AGENDA MEMORANDUM ***Natural Resources Department***

City Council Regular Meeting Date: June 3, 2025

To: City Council

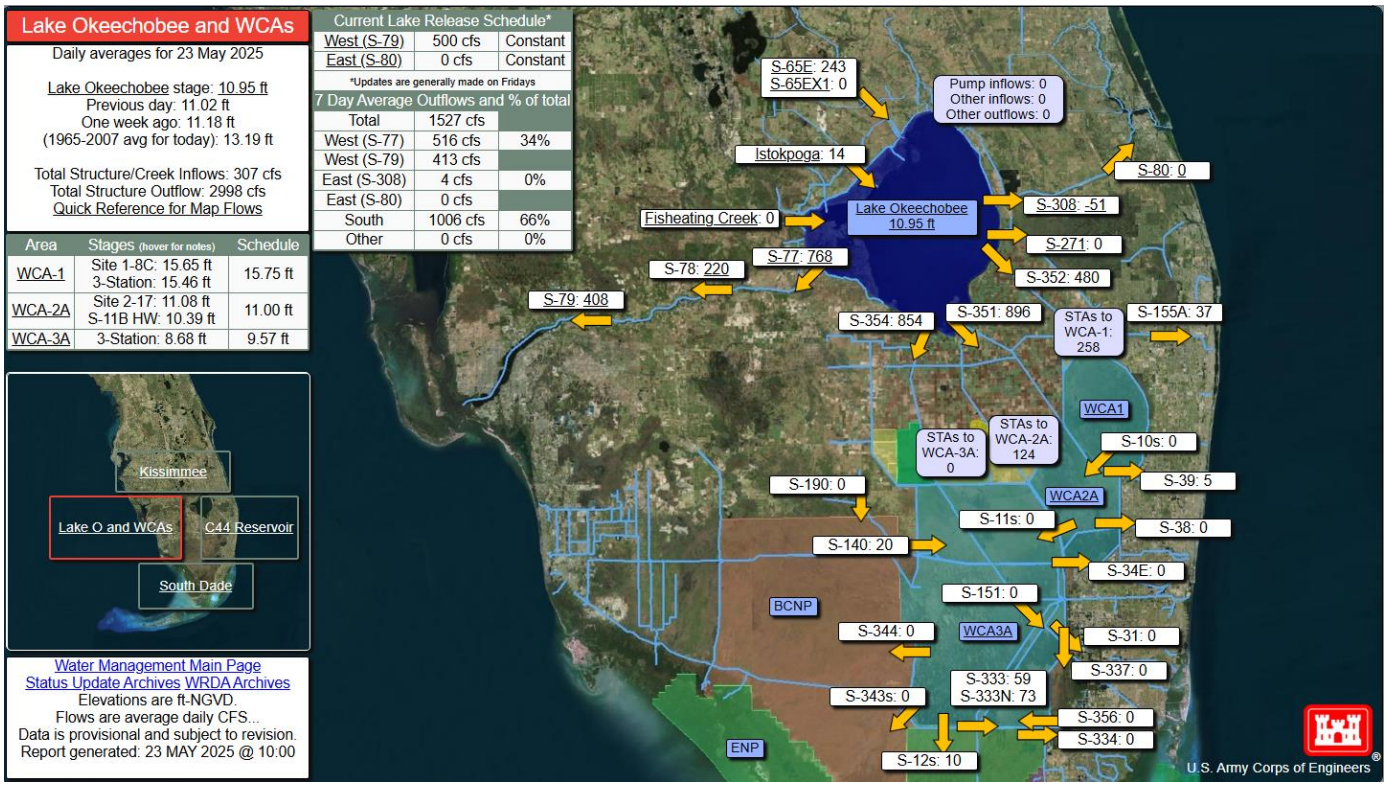
From: Holly Milbrandt, Natural Resources Director

Date: May 23, 2025

SUBJECT: Natural Resources Water Quality Updates

BACKGROUND:

CALOOSAHATCHEE RIVER & ESTUARY CONDITIONS REPORT



Click to view: [May 19, 2025 Caloosahatchee Conditions Report]

LAKE OKEECHOBEE RECOVERY OPERATIONS

The Corps began Lake Okeechobee recovery operations (ROs) on December 7, 2024. Recovery operations is a strategy included in LOSOM to address ecological recovery in Lake Okeechobee necessitated by prolonged high lake stages. The goal of lake ROs is to lower lake stages (referred to as a drawdown) during the winter/spring before the onset of the wet season to help expedite the reestablishment of submerged aquatic vegetation (SAV) within the lake.

