the use of additional chemicals, it also reduces the potential for the formation of harmful disinfection by-products.

Construction Information

MWRA's contractor, Daniel O'Connell's Sons, Inc., based in Holyoke, Massachusetts is constructing an addition to the existing Quabbin facility that will house the UV treatment equipment. Work began in January 2013 and is expected to be substantially complete by August 2014.

Contact Us

If you have questions or concerns about this project, please e-mail Len Cawley, MWRA Community Relations Manager: leonard.cawley@mwra.com, or call (617) 660-7972.



The Quabbin Disinfection Facility in Ware was built in 2000. MWRA is adding UV light water treatment capabilities. The new treatment components will be housed in an addition constructed by Daniel O'Connell's Sons, Inc.



Ultraviolet light reactor units recently installed at MWRA's Carroll Water Treatment Plant in Marlborough. The Quabbin facility will be equipped with three, 24-inch Sentinel UV Light Reactor units manufactured by Calgon Carbon Corporation.

About MWRA



The Massachusetts Water Resources Authority provides wholesale water and sewer services to local water and sewer departments in 61 communities, serving 2.5 million people.

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