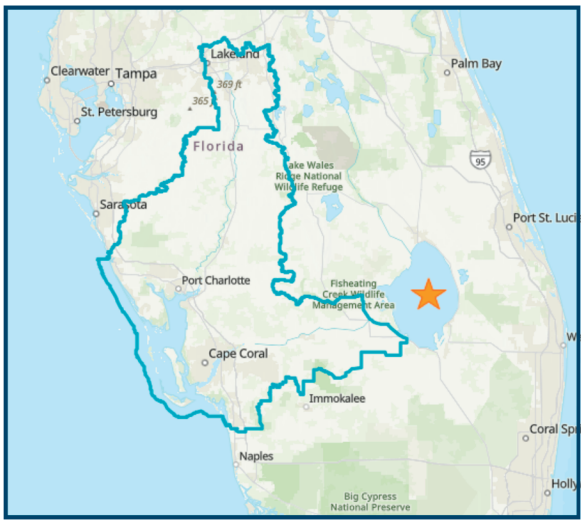
Lake Okeechobee

WATER QUALITY IMPROVEMENT

Summary

Lake Okeechobee is the largest freshwater lake in Florida. It spans across Glades, Okeechobee, Martin, Palm Beach, and Hendry counties. The lake is relatively shallow with an average depth of only 9 feet. Lake Okeechobee is part of the Greater Everglades ecosystem which spans from the headwaters of the Kissimmee River to the Everglades. Water flows into Lake Okeechobee primarily from the Kissimmee River as well as Fisheating Creek, Lake Istokpoga, Taylor Creek, and smaller tributaries. Historically, water flowed south out of the Lake and through the Everglades by natural sheet flow. Today, the lake is enclosed by the Herbert Hoover Dike and outflows are directed through control gates to canals that flow to tidal rivers, such as the Caloosahatchee and St. Lucie rivers and estuaries.



Impaired Waters

This waterbody **is impaired** according to the Florida Dept. of Environmental Protection's (FDEP) implementation of the Impaired Waters Rule (IWR). The FDEP evaluates whether waters meet their designated uses, which include aquatic life use support, primary contact and recreation use support, fish and shellfish consumption use support, and drinking water use support. Learn more about IWR Assessment »

Impairment Status	Water Body Class(es)	Water Body Type(s)
Impaired	1	Lake

The overall health of Lake Okeechobee has declined over the years due to excessive nutrient pollution from agricultural and urban runoff, damaging high and low water levels, and the spread of exotic vegetation. This has contributed to recurring harmful algal blooms (HABs) and declining water quality in the lake and connected rivers and estuaries.