Water levels in Lake O have been above the ecological envelope (i.e. too high to support seagrass growth) for Lake Okeechobee since Hurricane Ian in 2022. The last time the lake was less than 12-feet was in 2019, at which time there was more than 25,000 acres of submerged aquatic vegetation (SAV). Higher lake levels over the last 5 years have reduced the SAV to less than 5,000 acres.

The operational strategy for RO intends to slowly bring water levels down by making moderate, non-harmful releases to the estuaries and to the Everglades. Recovery operations may only occur when the Lake elevation is in Zone D. Zone D is the largest operational band in LOSOM and allows flows west to the Caloosahatchee of up to 2,000 cfs and provides for no flow east to the St. Lucie.

However, under recovery operations additional flows are authorized. The Corps initiated releases in accordance with the RO limits established in LOSOM:

- up to 2,100 cfs at S-79
- up to 1,400 cfs total St Lucie Estuary (SLE) inflows (accounting for other SLE inflows in addition to S-80)
- up to 300 cfs to the Lake Worth Lagoon at S-271 and S-352
- up to maximum practicable south at S-351 and S-354

As of May 23, 2025, Lake Okeechobee is at 10.95 feet, down nearly 5 feet from 15.93 feet when recovery operations began on December 7, 2024.

With significant lake recession and conditions even drier than expected, the Corps has continued to reduced releases to the Caloosahatchee.

Date	**Flow**	**Reduced Flow**
March 22, 2025	2,100 cfs	1,400 cfs
April 12, 2025	1,400 cfs	1,000 cfs
April 19, 2025	1,000 cfs	650 cfs
May 3, 2025	650 cfs	500 cfs

Since the Corps implemented the latest reduction to 500 cfs, the actual flows at S-79 have failed to meet this target, except for a few days when there was rainfall in the watershed. The resulting combination of high salinity and high temperatures is particularly harmful to oysters during this critical spawning time. In response to concerns expressed by the west coast stakeholders, the Corps has removed manatee screens limiting flow from the S-77 structure and will be decreasing the navigable draft in the C-43 canal between S-77 and S-78 on May 27, 2025. Between S-78 and S-77, there is high water demand from users along the C-43 canal, which has reduced flow to approximately 230 cfs at S-78. Additionally, maintaining navigation within the system limits the amount of water passing through S-78 to sustain a draft of around 8 feet.

The desired result of ROs is to achieve a lake stage below 12 feet for 90 days (non-consecutive) between mid-April and September or to recede below 11.5 feet for at least 60 days (non-consecutive) between May and August. The Lake receded below 12 feet on April 15 (39 days) and below 11.5 feet on April 26 (28 days).

CURRENT RAINFALL AND CLIMATE OUTLOOK

SFWMD rainfall for May to date is above normal at 3.73" (120% of normal). However, the Southwest Coast region and the Big Cypress region have received below normal rainfall of 2.38" (86% of normal) and 2.36" (72% of normal) respectively.
https://www.sfwmd.gov/weather-radar/rainboard

For the 2024-2025 dry season to date (October 10, 2024-May 22, 2025), the SFWMD has received 11.29" of rain (58% of normal); the Southwest Coast received 8.32" (46% of normal).
https://www.sfwmd.gov/weather-radar/rainboard

The NOAA Climate Prediction Center one-month Probability Outlook for June 2025 indicates a 33-40% chance of ABOVE NORMAL rainfall for Florida.
https://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead14/

The three-month outlook for Jun-July-Aug 2025 indicates a 40-50% chance of above normal rainfall for Florida north of Lake Okeechobee and a 33-40% chance of above normal rainfall for south Florida.

https://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead01/off01_prcp.gif

NOAA ENSO Report (updated on 5/19/2025):

- ENSO-neutral conditions are present.
- Equatorial sea surface temperatures (SSTs) are near average across most of the Pacific Ocean.
- ENSO-neutral is favored through the Northern Hemisphere summer 2025 (74% chance during June-August), with chances exceeding 50% through August-October 2025.
  https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf

