

New projections: Region's aquifer can't handle 40% rise in water use by 2035

July 11, 2013|By Kevin Spear, Orlando Sentinel

Much of Central Florida's [environment](#), especially springs and wetlands tied to the Wekiva River, would suffer greatly if the region's utilities were to begin pumping from the ground all of the water already permitted by state rules.

That's one of the conclusions of the most-intense effort yet to measure the Floridan Aquifer, the region's primary source of water, and mesh those findings with new predictions for the area's residential, agricultural and industrial water needs through 2035.

Utility and government experts, working as a consortium calling itself the Central Florida Water Initiative, have estimated that the area's current water use — about 700 million gallons daily — will grow to more than 1 billion gallons a day by 2035. The consortium, known as the CFWI, studied an area covering southern Lake and all of Orange, Osceola, Seminole and Polk counties.

"Our preliminary finding is that traditional groundwater sources can meet some but not all projected needs," said Mark Hammond, director of resource management at the Southwest Florida Water Management District.

Engaged in the CFWI study are utilities, their ever-present lawyers and consultants, and state officials responsible for granting them water-use permits. Environmentalists have had little involvement in the consortium.

Soon to come from the CFWI: a more precise estimate of how much more water can be pumped from deep within the Floridan Aquifer, which is connected to and plays a critical role in the health of the region's shallow aquifers, springs, wetlands, lakes and rivers.

"We know we can go a little above the 700 million gallons a day, but we know it's not going to be a billion gallons per day," Hammond said.

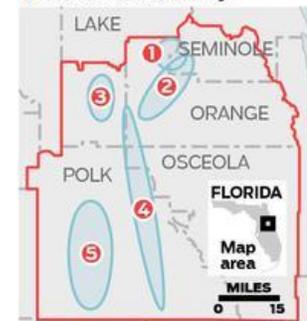
Also on the consortium's to-do list: a framework for sharing water.

"The solutions we come up with are going to have to be regional," said Brian Wheeler, executive director of Osceola County's biggest utility, Toho Water Authority. "We can make some attorneys rich and spend a lot of time fighting over water, or we can spend our time and resources trying to find a solution we can all live with."

Aquifer trouble

Five areas are vulnerable to environmental harm caused by increased pumping from the Floridan Aquifer.

- 1 Wekiva River system
- 2 West Seminole and west Orange counties
- 3 South Lake County
- 4 Lake Wales Ridge
- 5 South Polk County



SOURCE: Central Florida Water Initiative
STAFF GRAPHIC

Solutions that could spare Central Florida's wet terrain from drying out because of excessive aquifer pumping include: improved **conservation** measures, more sophisticated pumping patterns to spread the stress of water withdrawals, and the use of alternatives sources such as the St. Johns and Kissimmee rivers.

At the core of the CFWI's work is a **computer** model newly developed by the U.S. Geological Survey to predict conditions within the Floridan Aquifer using different scenarios for rainfall and population growth.

According to the model, the springs, rivers, lakes and wetlands most vulnerable to deterioration from increased aquifer pumping are along the Wekiva River north of Orlando and the ridge area of south Lake County to the west of the city.

Population growth is expected to be the biggest driver of the region's rising demand for water. According to CFWI projections, based on estimates by the University of Florida's Bureau of Economic and Business Research, the number of people living within the consortium's boundaries will grow from 2.8 million in 2010 to 4.1 million in 2035.

Utilities currently provide their **customers** with about 435 million gallons of water each day. The next biggest user of the aquifer is agriculture, which draws about 185 million gallons a day. But by 2035, utilities' daily pumping is expected to increase to 653 million gallons, while agricultural needs will remain relatively unchanged, at a projected 214 million gallons daily.

Among the five counties in the study area, Osceola's demand for water is expected to almost double, from 105 million gallons daily to 196 million gallons. But Orange County's thirst would grow the most in absolute terms — by 116 million gallons a day — rising from 268 million to 384 million.

CFWI participants concede that the region's demand for water may not keep pace with their projections. That was the case with the Central Florida Coordination Area, the region's previous attempt to manage its water resources.

That program declared some years ago that 2013 would be the deadline after which no water utility could increase its pumping from the aquifer. But as the Great Recession unfolded, **customer demand** for utilities' water was flat or fell, and the 2013 deadline was cast aside.

Consortium members are now beginning to figure out what kinds of regulations and measures make sense, given the new, more accurate projections supplied by the Geological Survey's computer model. Later this year, they will also begin presenting their findings to local governments, business groups, and civic and **environmental** organizations.

"The timing is not inevitable," said Tom Bartol, water-supply bureau chief for the St. Johns River Water Management District. "We don't say it's inevitable that it's going to happen by 2035. But we say it's going to happen."

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