

DEPARTMENT OF PUBLIC WORKS

Improving our water system for the future..

It is no accident that the county has an abundant supply of clean, safe drinking water. The leadership of County Executive Janet S. Owens has bolstered planning efforts for a water system that will abundantly supply future generations of county residents.

Mrs. Owens has championed the capital projects that will put in place the infrastructure that will insure our public water system in Anne Arundel County thrives well into the future.

Our public water system was not always as functional or flexible as it is today. Many Anne Arundel County residents remember the outdoor water restrictions of the late 1980s. Residents were assigned even or odd number days designating when they could use water outdoors. In several instances, outdoor water use was banned altogether.

"These restrictions occurred not because we didn't have an adequate supply of water, but because we didn't have the capacity to move the water throughout the system effectively", according to Richard Dixon, Regional Manager for Water Operations, Anne Arundel County Department of Public Works Utility Operations. As the county's top water operations administrator since 1985, Mr. Dixon is thoroughly familiar with every aspect of the county's water system. "Planning to meet the county's water demands of the future is one of our top priorities," according to Mrs. Owens.

Building to Improve

Since the late 1980s, the DPW has concentrated its capital projects in two areas. First, it has expanded the amount of water the county's treatment plants could produce. This includes providing additional storage.

At one time, the Arnold, Broad Creek, and Severndale plants, all major water producers in the county, had to be shut down at night because there was no place to store the water they produced. Building additional storage reservoirs allowed the plants to produce 24 hours a day.

Second, the DPW has interconnected the county's water service areas, improving the department's ability to move water from where it is produced to where it is needed.

Most recently, the DPW has expanded its ability to produce



water by increasing the capacity of the Arnold and Crofton Meadows II treatment plants and upgrading the booster stations used to pump water into the county from Baltimore City.

From Arnold to Sun Valley

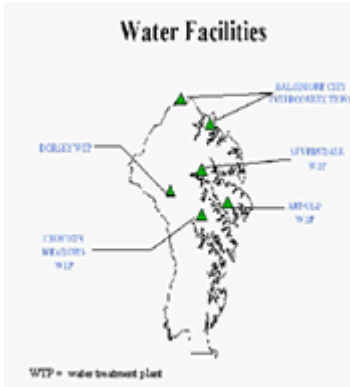
The major thrust in the next few years, Mr. Dixon said, lies in strengthening the transmission system in two major areas. First, a 36-inch transmission main is planned to run from the Arnold plant north on Route 2 to interconnect with a 30 inch transmission main at the intersection of Rt. 177 and Rt. 648 in Sun Valley.

When finished, if there is a problem or interruption in the system anywhere on the eastern side of the county from the Broadneck peninsula to north of Glen Burnie High School, the DPW can move large amounts of water from other areas to compensate.

Second, a similar transmission main is planned for the west part of the county. This 36-inch main will run from Crofton Meadows II plant to Jessup allowing water to be moved throughout the entire west part of the system as needed.

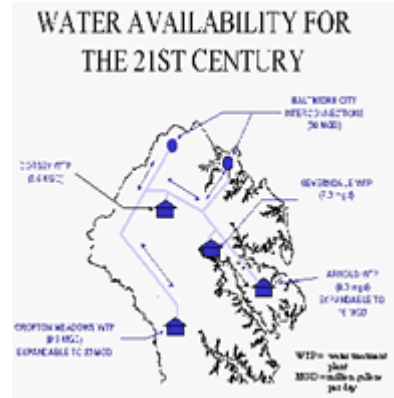
The end result is that the two major transmission lines-one in the east and one in the west-will enable water operations to move water north from the two major water producing plants- Arnold and Crofton Meadows II - so that the county will be less dependent of other sources for water in the future.

Over 11 billion gallons of water were distributed by Anne Arundel County in 2000. Over 8 billion gallons were treated and distributed after being taken from deep wells throughout the county. Almost 3 billion gallons were purchased from Baltimore City. "We will continue to purchase water from Baltimore City in the foreseeable future because it is more economical", according to Mr. Dixon. However, he notes that expanding plant capacity will make the system more independent and more economical in the future.



Long range plans for the county water system consider projected future demands. For example, the Crofton Meadows II plant which currently produces 5 million gallons per day (mgd) can be expanded to produce 30 mgd after which water can be moved north to the Airport Square/West Nursery Road corridor which is currently served with water purchased from Baltimore City.

The Arnold plant can also be expanded from 8 to 16 mgd to meet future demands. Only one of two plants at the Broad Creek facility is currently being used. The other is available for future needs.



Demands of the Future

As the county continues to grow, other water system issues will arise, according to Mrs. Owens. Mr. Dixon cites the need for additional elevated storage tanks which will become more critical to supply peak hour demands and to continue to meet adequate fire flow protection levels. The need to upgrade older plants, such as the Herald Harbor and Gibson Island plants which are 30 to 40 years old, are just an example of the constant need to replace old equipment and update technology.

Utility Operations continually strives to increase efficiency by automating operations. Presently there are seven locations throughout the county from which operators can monitor the entire water system from a single location. This automation reduces operating costs. In addition, Utility Operations' EXCEL program employs "private sector" techniques to optimize the workforce to operate more efficiently and hold down costs. "Our plans and projects for the water system are designed to ensure water supplies and exceptional water quality at reasonable costs well into the 21st century," states Mrs. Owens.