

ACHIEVING THE WATERFIRST DESIGNATION: HIGHLIGHTS OF FIVE COMMUNITIES

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Abstract. The WaterFirst Community Program was launched in 2002 in an effort to recognize and reward cities and counties across the state that go above and beyond the requirements of the law when it comes to the management and stewardship of our shared water resources. The program also provides technical assistance to a limited number of communities each year that are striving to improve their water stewardship and management and gain the WaterFirst designation. This paper will: 1) highlight the achievements of the communities that have received the designation; 2) explore the challenges faced by communities that are active in the WaterFirst Program; and 3) review the lessons learned through the program.

WATERFIRST COMMUNITIES

Since the inception of the WaterFirst Community Program, five communities have received the WaterFirst designation. Receiving the designation is not an easy process as numerous steps must be taken by the local government to be named WaterFirst. The process begins with an application submission to the Department of Community Affairs (DCA). That application is reviewed by several individuals considered leaders in the state on water issues¹. A recommendation is then made to DCA on which communities should receive technical assistance and which, if any of the applicants, should be further reviewed for the designation.

The review for designation begins with a site visit, again by individuals considered leaders on water issues

in the state, who score the communities on a variety of topics. The community under review provides a presentation on their efforts related to the WaterFirst categories (Watershed Assessment, Stormwater Master Planning, Water Supply Planning, Water Supply Protection, Water Conservation, Wastewater Treatment Systems and Management, and Water Reclamation and Reuse). Following the presentation, a tour of various facilities is taken so that reviewers can see the community's efforts in action. Following the site visit, the review team makes a recommendation, through their scoring of the community, to DCA's Office of Environmental Management. That recommendation is then forwarded to the Commissioner of DCA who either accepts or rejects the recommendation.

To date, the positive recommendations for each of the communities reviewed have been accepted by the Commissioner and the WaterFirst designation has been awarded to: the Clayton County Water Authority and its members²; the Columbus Water Works and the Columbus Consolidated Government; Gwinnett County, the City of Hartwell, and the City of Savannah. Following are highlights of programs each of the designees has in place, representing just part of what helped them gain the WaterFirst designation.

Clayton County Water Authority and its Members

The Clayton County Water Authority (CCWA) has long been recognized in the state and nation for its excellence in water resource management and stewardship. One of their many exceptional programs deals with managing wastewater and its by-products. Over the years CCWA has developed innovative ways of treating and disposing of waste materials and then using those materials for environmental improvement. With its reuse of both wastewater solids and the liquid effluent, CCWA has long been recognized for its

¹ These individuals have included representatives from the Georgia Water and Pollution Control Association, the Georgia Conservancy, the Georgia Municipal Association, Association County Commissioners of Georgia, the University of Georgia, the Georgia Environmental Protection Division, the US Environmental Protection Agency, Columbus State University, Georgia Environmental Facilities Authority, and the Georgia Economic Developers Association.

² The Clayton County Water Authority members who have received the WaterFirst designation are Clayton County, Forest Park, Jonesboro, Morrow, and Riverdale.

environmentally sound approach to water treatment and resource management.

CCWA takes all of its wastewater solids from its four reclamation facilities and converts them to usable products such as marketable compost and fertilizer products like *Agri-plus 650*, which is sold by the ton and used by the agricultural industry in Florida. By turning the solids into a usable product, CCWA avoids the typical landfilling of the wastewater treatment by-product, saving valuable landfill space.

In addition to CCWA's converting wastewater solids into a usable product, CCWA also makes use of the liquid wastewater effluent. Seventy-eight percent of all wastewater effluent is land applied using a vast array of sprinklers on over 4,000 acres of wooded land. Here the water is converted into needed nourishment for the forest plant life. These woodlands are also a valuable community resource as the Authority allows bow-hunting of deer on these lands, providing an outdoor recreation opportunity for community members.

CCWA also provides an outstanding community amenity with its Wetlands Education Center. With indoor exhibits and trails that go throughout the site, the Center provides children and adults with an opportunity to learn about the environment.

The Columbus Water Works and the Columbus Consolidated Government

The Columbus Water Works (CWW) and the Columbus Consolidated Government have demonstrated their commitment to excellence in water resource management and stewardship through education and innovation. The Oxbow Meadows Environmental Learning Center, for example, demonstrates the foresight of the city and the Water Works to develop and operate the center in conjunction with Columbus State University. The center also and illustrates a commitment to the community, education, and environmental stewardship.

