Coastal Ground Water at Risk

Saltwater contamination at Brunswick, Georgia, and Hilton Head Island, South Carolina

Introduction
Saltwater contamination is restricting the development of ground-water supplies in coastal Georgia and adjacent parts of South Carolina and Florida. The principal source of water in the coastal areas of Georgia and Florida is the Floridan aquifer, an extensive and permeable sandstone formation that is underlain by saltwater. Water in the Floridan aquifer is also affected by intrusion of saline water from the Atlantic Ocean. Low-lying areas along the coast are underlain by the Lower Floridan aquifer, composed of hard limestone and dolostone saturated with fresh groundwater. Saltwater intrusion is of major concern in coastal areas of Georgia and Florida because of the developmental pressures in the area and the large and diverse range of resource users withdrawing water from these aquifers.

Coastal Ground Water at Risk

Saltwater contamination along the coastal portions of Brunswick, Georgia, and Hilton Head Island, South Carolina, poses a threat to coastal development and infrastructure. Saltwater contamination has been detected in numerous aquifers along the coast of Georgia and may be present in aquifers along the coast of South Carolina. Saltwater contamination can result in reduced water-quality standards, reduced water supply, and increased treatment costs. The coastal areas of Georgia and South Carolina are under pressure to conserve funds for public works and infrastructure. In order to address this problem, the U.S. Geological Survey is working on a comprehensive program to evaluate ground-water conditions in the coastal areas of the southeast and adjacent parts of the Carolinas. The study is being conducted in cooperation with the U.S. Environmental Protection Agency and the U.S. Department of Energy.

Water-quality data from the U.S. Geological Survey’s ongoing monitoring program provide the tools necessary to study the extent and effects of saltwater contamination in the coastal areas of Georgia and South Carolina. In addition, the USGS is working with numerous stakeholders, including the Georgia Department of Natural Resources, the Georgia Environmental Protection Division, the Georgia Department of Natural Resources, the Georgia Environmental Protection Division, and the Atlantic Water Quality Association, to develop strategies to protect coastal ground-water resources.

Saltwater contamination in Brunswick, Georgia
Saltwater contamination is the result of a series of events leading to the contamination of the underground aquifers. The Floridan aquifer system is underlain by saltwater, and the seawater has penetrated the aquifer through various means, including natural processes and human activities. In order to prevent saltwater from moving toward the coast and contaminating the freshwater part of the aquifer, the USGS is working with numerous stakeholders to develop strategies to protect coastal ground-water resources.

Saltwater contamination in Hilton Head Island, South Carolina
Saltwater contamination is a threat to the development of ground-water supplies in Hilton Head Island, South Carolina. The USGS is working with numerous stakeholders to develop strategies to protect coastal ground-water resources.

Objectives of the Sound Science Initiative
The Coastal Groundwater Project is a joint project between the U.S. Geological Survey and the Georgia Department of Natural Resources. The project is focused on developing and implementing strategies to protect coastal ground-water resources in the coastal areas of Georgia and South Carolina.

Selected References, Sources of Information, and Contacts
For more information, contact:
Dr. J. Hopson, U.S. Geological Survey, P.O. Box 25086, Atlanta, GA 30360-2824 USGS URL: http://www.usgs.gov

Geography and Ground-Water Resources
The coastal areas of Georgia and South Carolina are under pressure to conserve funds for public works and infrastructure. In order to address this problem, the USGS is working on a comprehensive program to evaluate ground-water conditions in the coastal areas of the southeast and adjacent parts of the Carolinas. The study is being conducted in cooperation with the U.S. Environmental Protection Agency and the U.S. Department of Energy.

As water use increases and development continues, the need for clean and reliable water supply grows. The U.S. Geological Survey is working with numerous stakeholders, including the Georgia Department of Natural Resources, the Georgia Environmental Protection Division, and the Atlantic Water Quality Association, to develop strategies to protect coastal ground-water resources.

Ground-Water Management and Scientific Studies
In order to address the threats to coastal ground-water resources, the USGS is working with numerous stakeholders to develop strategies to protect coastal ground-water resources.

Ground-Water Use and Contamination
Ground-water withdrawals from the coastal aquifers in Georgia and South Carolina are extensive and are affecting the quality of ground-water resources. The USGS is working with numerous stakeholders to develop strategies to protect coastal ground-water resources.

Ground-Water Use Act
The Ground-Water Use Act is a state statute that provides a framework for the management of ground-water resources. The act is designed to protect the quality and quantity of ground-water resources and to ensure that ground-water withdrawals are sustainable.

Saltwater Contamination at Brunswick, Georgia
Saltwater contamination in Brunswick, Georgia, has resulted in reduced water-quality standards, reduced water supply, and increased treatment costs. The coastal areas of Georgia and South Carolina are under pressure to conserve funds for public works and infrastructure.

Saltwater Contamination at Hilton Head Island, South Carolina
Saltwater contamination in Hilton Head Island, South Carolina, has resulted in reduced water-quality standards, reduced water supply, and increased treatment costs. The coastal areas of Georgia and South Carolina are under pressure to conserve funds for public works and infrastructure.

Saltwater Contamination in Brunswick, Georgia
Saltwater contamination in Brunswick, Georgia, has resulted in reduced water-quality standards, reduced water supply, and increased treatment costs. The coastal areas of Georgia and South Carolina are under pressure to conserve funds for public works and infrastructure.

Saltwater Contamination in Hilton Head Island, South Carolina
Saltwater contamination in Hilton Head Island, South Carolina, has resulted in reduced water-quality standards, reduced water supply, and increased treatment costs. The coastal areas of Georgia and South Carolina are under pressure to conserve funds for public works and infrastructure.