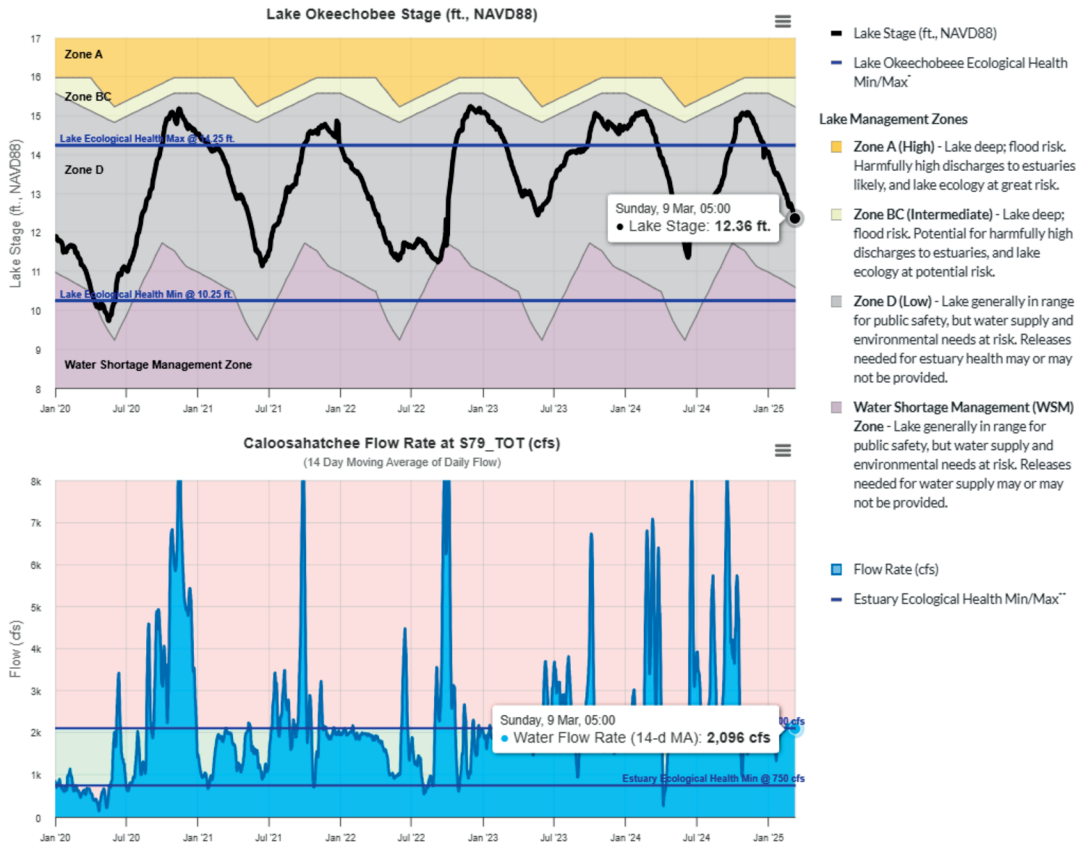
Lake Okeechobee is regulated as a Phosphorus-limited system. A Total Maximum Daily Load (TMDL) for Total Phosphorus (TP) was adopted in 2001 to reduce elevated levels of phosphorus in the lake. Lake Okeechobee currently has impairments for total phosphorus, total nitrogen, chlorophyll-a, iron, mercury (in fish tissue), dissolved oxygen (percent saturation), and turbidity.

CHNEP WATER ATLAS

LAKE OKEECHOBEE WATERBODY PAGE

COASTAL & HEARTLAND NATIONAL ESTUARY PARTNERSHIP

Lake Okeechobee is just outside the CHNEP area; however, its management and water quality have a direct and significant impact on the ecological health of the Caloosahatchee River, its estuary, and watershed. The man-made dike surrounding the lake provides necessary flood protection to area residents, and the Lake's water levels are controlled by a series of water control structures to its west, east and south. However, these artificial elements and the Lake's operations have caused unintended negative consequences for the ecological health of the St. Lucie and Caloosahatchee Rivers and their estuaries.



* The Lake Okeechobee Lake Stage Performance Measure indicates that an elevation of 10.25-14.25 feet supports healthy lake ecology.

** The Northern Estuaries Salinity Envelope Performance Measure indicates 750-2100 cubic feet per second supports healthy river and estuary ecology in the Caloosahatchee River. [Note: daily point is 14-day moving average of previous 14 days]

The lake is polluted with excessive nutrients and pesticides and as a result, experiences periodic cyanobacteria algae blooms. High Lake levels for sustained periods can cause the Lake's submerged aquatic vegetation to die off, resulting in decreased aquatic habitat and poorer water quality.

The Caloosahatchee River and its estuary require regular, adequate and appropriate levels of freshwater flow from the Lake to maintain proper salinity in its tidal reach for maintaining conditions for its aquatic life. Therefore, proper management of Lake discharges is imperative for maintaining an ecologically healthy Caloosahatchee River and Estuary. Lake Management and controlling the timing and amount of discharges from the Lake is a delicate balancing act that must consider public safety, the health of the lake, and the health of the estuaries. Too much freshwater flow lowers salinity excessively in the estuaries and overwhelms them with pollutants from the lake. Too little flow, and the estuaries suffer harm from low water levels and high salinity. Detailed information about the release schedule is documented in the Lake Okeechobee System Operating Manual (LOSOM).

CONTACT INFORMATION

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CHNEP wateratlas

Uniting Central and Southwest Florida to protect water and wildlife