

Water Resource Use and Conservation in Georgia

By David Kyler, CENTER FOR A SUSTAINABLE COAST

Saint Simons Island

Surface water, ground water, and wetlands are interconnected resources that are vital to our coastal ecosystems, and these water resources are already being overused. For example, by taking too much groundwater for one type of user (industry), we have greatly reduced the capacity of the aquifer to provide potable drinking water for continued population growth. Because such huge amounts are withdrawn for industry and power production, **if current water use efficiency in coastal Georgia could be improved by just 10%, enough water would be saved to support population growth for at least 35 years.** This approach would provide needed water without further jeopardizing water resources or aquatic life, unlike virtually every other alternative.

Consider the following highlights of water use and alternatives in Georgia:

- The combined use of several large industrial water users in the Georgia coastal area alone is equivalent to an amount of water that would support an additional 800,000 people, far more than the existing population.
- Statewide, in 1995 total industrial use was 675.8 million gallons a day — equivalent to the water needed to support a population of nearly 4.7 million people. A 10% cutback by industry would support 470,000 people.
- Agriculture is estimated to be using three times more than industry, comparable to the water demand of more than 14 million residents. Reducing farm water use by only 10% would serve 1.4 million people.
- But the lion's share of total Georgia water use is for power generation. Of the total water use estimated in Georgia in 1995, more than half of all water withdrawn from rivers and wells was used for electric generation. Modest conservation steps saving just 10% in this sector would support more than 2 million residents.
- Although most of the water in power production is returned to rivers after being used for cooling, much is lost to steam — a minimum of around 20% of all water used in Georgia literally goes up in smoke every day.
- Desalination is very energy intensive. This means that desalination itself uses freshwater to make freshwater, so at this stage of technology it is not a practical alternative, and it would also add to air pollution.

The coastal region's economy greatly depends on water flow and water quality throughout vast watersheds, covering more than 60% of Georgia's geographic area, to support nature-based businesses.

- Recreational fishing in coastal Georgia was estimated to generate \$335 million in business activity during 2000.
- If this region reflects the national average (nature-based tourism averaging one-quarter of total tourism), at least \$450 million a year in our tourism business activity is derived from natural resources.
- Commercial fishing, while in decline, is still a major economic factor in coastal Georgia — between \$200 and \$250 million in total annual business impact is estimated.
- This combined annual total of a one billion dollar nature-based business sector supports an estimated 40,000 jobs in the region, and many coastal communities depend on them.

Yet, we continue to parcel out and deplete water resources as if there is no limit. With the approval of state officials, every year more water is being taken out of coastal river systems and aquifers, and more wetlands are being ditched, drained and filled. Combined, these practices are depleting the capacity of our natural water-dependent ecosystems. No one knows for certain how much environmental damage would be done by taking still more water from the Altamaha, Ogeechee and other coastal rivers. We do know that our rivers are under threat from rapidly growing upstream areas — every year there are more state permits issued for taking water from our rivers and for discharging more waste into them. This unquestionably reduces the amount and quality of fresh water available downstream here on the coast. From 1989 through 1998, the state issued wastewater permits for the release of 83% more toxins into Georgia waters. (Annual EPA *Toxic Release Inventory* reports.)

Instead of proceeding recklessly by withdrawing and impounding more water from our rivers, and granting still more pollution permits, **we should consider making existing amounts of water go further by conserving water presently being wasted.** This would solve all Georgia's water supply problems for the foreseeable future.

- National studies have found that between 10% and 50% of water in municipal, commercial, and industrial systems is being squandered — either through faulty equipment (leaking pipes, valves & meters), excessive use (like irrigating during a rainstorm!), or obsolete, water-intensive processing methods.
- There has been no comprehensive study by the state to evaluate the feasibility of achieving greater water use efficiency, yet the state continues to issue permits that further threaten public resources unnecessarily.

We need to get smart about water use in Georgia sooner rather than later. This means adopting and enforcing an aggressive water conservation policy, while becoming more thoughtful about development choices. We should choose options that are compatible with our natural environment and the proven, traditional nature-based business sector — having a growth potential beyond most every other alternative — while preserving our quality of life within the sustainable capacity of natural systems. **Natural resources are our most irreplaceable form of public wealth — let's invest them wisely for the continuing benefit of this and future generations.**