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Florida's Water Crisis – Now What?

June 14, 2011 – West Palm Beach was warned that they have 22 days of water remaining.

July 7, 2011 – West Volusia County officials were facing the dilemma that there is not enough water for their citizens and the manatees. They need to take more water out of Blue Springs in order to meet the demands but pumping more water out could endanger the survival of the manatees that depend on that spring.

All over the state of Florida, cities, counties and municipalities are facing water shortages. In 2010, The Natural Resource Defense Council issued a report analyzing the top 10 cities that are most at risk of running out of water. Orlando, Florida came in at number 10. This Health Issues Brief will look into the background of Florida's water issue and how it got to this breaking point. It will analyze the economic impact of the water shortage to businesses and some possible solutions to consider.

Background

After World War II, Florida saw a population boom that lasted over 60 years. Affordable housing, no state income tax, the advent of air conditioning, sun and beaches drove people by the thousands to the Sunshine State. During the 1990's, Florida saw approximately **750** people move into the state every day. As the population grew, wetlands were replaced with housing developments. To date over **9 million** acres of wetlands have been lost in Floridaⁱ.

Floridians love water. Nationally, per-person water consumption has dropped over the past decade. But in Florida, it increased by 5 gallons per person per day. A Floridian uses an average of 174 gallons of water a day (at home) compared to 142 gallons a day nationwide. Florida's green grass culture may be to blame – up to 75% of domestic water use in Florida is for outdoor purposes-compared to 50% nationwideⁱⁱ.

Agriculture

Florida's agriculture industry is second only to its tourism industry. In 2002, agriculture had total cash receipts of over \$6.85 billion, ranking Florida 9th in the nation. Agriculture is the largest water user in Florida, using 48% of the total freshwater withdrawals from ground and surface water.

Water Storage and Changing Weather

Past drainage for development in Florida, coupled with the replumbing of the everglades by the Army Corps of Engineers, left no place for the state's water to be stored. Therefore, rainfall is not properly directed back into Florida's aquifers but rather, goes into canals and out to sea. Also with the loss of wetlands, Florida lost organic soils, which store water like a sponge. One inch of rainfall can raise the water table a half of foot in the peat (an organic soil).

Scientists now realize that by wiping out so many wetlands they actually changed the local climate. Wetlands create evapotranspiration that triggers the release of moisture from clouds as they move inland from the seaⁱⁱⁱ. In simple terms – Florida's afternoon thunderstorms are not happening as frequently due to the loss of wetlands.

Salt Water Intrusion

Wells are taken over by sea water as cities along South Florida's coast are running out of drinking water. Urbanization of the coastal area, construction of drainage canals, and development of municipal well fields has led to a lowering of water levels in the Biscayne aquifer – the primary source of drinking water for 4.5 million people.

Bottled Water

Florida is home to 22 bottled water companies, three being the largest in the world – Nestle, CCDA Waters (Coca-Cola) and Danone Water Company. The Florida Department of Environmental Protection estimates that that these companies pump about 5.4 million gallons of water a day^{iv}, enough water for 31,000 people. Yet bottled water companies do not pay for that water. Unlike other businesses in the state that are charged according to consumption, most bottled water companies pay a onetime fee for a water permit that usually costs \$150. In 2009 Gov. Crist proposed a \$.06 cent tax on a gallon of water for commercial purposes, which would have generated \$56 million the first year. The tax never passed the Legislature.

Economic Consequences

At one time, water permits in Florida were handed out to new developments without a lot of fanfare or recourse. As water levels drop and Florida faces drought-like conditions water permits are becoming harder to obtain and are more expensive.

A recent example was featured in the *Orlando Sentinel*. Deseret Ranch, one of the nation's biggest producers of beef cattle, was recently approved for a permit to pump an average of nearly 2 million gallons of water a day, an amount similar to what a small city would use. The permit was awarded but not without controversy. Orange County pushed against the permit saying it could undermine the county's attempt to tap from the same reserve. Orange County may still appeal the decision.

"This is just one of many situations I see developing statewide that may turn into nasty battles," said Richard Budell, director of the Florida Office of Agricultural Water Policy. According to the Pacific Institutes report entitled *Water Scarcity: Growing Risk for Business and Investors*^v, businesses in areas where water is scarce may be impacted by:

- Higher costs for water
- Regulatory caps for water use
- Conflicts with local communities and other large-scale water users
- Growing demand for water efficient products and technologies

What Can We Do?

Businesses in Florida should be concerned about Florida's water crisis not just for economic reasons but for community and environmental reasons. Below is a list of possible solutions for businesses, government, and the community to consider:

- Water Conservation
 - a. A public campaign that encourages and educates the public on water conservation
 - b. Incentivizing water conservation practices for business and agriculture
 - c. Considering a block rate for household use – when water prices increase usage decreases. The decreases are predictable and statistically valid^{vi}.
 - d. Campaign to change Homeowner Association lawn policies
 - e. Incentives to change landscape to xeriscape (refers to landscaping and gardening in ways that reduce or eliminate the need for supplemental water from irrigation)
- Resource Protection and Sustainability
- Alternative Water Supply Development - New water storage initiatives

Florida Hospital is concerned about the water crisis and is currently studying ways we can conserve water at our hospitals. We hope to partner with other businesses and community members to create innovative solutions to the area's water problem.

ⁱ R.H. Caffey and M. Schexnayder, "Coastal Louisiana and South Florida: A Comparative Wetland Inventory"

ⁱⁱ Cynthia Barnett, "Mirage Florida's vanishing Water"

ⁱⁱⁱ Hamann, "Wetlands loss in South Florida"

^{iv} 2009 study by DEP

^v Pacific Institute February 2009 *Water Scarcity: Growing Risk for Business and Investors*

^{vi} Water Rates: Conserving Water and Protecting Revenues- A study by the Southwest Florida Water Management District

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