

Impacts of Operating Lake Okeechobee at Lower Water Levels

The U.S. Army Corps of Engineers implements the lake’s regulation schedule for flood control, navigation, water supply and the environment. The federal regulation schedule prescribes operational action to manage Lake Okeechobee’s water levels between 10.5’ and 17.25’. The purpose of these operations range from the release of water for the protection of communities (during the wet season) to the conservation of water for water supply to South Florida (during the dry season). Below is a breakdown of the impacts of operating the lake as water levels are lowered.

17.25’ – 15.5’

Upper operational band for lake’s water levels. Above 15.5’, the lake water is against the Herbert Hoover Dike, surrounding the lake. As water levels increase, releases are prescribed to protect communities because the integrity of the dike becomes a concern.

15.5’ – 12.5’

Ecologically preferred operating band for water levels in the lake, which provides depths that facilitate fisheries habitat and the growth of desirable aquatic vegetation. Within this operational band, water managers balance flood control, water supply and environmental needs. Implementation of the Comprehensive Everglades Restoration Plan (CERP) will significantly enhance water management operational flexibility.

12.5’ – 10.5’

When the lake falls into the water shortage band, the South Florida Water Management District (SFWMD) orders water use cutbacks and mandatory restrictions. Water deliveries to all are reduced.

Ecological impacts can occur when the lake’s water level goes below 11’ for more than 80 days – a violation of the Lake Okeechobee minimum flow and minimum water level rule.

Decrease in environmental water deliveries to the Caloosahatchee Estuary.

Difficulty delivering water supply to the Seminole Tribe of Florida’s Big Cypress and Brighton Reservations.

Lake Okeechobee lock operations discontinued along northern shore due to safety concerns.

Navigation restrictions for the Okeechobee Waterway rim canal due to shallow water make lake crossing unsafe for large boats with deeper drafts. Reduced lock operations along C-43 and C-44 canals.

Impact to crops in the Lake Okeechobee and Lower East Coast service areas, potentially causing impact to nationwide crop prices and domestic availability.

Shallow water limits recreational and commercial fishing and impacts small businesses such as marinas.

10.5’ – 9.5’

Severe reduction in capability to deliver water south of the lake for any beneficial purpose.

Increased risk of permanently compromising freshwater supplies in wellfields due to saltwater intrusion in urban coastal areas, affecting health and safety.

City of Okeechobee’s withdrawal for water supply needs is compromised, impacting public health and safety.

Primary water supply source for the City of West Palm Beach’s Grassy Water Preserve no longer available, affecting 100,000 residents.

SFWMD orders increased water shortage restrictions on communities. Restrictions negatively impact businesses and a population of more than 6 million south of the lake and coastal communities, stretching to Miami-Dade County and the Florida Keys.

Wildlife and endangered species survival affected as water needs for Water Conservation Areas (WCAs) no longer met.

9.5’ – 8.0’

Saltwater intrusion within the Caloosahatchee River (C-43) precludes lock operations and compromises Lee County water treatment plant. Navigation from Lake Okeechobee is no longer available.

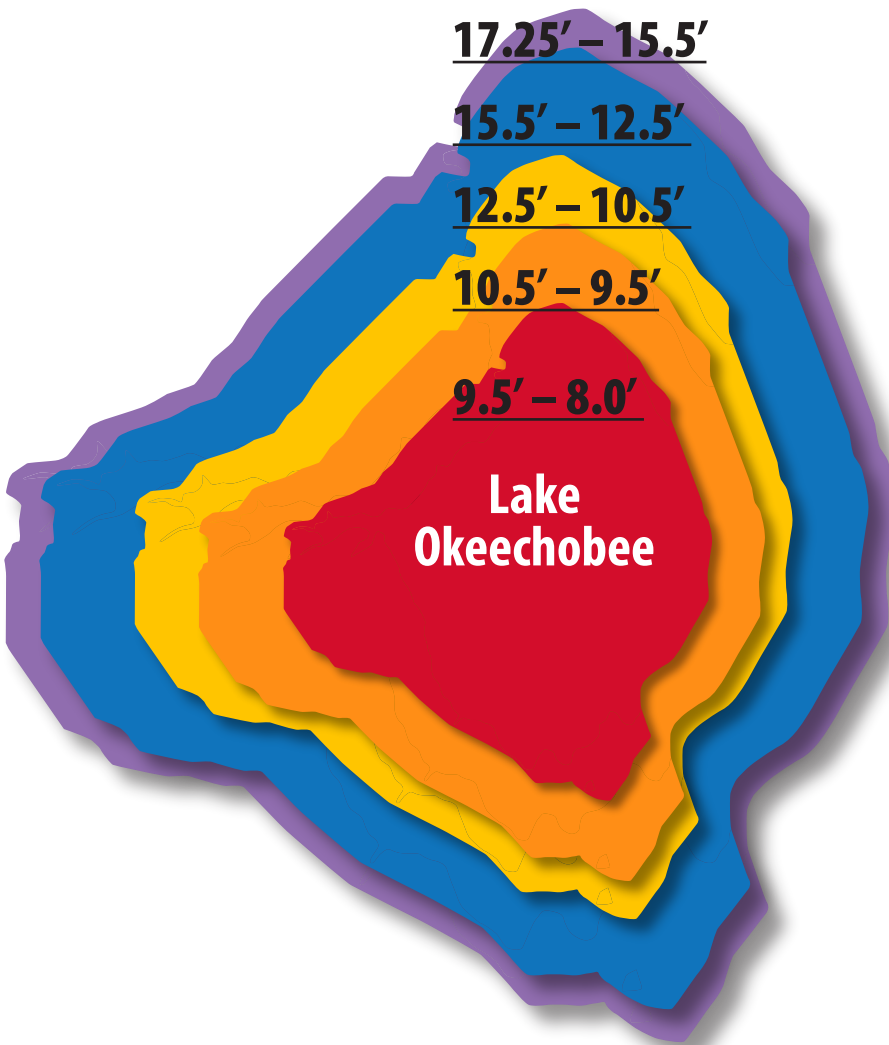
Pump stations in S-351, S-352 and S-354 on rim of lake are dry and inoperable, no longer moving water out of the lake.

Everglades Stormwater Treatment Areas no longer receive water to sustain wetland plants that remove nutrients from the water. Costly restoration infrastructure critical to sending water south is compromised.

The Everglades are at high risk for muck fires, permanently destroying Everglades habitat and threatening human life.

The District is unable to deliver the Seminole Tribe of Florida its allotted water entitlement at both the Big Cypress and Brighton Reservations.

In the event of a drought, the majority of Lake Okeechobee – the second largest freshwater lake wholly within the U.S. – could become a dry lakebed.



SOLUTIONS

The following actions need to be taken to reduce operational constraints within the lake and water management system. Increased operational flexibility will improve the capability to reduce estuary releases while ensuring environmental restoration and providing water supply for the region.

- Expedite rehabilitation of the Herbert Hoover Dike and the restudy of Lake Okeechobee’s operating schedule.
- Federal government contributes its share of funding, including 50-50 cost share with SFWMD for critical restoration projects.
- Complete ongoing and planned restoration projects such as the C-43 Reservoir, C-44 Reservoir, Everglades Agricultural Area Reservoir, the Central Everglades Planning Project and the Lake Okeechobee Watershed Restoration Project.
- Continue to investigate and implement innovative technologies, alternative storage and protection measures such as Emergency Estuary Protection Wells and Dispersed Water Management.