

# THE WATERFIRST COMMUNITY PROGRAM: COMMITTED TO CARING FOR OUR WATER RESOURCES

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**Abstract.** WaterFirst is an innovative approach to address myriad water issues, and to encourage and assist communities in making real progress in their water protection, conservation and stewardship. The program is a voluntary partnership between local governments, state agencies, and other organizations working together to increase the quality of life in communities through the wise management and protection of our valuable water resources. The WaterFirst Program provides a framework for communities to involve and educate their residents; raise their water consciousness; and make a real commitment to their invaluable, irreplaceable water resources. The achievement of excellence, that is, going above and beyond the requirements of the law in eight specific components, is expected for communities to earn the WaterFirst designation, and those components are: Watershed Assessment; Stormwater Management; Wastewater Treatment and Management; Water Supply Planning; Water Supply Protection; Water Conservation; Water Reclamation and Reuse; and Residual Biosolids Management.

## INTRODUCTION

Addressing the complex and challenging water issues that exist within the state is not an easy task. Because of the increased attention that must be paid to Georgia's waters and how they are used, the Georgia Department of Community Affairs has created WaterFirst. This is an exciting new initiative designed to recognize and reward local governments for going above and beyond the minimum planning and environmental compliance requirements for managing water resources. The WaterFirst Community Program will not only provide recognition to communities but will also offer financial incentives as well as technical assistance to local governments across the state.

The program is a proactive approach to water resources and seeks to help communities make the

connection between land use and water quality and quantity. It is an important step that communities can take to protect water resources for both environmental and economic benefits. WaterFirst also encourages communities to look beyond their own political boundaries and recognize the inextricable links that shared water resources create. Working in partnership with surrounding communities will enable watershed level issues to be addressed, as well as local, more specific concerns. We all live downstream, and our actions, particularly when it comes to our water resources, do affect those around us.

## WATERFIRST PROGRAM DESIGN

The WaterFirst Program is organized into eight components that fall under three major program themes: Water Quality and Quantity Management; Water Supply Planning and Development; and Wastewater Management. Within each component, requirements are specified for meeting the WaterFirst designation. Communities meeting goals set forth with the assistance of WaterFirst staff will be recognized statewide as a WaterFirst Community, having demonstrated a strong commitment to water resources protection and wise management. Communities will also become eligible for financial benefits from both the Department of Community Affairs and the Georgia Environmental Facilities Authority.

### **Water Quality and Quantity Management**

How we manage activities within a watershed determines the quality and quantity of our receiving waters. Efforts to improve water quality have previously focused on reducing pollutants from industrial wastewater and discharges from municipal sewage treatment plants. As pollution control measures for these sources were implemented and refined, it became more evident that nonpoint sources of water pollution were also causing significant impairment of

water quality. To further address these issues, WaterFirst Communities are required to perform a Watershed Assessment and implement a watershed management plan. To further address nonpoint source pollution, communities are expected to implement a Stormwater Management Plan.

**Watershed Assessment.** This comprehensive effort to determine the multiple causes of water quality and habitat degradation will provide communities with the information to assist in prioritizing the problem areas within their watershed. Following the assessment, communities will be able to develop solutions to correct or prevent degradation. The watershed management plan will allow communities to plan for the impacts of changes in local population density and economic growth while protecting water quality.

**Stormwater Management.** Generally, stormwater management is a program to manage the volume and flow rate of stormwater runoff so that it does not damage natural or constructed systems. In the past, the major focus of stormwater management was to reduce flooding. However, controlling nonpoint source pollution associated with stormwater runoff has also become a primary objective. Managing stormwater at the local level includes flood control activities, proper land management, utilizing best management practices for water quality control, attention to infrastructure needs, seeking innovative design solutions, and educating the community at large.

### **Water Supply Planning and Development**

Maintaining a clean and adequate water supply protects both public health and public finance. When water supplies are contaminated, it is difficult and expensive to remediate. Local governments play a key role in addressing the necessary treatment standards as well as promoting water conservation and protection. Careful planning and protection of the state's limited water resources is vital to both the environmental and economic health of the state. Both the quality of our water resources and the quantity must be considered as we look at both the demands made on this limited resource and long-term growth. As careful planning of water supply, water conservation and water protection are addresses, we must keep in mind the not only do people benefit from protected and plentiful water resources, but plants and wildlife benefit as well.