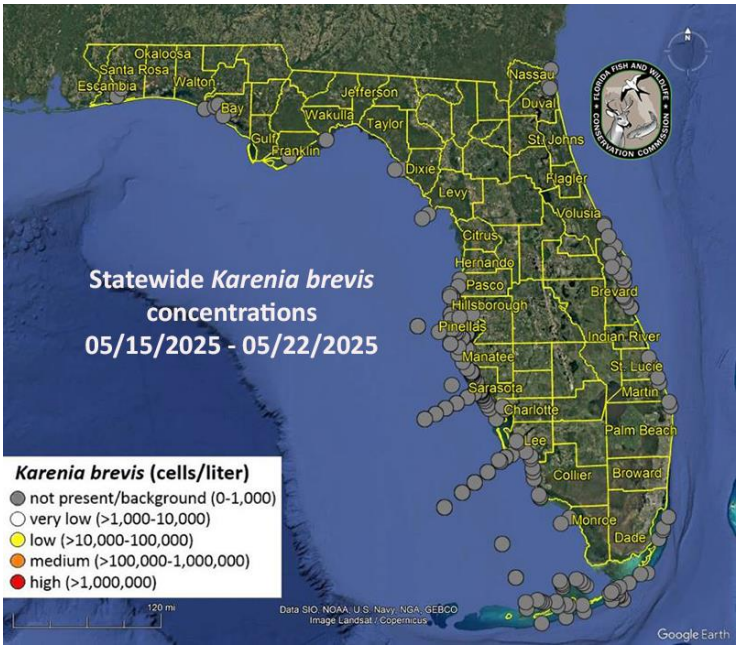
ALGAE BLOOMS

Red Tide: FWC Red Tide Update for May 23, 2025
https://myfwc.com/research/redtide/statewide/

Over the past week, the red tide organism, *Karenia brevis,* was detected at background concentrations in Southwest Florida.

In Southwest Florida over the past week, *K. brevis* was observed at background concentrations in one sample collected from Sarasota County and three samples collected offshore of Monroe County.

Fish kills or respiratory irritation suspected to be related to red tide were not reported over the past week in Florida.



Blue-Green Algae: DEP Weekly Update (May16-May 22)
https://floridadep.gov/AlgalBloomWeeklyUpdate

There were 44 reported site visits in the past seven days with 44 samples collected. Algal bloom conditions were observed by samplers at 11 of the sites.

The most recent usable satellite imagery for Lake Okeechobee from 5/21 is partially obscured by cloud cover and shows low to moderate bloom potential primarily from Fisheating Creek north to the city of Okeechobee and along the western and southern shorelines.

The most recent usable satellite imagery for the Caloosahatchee Estuary from 5/21 is partially obscured by cloud cover and shows no bloom potential on visible portions of the estuary.

The most recent usable satellite imagery for the St. Lucie Estuary from 5/21 is partially obscured by cloud cover and shows no bloom potential on visible portions of the estuary.

Red Drift Algae: No reports

Trichodesmium: No reports

Sargassum: No reports

PAST MEETING HIGHLIGHTS & UPDATES

SFWMD Governing Board Meeting
May 8, 2025
10:00 AM
Miami, FL
https://www.sfwmd.gov/event/governing-board-meeting-32

- Oath of Office Administered to Governing Board Members to Thomas Hurley and Robert A. Spottswood, Jr
- Approved a resolution proclaiming May 18-24, 2025 as Water Reuse Week
- Approved a resolution authorizing additional budgetary authority in the amount of $28,000,000 for construction of the C-43 Caloosahatchee Basin Storage Reservoir
    - The project is nearing completion with an initial fill scheduled this summer to start seeing early benefits. Some key activities left to implement include necessary public access infrastructure that will be available after operations, testing, and monitoring is complete for the site to be opened for public activities. In support of project closeout activities and public access features, staff seeks additional budgetary authority in the amount of $28,000,000. This does not change current or projected appropriation needs.

CHNEP Management Committee Meeting
May 9, 2025
Port Charlotte, FL
https://www.chnep.org/management-committee

- State and Federal Funding Opportunities
    - https://www.chnep.org/federal-funding
- Water Quality Trends in Southwest Florida Factsheet
    - https://www.chnep.org/_files/ugd/252fd8_a9bdb9171bd740808867c7ddeea6964b.pdf

South Florida Ecosystem Restoration Task Force
Joint Working Group (WG) and Science Coordination Group (SCG) Meeting
May 14, 2025
West Palm Beach, FL (SFWMD)
https://www.evergladesrestoration.gov/working-group/may142025wgscg

- Florida Department of Agriculture and Consumer Services (FDACS) Best Management Practices (BMP) Manuals Update
    - https://static1.squarespace.com/static/5d5179e7e42ca1000117872f/t/681a12a44fd2fa61888c0783/1746539172881/11_FDACS_BMP_Manuals_Update.pdf

UPCOMING MEETINGS & EVENTS

SFWMD Governing Board Meeting
June 5, 2025
9:00 AM
West Palm Beach, FL
https://www.sfwmd.gov/event/governing-board-meeting-32

Harmful Algal Bloom Task Force
June 10, 2025
1:00 p.m.
Virtual meeting will be livestreamed on YouTube.com/FWCResearch
https://myfwc.com/research/redtide/taskforce/meeting/

Florida Stormwater Association (FSA) Annual Conference
June 11-13, 2025
Sanibel Harbour Marriott, Fort Myers, FL
https://www.florida-stormwater.org/conference

FUNDING SOURCE: N/A

RECOMMENDED ACTION: N/A