

Florida Coastal Everglades

Long Term Ecological Research

WATER FOR LIFE

Water is essential to all forms of life. Human societies that must work hard to secure and maintain a reliable source of water often are aware of the environmental constraints on that supply. In developed societies, however, many people are isolated and insulated from both their source of fresh water and from its environmental constraints--except when that water is locally scarce, comes from far away, or is locally drawn from a well.

As the importance of water supply continues to grow, and begins to dominate inter-societal interactions, it is increasingly important that people understand where their water comes from. In south Florida, 95% of the human population (about 6 million people in 2005) get their fresh water from the shallow Biscayne aquifer.



This karstic, highly transmissive limestone aquifer is overlain by the Florida Everglades. The Everglades is critical to the people of south Florida because it is effectively the source of their fresh water. However, few residents of the area recognize the pragmatic importance of this large wetland landscape just to their west. The Everglades wetlands recharge the Biscayne aquifer in nearly real time and its low nutrient status (what ecologists refer to as "oligotrophy") is almost certainly responsible for the excellent quality of water that enters the Biscayne aquifer.

The Florida Coastal Everglades (FCE) LTER Program is focusing its research on how changing freshwater flow through the Everglades controls dynamics in the downstream estuaries. The ongoing Everglades Restoration Program—an \$8 billion, 25 year state-federal partnership—will be the source of this increased freshwater flow. An important component of this research is directed at understanding the ecology of the oligotrophic freshwater marshes that are so important to recharging the Biscayne aquifer and to providing the local human population with its drinking water.



FCE LTER is also working hard, through its Education and Outreach Programs, to better inform the public about the direct relationship between their sustainable future and the restored health of the Everglades.

Website: <http://fce.lternet.edu/>