**Water Supply Planning.** Water supply planning is an important management tool for local governments because it promotes orderly, methodical development and wise investments while protecting our important natural resources. Water supply plans are typically

designed to evaluate all of the factors affecting our water resources. Once the planning process is complete, policy can be set, sources determined and allocations established. An effective water supply plan will include, as a minimum, a needs analysis, identification of source limitations and policy concerns, and evaluation of environmental impacts.

**Water Conservation.** As water quality and quantity are directly linked, implementing a water conservation strategy offers both financial and environmental benefits to local governments. Improved water resource management, effective planning and coordination, and public education are key components in a successful water conservation strategy. The Environmental Protection Agency offers a nine-step planning process for developing a water conservation plan. WaterFirst Communities can utilize these guidelines as they develop and implement a strategy for water conservation.

**Water Supply Protection.** A safe and reliable source of drinking water is essential for communities to grow and prosper. Increasing point and nonpoint sources of pollution, urban sprawl, and migration of pollution from old disposal sites all create growing threats to water supply. Water supply protection provides a comprehensive approach to guarding public health by protecting drinking water supplies. Protecting water supplies from contamination rather than relying on treatment processes to remove them is the fundamental goal of water supply protection. Water supply protection also means managing potential sources of contaminants and engaging in contingency planning by determining alternative sources of drinking water.

### **Wastewater Management**

Wastewater treatment accelerates nature's process and protects land, air, water, and plant and animal life. The treated effluent is discharged into either the ground, a nearby lake or stream, an underground aquifer, or a distribution system for reuse in irrigation or other non-potable applications. Despite advances in wastewater treatment, continued rapid growth and development, coupled with increasing awareness of water quality problems, still creates public concern. Wastewater planning, treatment and management, as well as what should be done with the resulting biosolids and effluent are key components that communities must address.

**Wastewater Master Planning, Treatment and Management.** A community's infrastructure needs are never static, and wastewater collection, conveyance,

treatment and disposal facilities must be reviewed periodically for adequacy. It is essential to review the condition of facilities, project service populations and locations, conduct a regulatory assessment for changing requirements, and conduct fiscal management planning to maintain the solvency of the utility. It is also essential to review treatment methods and determine when facilities need to be upgraded or new facilities need to be constructed to eliminate or lessen the use of individual septic systems. Managing the wastewater system is also a vital element to protecting water quality. Conducting a Capacity, Maintenance, Operation and Management audit will provide the utility with the information necessary to determine how and when system improvements need to be made. Additionally, providing the public with information on the proper siting, inspection, and maintenance of septic systems will reduce the incidence of water quality concerns related to septic tank failures.

**Residual Biosolids.** Biosolids are the nutrient-rich organic materials resulting from the treatment of sewage sludge. When treated and processed, biosolids can be safely recycled and applied as fertilizer to improve and maintain productive soils. There are several benefits to recycling biosolids including: higher crop yields, as biosolids have been shown to produce significant improvements to crop growth and yield; lower costs, as biosolids can be a cost efficient complement to chemical fertilizers; and greater savings, as local governments can market their biosolids and offset some of the cost of ensuring clean water quality. Recycling biosolids also reduces the amount of landfill space used for disposal.

**Water Reclamation and Reuse.** Water recycling is a safe and environmentally responsible approach to conserving our water resources. Reclaimed water undergoes a high level of treatment to remove bacteria and viruses from the wastewater and can then be safely reused for other purposes. By using reclaimed water, communities can reduce the amount of potable water that is used, for example, for irrigation and industrial applications. The environment can also be enhanced through the use of reclaimed water as it can be used to create artificial wetlands, enhance natural wetlands and sustain stream flow.

## WATERFIRST PROGRAM GOALS

The major objective of the WaterFirst Community Program is to challenge local communities to not only work within their community, but to think outside of their own political boundaries to better protect and

manage the water resources that we are all dependant upon. Readjusting our thinking to realize that water, its flow and cycle, is not constrained by artificial political lines is key to ensuring that an abundant and high quality water environment is maintained. Realizing that the way we use land is directly linked to our water quality and quantity and implementing changes to improve that relationship is also of utmost importance.

A WaterFirst Community is one that pursues excellence in its management and protection of water resources, and embraces a proactive approach to providing a better water utility and seizes the opportunity to manage natural resources in the best manner possible. Addressing the components of the WaterFirst Program and reaching the goals of water protection and management excellence can lead to improved economic, environmental, and social health throughout the state.

## ACKNOWLEDGEMENTS

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