One of the most well-known innovations of the CWW is its Combined Sewer Overflow (CSO) technology testing program. Faced with the high cost of separating combined sewers, the CWW sought to find an alternative solution to system separation that would meet the standards required by EPA. The Advanced Demonstration Facility developed by the Columbus CSO Control Program was one of the first in the nation to meet the full requirements of EPA's CSO Policy which requires compliance with water quality standards, public involvement and improving the beneficial use of the receiving waters.

The Advanced Demonstration Facility at Uptown Park is as impressive as it is effective. It utilizes vortex vessels for storage, separation, and chemical disinfection, followed by treatment using a compressed media filter

then UV disinfection. The facility does not require fulltime staff, and because it is located underground, it provides community greenspace above. It has also proved to be highly cost-effective, providing a savings in the tens of millions of dollars to CWW over another option, sewer separation. This project has garnered not only state and national attention, but international interest as well as a means to reduce pollution loads from CSOs during wet weather events.

Gwinnett County

Gwinnett County has a strong commitment to water supply and wastewater planning, community education, and an outstanding use of technologically advanced treatment methods to exceed required water quality standards. Numerous divisions within the county coordinate their efforts to provide water related services to this constantly growing metro-area county. With limited water resources available, Gwinnett County strives to maintain environmental excellence while investing wisely in infrastructure.

Because protecting limited water resources is vitally important, Gwinnett County conducted a Watershed Assessment to determine the conditions of local streams and what factors were contributing to their impaired conditions. Following a two-year assessment and modeling project, Gwinnett County was able to determine the primary stressors on the streams in the county: stormwater runoff from stabilized developed land and historically agricultural lands; and the clearing of riparian zones and streambank vegetation were the primary culprits contributing to water quality concerns.

To address these stressors, and to minimize the problems they caused, a watershed protection plan was developed with three key objectives that needed to be addressed: changes in hydrology; alterations of riparian corridors; and reduced water quality. To accomplish these key objectives, three major components had to be addressed: activities that would improve the watershed conditions; new development requirements; and improving already affected areas.

Real solutions to mitigate the impacts of urban development within a watershed both begins and ends at each individual development site, and it is not easy to make real changes in improving stream quality. It takes a broad understanding by the local governments, the development community and the general public about best management practices – why they are needed, what they are, and how they can be accomplished in order to improve water quality and protect water resources.

The City of Hartwell

The City of Hartwell worked diligently for more than a year to earn the WaterFirst designation. The city owns its own smoke-testing and in-line TV camera, a

significant investment for a community of less than 5,000 people, and has inspected 100% of the collection system through one of these methods. They have provided educational brochures, worked with Boy Scouts and other youth community clubs to stencil storm drains and reinforce their direct connection to area streams. The city is also implementing a meter change out program, and notifying customers of potential water leaks within their homes. These are just a few of the steps Hartwell has taken to improve their stewardship and management of water resources.

One key element in Hartwell's water management and stewardship efforts has been the implementation of a water reuse system. The system provides 1.75 MGD of Hartwell's wastewater effluent to the Catechee Golf Club for the irrigation of greens and fairways. Not only does this significantly reduce the amount of potable water required by the golf course, but it has eliminated the direct discharge of treated effluent into a local stream. One of the most important aspects of this reuse system is that it has also eliminated the city's problem with wastewater overflows. Three spills that occurred prior to the implementation of the reuse system were all the result of lightning strikes to various components of the same lift station. By investing in the water reuse system, Hartwell proactively demonstrated their commitment to improving their management and stewardship of local waterways.

The City of Savannah

The City of Savannah can be considered a national model for water conservation programs. Out of necessity, the city has developed educational water conservation programs, constructed a water reclamation facility, and worked diligently to conserve one of our most vital natural resources. Following are several program descriptions that demonstrate how City of Savannah is working to protect our shared water resources through water conservation community programs.

Savannah Water Efficiency Project: The Savannah Water Efficiency Project (SWEP) is a dynamic partnership between the city of Savannah Water & Sewer Bureau, the Neighborhood Improvement Association (NIA), local businesses, and industries. The program is designed to educate community residents about simple actions they can take to conserve water, such as replacing their old water-guzzling toilets with new, ultra-low-flush toilets (ULFTs). Residents who participate receive a ULFT, a low-flow showerhead, and faucet aerators to install in their homes. In order to receive a new toilet, they must be willing to return the old fixture.

