



Drought Update

The spring droughts seem to never let up. Rainfall up to early May 2009 in Central Florida had been exceedingly low. This followed periods of low rainfall during the springs of 2006, 2007, and 2008. In the Tampa Bay area, the Hillsborough and Alafia Rivers in April 2009 were at record low levels. By March, Tampa Bay Water's 15-billion-gallon C. W. Bill Young Regional Reservoir was depleted to the point where it could no longer provide water. Lake levels in Central Florida were averaging more than 1.5 feet below the lowest normal readings. In early May 2009, aquifer levels in Central Florida were nearly 2 feet below normal. The purpose of this article is to give a broad overview of the current drought situation.

Wild Weather

These dry conditions were enhanced by this past winter's La Niña, a condition of cooler-than-average surface water temperatures in the eastern Pacific Ocean that tends to create dry and warmer conditions in the southern U.S. The La Niña pattern has shifted to a neutral condition, but the vegetation is still very dry. This led to a very active brush fire season in the spring of 2009.

Heavy rains in March and early April helped fill lakes in North Florida, South Alabama, and South Georgia, but little of this rain fell

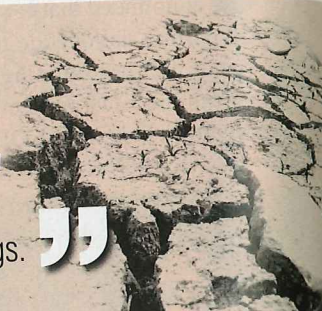
on Central and South Florida. The Keetch-Byram Drought Index ranged from 600 to 650 in much of South Florida and was more than 700 in Hendry and Collier counties in April. The maximum drought index value is 800, so these peninsular Florida conditions were extremely dry.

The severity and duration of this drought will impact citrus and other crops. Hot temperatures in May and June cause high evapotranspiration rates. To meet tree water demands during these months, growers should irrigate trees with microsprinklers two to three times per week when there is no rain. Growers with drip irrigation systems should pulse these systems several times a day. Growers with low-volume irrigation systems should check them frequently to clean any plugged emitters. If emitters are plugged for more than a few weeks in these hot conditions, studies have shown that loss of small fruit will be significant. In one study, lack of irrigation for three weeks in April caused a loss of 300 boxes per acre.


Restrictions And Reclaimed Water

Florida's water management districts had to impose some of the tightest water restrictions in many years.

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The governing board of the Southwest Florida Water Management District voted to enact Modified Phase IV (or Critical) Water Shortage Restrictions for parts of Hillsborough, Pasco, and Pinellas counties — something it had never done in this region before. Lawn and landscape watering for properties less than 1 acre in size was limited to one day per week for no more than four hours. Tampa restricted landscape irrigation to hand watering only. Initially, there were few restrictions on the use of reclaimed water for irrigation, but Pinellas County later restricted reclaimed water irrigation to three days per week. The fewer restrictions on reclaimed water have brought renewed interest in this type of water.

Reclaimed water is highly treated wastewater that is commonly used for irrigation. Interestingly, even though Florida normally receives around 50 inches of rainfall per year, it is one of the leaders in the production and use of reclaimed water. St. Petersburg started operating one of the first large-scale municipal reclaimed water systems in Florida in 1977. Citrus crops have been successfully irrigated in western Orange County by the Water Conserv II project since 1986. Hopefully, our summer rainy season will come early, stay late, and help ease the state's water woes. If not, reclaimed water will become even more valuable. 



For More

Videos on reclaimed water can be viewed at www.crec.ifas.ufl.edu/extension/irrigation/index.htm. If web-blocking software prevents access to these videos, readers may contact me directly at lrp@crec.ifas.ufl.edu.

Additional information on reclaimed water can be obtained at www.dep.state.fl.us/water/reuse and www.swfwmd.state.fl.us/conservation/reclaimed.