

Florida's Water Supply Issues: Getting Involved in the Educational Process

Tom Obreza, Sanjay Shukla, Mark Clark, Chuck Jacoby, and Chris Wilson

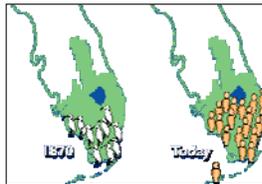
Florida's population of 16 million increases by about 700 each day. South Florida's population is projected to increase 40% by 2025, with a concurrent increase in water demand. At the same time, agriculture and natural systems will compete for their share of limited fresh water resources. Florida's water managers are relying on water conservation and alternative water supplies to meet future demand. At the local level, Florida's county agents educate clientele about past, present, and future water supply issues to improve water resource decision-making.

The Past

Florida's original water "problem" – Too much of it!



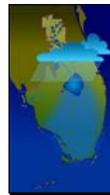
In the late 1800s, south Florida was a pristine wilderness that was often under water...



...but that was OK, because in 1870, a few hundred people were outnumbered by 2 million birds.



Summer rains caused Lake Okeechobee to spill its waters to the south...



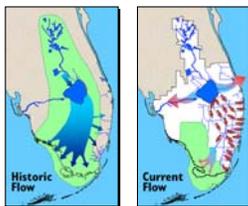
...spreading out slowly across 8+ million acres, covering 100+ miles.



Historically, a very slow river – flowing a quarter mile per day...



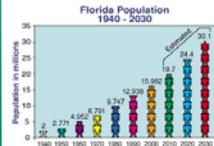
...that sometimes flooded towns and farms...



...which caused major alterations of natural hydrology and ecosystems so human activities could continue unabated.

The Present

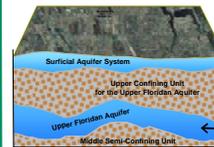
Massive growth, but wise growth management planning?



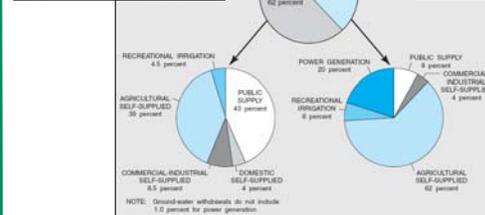
People obviously like Florida...they are moving here in droves, with no end in sight...



...but is all this growth being planned and managed properly? Judge for yourself.



Here is how Florida's fresh water resources are used now...



...and how much is consumed in millions of gallons per day.

Category	Mgd
Public	2,437
Domestic – self	199
Com./Ind. – self	563
Agriculture – self	3,923
Rec. irrigation	412
Power generation	658
TOTAL	8,192

Source: Richard Marella, "Water Withdrawals, Use, Discharge, and Trends in Florida, 2000," USGS Scientific Investigations Rpt. 2004-5151.

Florida water use facts



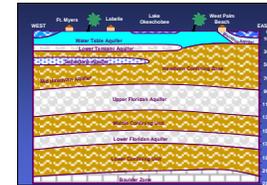
Questions & Answers:

- Q. What is Florida's average per-person public supply water use in gallons per day? **A.** 174.
- Q. What is Florida's average per-person residential water use in gallons per day? **A.** 106.
- Q. What is the split between ground and surface water for ag withdrawals? **A.** 51% ground, 49% surface.
- Q. Where does Florida rank in the nation and in the East in ag water use? **A.** #11 in nation; #1 in the east.
- Q. What percentage of all farmed agricultural land in Florida is irrigated? **A.** 40%.

The Future

Is Florida's water supply sustainable?
How supply will meet human, agricultural, and natural system demands as Florida grows:

Ground water (traditional)



Reclaimed water



Golf courses are prime candidates for reclaimed water use.

Conservation



Microirrigation has been heavily adopted by the fruit and vegetable industry.

Aquifer storage and recovery



ASR wells have been established all across the Florida peninsula.

De-salinization



Surface water storage



Tampa Bay Water's reverse osmosis plant (left) and regional storage reservoir (right).