Water Smart Puppet Show: The Water Smart Puppet Show, created by Puppet People, uses puppets, music and storytelling to teach elementary school age children

about water resources and water conservation. Every year between 20 and 25 elementary schools in Chatham County receive a visit from the puppet show.

Groundwater Guardian Program: The Chatham County Groundwater Guardian Team is a program that the city of Savannah participates and funds each year. The team consists of governmental, agricultural, business, educational, and public representatives in Chatham County. The mission is to educate the public about groundwater resources, and what can be done to protect them.

Water Conservation Kits: The City of Savannah provides the following items to citizens who are connected to the city of Savannah Water and Sewer systems: Indoor Water Conservation Kits which include: low-flow showerheads, faucet aerators, toilet bank bag, and leak detection tablets; Outdoor Water Conservation Kits that include: multi position garden hose, hose repair ends, water gauge, garden hose nozzle seal & screen washer; Toilet Diverters: This device saves 1/2 gallon per flush of the fill cycle water; and Leak Detection Dye Tablets: Easy to use dye tablets to detect silent leaks.

WATERFIRST CHALLENGES

The WaterFirst Community Program has presented two significant challenges in its implementation. The first is that local governments must be pro-active in their approach to improving their water resource management and stewardship. The second is that many communities face significant economic challenges in implementing improvements in their water systems, and the WaterFirst Program does not provide any upfront financial benefits.

Local governments face myriad challenges everyday. In improving the way they manage water resources and in becoming better water stewards, it is often necessary to put significant changes in place. In providing technical assistance through the WaterFirst Program, recommendations are made to the local governments on a variety of issues, including educational efforts, ordinance adoption, or program changes and improvements. However, because the program is designed to recognize communities that go beyond the requirements of the law when it comes to their water resources, it is often challenging to get local governments to take the next step to move beyond the norm. While the will to do so may be there, the community may have difficulty in pro-actively moving forward because of other competing interests. This is a voluntary program, thus no enforcement is involved.

A second challenge in the WaterFirst Program is that no financial benefits are offered to the communities up front. Once the designation is received, communities become eligible for one point off the borrowing rate for

state funded loans from the Georgia Environmental Facilities Authority, and they are eligible to receive Community Development Block Grants every year for water related improvements. Even though the economic benefits exist, it is often difficult for communities to plan for or implement necessary improvements without the economic assistance to do so. However, if these benefits were given when a community was selected to participate in the program, and the community did not use the funds to make the recommended improvements or did not receive the designation within an appropriate amount of time, recouping those funds would be very difficult. If the program provided a cash grant up front for specific project work, it might encourage more local governments to more pro-actively seek the designation.

LESSONS LEARNED

Several lessons have been learned through the WaterFirst Program. The first is that most local governments like to be recognized when they are doing the right thing. We frequently hear only about the problems in local government, but when a city or county is doing more than they have to, it all too often goes unnoticed. That is a significant part of the WaterFirst Program: provide recognition and reward to communities going above and beyond what they are required to do when it comes to water resources.

A second lesson learned is that communities do want to learn from each other. Recreating the wheel with every educational effort or having to make a significant financial investment in determining if a particular technology works is not always necessary. By sharing ideas and resources, local governments can benefit significantly. A next step in the WaterFirst Program is to bring together the participating communities to encourage more peer to peer exchange.

A final lesson learned is that communities do want to do the best that they can. They want to provide a high quality of life to their residents, and while some are hesitant to implement changes in the way they do business, providing them with the tools to do so and the sound reasoning behind what needs to be done to improve the management and stewardship of water resources can provide a higher quality of life, and economic, environmental and health benefits.

CONCLUSIONS

The WaterFirst Community Program will continue to provide technical assistance to communities who desire to go above and beyond the requirements of the law when it comes to the management and stewardship of our

shared water resources. As water becomes a limiting factor to growth in many areas of the state, it will be of vital importance that local governments are doing all that they can to: 1) ensure a safe and reliable water source; and 2) provide wastewater treatment that results in a high level of water quality in our lakes, rivers, and streams. Communities must be engaged in water planning and educational efforts on water conservation and reducing nonpoint source pollution. These activities should be priorities for local governments.

WaterFirst will continue to serve as a mechanism to recognize excellence and assist in making improvements. The Department of Community Affairs is committed to working with local governments in protecting and enhancing the state's water resources and will continue to seek ways to improve the program to best benefit local governments.

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