

Executive Report

Major progress was made in water quality in 2000. The Authority's Corbalis Water Treatment Plant became the first in Virginia, and one of the few plants in the nation, to treat its water with ozone. Ozone treatment adds an additional barrier against waterborne pathogens such as *Cryptosporidium* and *Giardia*, significantly reduces dissolved organics, lowers the amount of chlorine needed to treat water, and ultimately improves the quality of drinking water.

In another major water quality effort, progress was made with the State of Maryland on the issue of building a replacement intake along the Potomac

River. Construction began in early 2001. The new intake will take in cleaner water than is possible from the current shoreline intake.

Construction of the Frederick P. Griffith, Jr. Water Treatment Plant in Lorton, Virginia, began in May 2000. Work on the associated raw water facilities started in July. The Griffith Plant, which will be a state-of-the-art water treatment facility, is scheduled for completion in 2003.

In 2000, the Authority and the other major providers of water in the region, the U.S. Army Corps of Engineers'

Workers at the construction site of the Griffith Water Treatment Plant install a 96-inch filter drain.



Washington Aqueduct Division and the Washington Suburban Sanitary Commission, asked the Interstate Commission on the Potomac River Basin to examine future water demands and water supply availability through 2020.

The resulting study assessed the ability of regional water resources to meet the water supply needs of the Washington metropolitan area as it continues to grow. Two demand forecast scenarios (most likely and high growth) were compared with available resources. Assuming a repetition of the 1930–31 “drought of record,” the study found current resources adequate to meet both the most likely and high growth estimates of 2020 demands.

In February 2000, the Occoquan High Dam underwent repairs, replacing sediment bedload barriers with 23-foot-long panels of galvanized steel.

In May, the Authority became the only independent public water agency in the United States assigned a triple A bond rating—the highest bond rating possible. According to Standard & Poor’s, the rating upgrade from double A reflected “an ongoing record of solid financial management and a manageable capital improvement program.”

Also in 2000, Authority community outreach efforts to improve water quality resulted in grants to five area community groups for projects related to water supply and source water protection.

In February 2000, the Occoquan High Dam underwent repairs. A helicopter was used to lift 23-foot-long steel panels of corrosion-resistant galvanized steel, which were then placed along the outside of the water intake at the dam. Divers, in wet suits to combat frigid temperatures, then bolted the panels in place.



The Potomac River Intake Issue

The Need for a Potomac Offshore Water Intake

The Fairfax County Water Authority began planning for the construction of an offshore intake pipe in the Potomac River in 1992. The offshore pipe was needed to replace the existing shoreline raw water intake that has been clogged on numerous occasions by grass, leaves, and ice, resulting in partial and sometimes total shutdowns of the Authority's Corbalis Treatment Plant. The plant provides a critical raw source for the 1.2 million Northern Virginians whose water is supplied by the Authority.

The new intake was also needed to obtain a cleaner source of water—an

important barrier to water-borne pathogens. A basic tenet of water supply science is to use the best source water obtainable and erect every feasible barrier between raw water and finished drinking water. Turbid water at the shore has the potential to contain proportionately more *Cryptosporidium* oocysts and *Giardia* cysts than the cleaner offshore water, and it is more difficult to treat. (*Cryptosporidium* caused the death of 100 people and illness to 400,000 more in Milwaukee in 1993.) Another turbidity issue is cost. Each year, the treatment plant takes in 4,000 to 8,000 tons of sediment from

[continued on page 10](#)

In 1994, ice storms froze the Potomac River, reducing intake flow by 75 percent. A total shutdown appeared imminent until the Authority improvised a solution. A jersey barrier attached to a crane chopped repeatedly into the river, displacing ice around the intake.

