

# WATER SUPPLY PLANNING AS A GROWTH MANAGEMENT TOOL IN COASTAL GEORGIA

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**Abstract.** As saltwater intrusion caused by over pumping continues to threaten the long-term availability of the Upper Floridan aquifer system as the primary source of water for domestic and industrial purposes in Coastal Georgia, water supply planning will likely be a growth management tool employed in the region. Availability of adequate water supply to meet future population and economic demand in Coastal Georgia will play a major role in dictating the amount of growth and type that can be expected to occur. Water supply considerations can also be a driving force behind creating more environmentally-friendly communities with the employment of sustainable site design practices and water conservation measures.

## INTRODUCTION

More than ever before, communities must address water supply issues when promoting economic development activities, including the attainability of groundwater withdrawal permits from the Georgia Environmental Protection Division. Groundwater withdrawals since the 1880's have resulted in long-term level declines in the potentiometric surface of the Floridan aquifer system, thereby allowing saltwater intrusion and encroachment to occur. Communities with comprehensive water supply management plans that are fortunate to have an abundant and well-managed water supply may emerge as strong urban centers that are able to attract economic development, and as a result, urban and rural sprawl may be reduced in areas that are unable to meet increased water demand. Communities must seek permission from the Georgia Environmental Protection Division to withdraw or increase withdrawal of groundwater. The ability of the groundwater resource to continue to meet the water demands from new residential developments with golf courses and irrigated landscapes will soon require major planning decisions at the local

level. Without adequate water to meet the day-to-day demands, communities will have to become selective in the types of new development they will allow.

## CURRENT PLANNING REQUIREMENTS

State legislation requires that local governments prepare comprehensive plans for orderly growth and development. However, there is no requirement that communities actually implement the prepared plans. Many communities along the coast do not fully utilize proper planning techniques in dealing with development proposals submitted to them for review and approval. The desire to have growth and economic development in a community sometimes far outweighs the proper review of a proposal and its relationship to the community's existing land use plan or the future land use plan.

Coastal Georgia has been experiencing growth rates similar to that of Atlanta's metropolitan area, and is predicted to outpace the state and U.S. over the next several years. Coastal Georgia is expected to grow at an average rate of ten percent between 2000-2005, while the state should experience approximately a six percent rate of growth. It is estimated that the U.S. will grow at approximately four percent during the same time frame.

As rural areas become more developed with residential communities and commercial establishments, the ability of the groundwater resource to meet the demand becomes more and more critical. Coastal Georgia is not going to run out of groundwater, but the ability of developers and local governments to continue to rely upon the Floridan aquifer to meet the ever increasing demands is approaching the problem stage. The opportunities to continue to expand utilization of the area's groundwater resource without creating problems for other communities are gone.

The Georgia Environmental Protection Division is requiring the twenty-four counties in Southeast Georgia

to produce water supply management plans with a planning period of fifty years. Alternative sources for water supply are a major feature within these required plans. Communities must also review their wastewater treatment capabilities to determine if waste treatment capacities will be sufficient to treat the water used by the new development activities.

#### FUTURE PLANNING ACTIVITIES

Communities in Coastal Georgia will continue to be faced with unprecedented population growth and requests to permit many different land use activities. However, the ability of communities to meet the water demands of this new growth will present a problem to those communities that do not plan for their future water supply needs.

Land use plans utilizing sustainable principles will become more complex. For example, communities may implement or require the following measures:

- Proposed areas of future use that include water use restrictions for development
- Site design practices that include major water conservation measures
- Cluster developments that occur more readily around vast areas of open space
- Developments that employ small lots with limited yard space needing little irrigation, if any

Local governments will, as part of their permitting process, require developers to purchase water capacity to serve the residents or commercial owners. Industrial use of groundwater will be greatly reduced through new technologies and aggressive water conservation programs.

Communities that fail to properly plan for water supply needs will be limited in their growth potential. Water supply planning is no longer just an engineering exercise. Planners and engineers, along with elected officials and citizens, will determine whether a community will be ready to face the challenges of future demand for water as economic growth continues.

As communities in Georgia continue to develop more specific comprehensive plans to address the problems and issues facing local government, the need to identify future water supply will become standard. Basic elements to be considered in growth management include: population projections, infrastructure and service areas, development potential of existing vacant property and re-development potential of existing land uses. Most important in growth management is the ability to

implement the vision that the citizens desire for their community. Long-range planning can help the community to achieve its goals.

#### CONCLUSIONS

Communities that fail to address water supply needs through the proper planning process will not enjoy the benefits of growth that will be continuing in Coastal Georgia. Communities will not be able to continue to make land use decisions without taking into consideration the ability to supply water to the proposed development. The communities that have planned for growth and taken steps to develop detailed water supply plans in combination with their comprehensive plans will be the new urban growth centers.

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