Central Florida Water Initiative

CFWI Water for Tomorrow

Modeling Results are Used to Develop Planning-Level Groundwater Availability

Recent groundwater modeling results for the Central Florida Water Initiative (CFWI) 2020 Regional Water Supply Plan (RWSP) have yielded new insight into central Florida's planning-level groundwater availability over the next 20 years.

"The modeling results are an important regional planning tool," said Brian Starford, Team Lead for the CFWI Water Resource Assessment and Groundwater Availability teams. "The results identify the planning-level traditional groundwater sources available in the CFWI planning area."

The expanded East Central Florida Transient (ECFTX) model covers a 25,000 square-mile area of central Florida from the Gulf of Mexico to the Atlantic Ocean. The model looked at the effect of groundwater withdrawals on 39 environmental criteria, including adopted minimum flows and levels (MFLs) on lakes, springs and the Wekiva River; 190,000 acres of wetlands within the CFWI planning area; and regulatory wells and aquifer levels in the Southwest Florida Water Management District's Southern Water Use Caution Area. Model scenarios were run for every five-year period from 2025 to 2040 based on projected water demands. The modeled quantities do not include mitigation projects or already permitted, but not yet developed, alternative water supply projects.

Groundwater use for the CFWI planning area is currently estimated at about 660 million gallons per day (mgd) and permitted groundwater is about 1,064 mgd. Planning-level groundwater availability is now limited to a maximum of 760 mgd, in part, based on the following model results: the MFLs for the Wekiva River and Wekiwa Springs are predicted to not be met after groundwater use exceeds 760 mgd, which could happen between 2025 and 2030. In addition, the MFLs for Rock Springs and Lake Prevatt are predicted to not be met once groundwater use is around 825 mgd, which could happen by 2035 based on current projections. The model results were also used to help identify seven areas potentially susceptible to groundwater withdrawals within the CFWI planning area.

Modeling results from the ECFTX model were presented to the CFWI Steering Committee in October 2019 and will be incorporated into the upcoming 2020 CFWI RWSP. The RWSP will identify existing and projected demands over the next 20 years as well as projects and funding sources to meet those needs while sustaining the water resources and natural systems.

sfwmd.gov watermatters.org www.sjrwmd.com

The CFWI encompasses five counties: Orange, Osceola, Polk, Seminole and southern Lake. Through the CFWI, three water management districts — South Florida, Southwest Florida and St. Johns River — are working collaboratively with other agencies and stakeholders to implement effective water resource planning, including water resource and supply development and management strategies to protect, conserve and restore our water resources. To learn more, please visit cfwiwater.com.