

**FLORIDA KEYS NATIONAL MARINE SANCTUARY ADVISORY COUNCIL WORKING GROUP:  
Florida Keys and South Florida Ecosystem Connectivity Team**

Meeting #1

Tuesday, July 20, 2021

10:00 AM – 12:00 PM

[meet.google.com/ryz-boiq-kpv](https://meet.google.com/ryz-boiq-kpv)

Or Dial: 443-819-0246; PIN: 476-784-890#

**Link to Working Groups website** - <https://floridakeys.noaa.gov/review/workgroups.html>

**Attendees:** Jerry Lorenz, Cara Capp, Joe Weatherby, Emma Haydocy, Chris Bergh, Chris Cavanaugh , Adam Gelber, Chris Madden, Karen Bohnsack, Shelly Krueger, Suzy Roebling, Steve Blackburn, Kelly Cox, Jolly Benson, Nick Parr, and Gina Ralph.

**Absent:** Erin Muller, Mike Goldberg, Steve Friedman, Matt Semcheski, Amelia Moura, Steve Davis, Gus Rios, and Luke McEachron

**Action Items:**

- Schedule a listening session from Army Corps geared toward the Keys on LOSOM – Cara will connect with Gina and Corps team and circulate to this group and the full SAC
- Need to ask Corps to model inputs according to possible beneficial scenarios south and for Florida Keys (until October 14).
- BBSEER topic for next meeting agenda. Decide what topics we want to hear about so that Army Corps can tailor the presentation.
- July 23, Friday 9 am to 1:15 pm link to FKNMS Water Quality Protection Program Meeting information: [https://ocean.floridamarine.org/FKNMS\\_WQPP/steering.htm](https://ocean.floridamarine.org/FKNMS_WQPP/steering.htm) and will be discussion of updating current water quality monitoring program.
- Working group needs to be strategic regarding time spent at SAC meetings since there are other priorities. Could ask for bullet list of recommendations for ACOE modelling requests to increase freshwater south from Steve Davis and Raj? Modelling to remove lower green line?
- Each member can represent their own organization/constituency, or individually, and send public comments to the Corps.

**Future consideration for agenda items:** Piney Point phosphate mine near Tampa Bay, stopping permitting of septic systems. Invite Miami Water and Sewer for a foundational understanding of how their system works, septic conversion hotspots, and start from there? Invite FL Keys agencies for updates about the advanced wastewater treatment.

**10:00am Welcome, Introductions, Administrative Items (15 min)**

Jerry Lorenz updated the group about the Resolution that was sent to the Florida Keys National Marine Sanctuary Advisory Council (FKNMS SAC) regarding LOSOM that passed unanimously at the June FKNMS SAC meeting, entitled “Resolution on the Lake Okeechobee Systems Operating Manual (LOSOM): Recommendations to Advisory Council” and can be found on the working group website <https://floridakeys.noaa.gov/review/workgroups.html>

## **Lake Okeechobee: Management, Operations, and Impact on the Florida Keys National Marine Sanctuary (1 hour total)**

Dr. Paul Gray, Everglades Science Coordinator, Audubon Florida presented on the Lake Okeechobee System Operating Manual (LOSOM), which is the water level management program for Lake O. Yesterday, Army Corps of Engineers (ACOE) announced plan on moving forward with recommended Plan CC.

**Summary of PowerPoint Presentation from Dr. Gray:** Lake O the neck of a fountain that begins around Orlando. Diverting water east and west has caused problems. 30-35 miles across and Lake O influences its own weather. Historical flow very different from current flow. ACOE working on new management plans (LOSOM) to return flow to the south. Middle of the lake is where the algal blooms occur with legacy phosphorus (P). SAV (eel grass, pond weed, et al.) buffers “dirty” water. Lake average high of 15’ and low of 12’ ideal height for ecosystem connectivity. Height too high = too turbid, too deep for SAV. Hurricane Irma caused loss of SAV due to extended high water levels. Emergent marsh along the perimeter needs appropriate hydrology, too. Cyanobacterial blooms in central lake, these are then sent down Caloosahatchee and St. Lucie Rivers with the freshwater releases to the east and west.

P is primary issue. Historically 20-40 ppb. Been over 40 ppb since at least the 1970s; orders of magnitude higher than goal of 40 ppb in the lake, but difficult due to legacy P. How to manage algal blooms is goal of LOSOM. Too high = increase nutrient transport to interior, increases cattails, reduces woody species coverage. Too low = terrestrial species invade, torpedograss expands, SAV replaced with emergent vegetation nearshore. Lake O water budget – average year 7.5’ of water into the lake, ~5’ evaporates, irrigation use 1’, urban use 0-6”, releases to other estuaries ~1’.

ACOE had 6 alternatives, plus no action. EE1 And EE2 experimental. Alternative CC recommended by ACOE on July 19, 2021. The pros are top performance for 10 out of 11 sub-objectives. Cons: moderate increases in performance when compared to other alternatives, increases stress flows at CRE. Some good things in Alternative AA were not included in Alt CC. When Lake O drops to 13’ will no longer send water south to Everglades first, and then EAA starts rationing below that level. CC has highest scheduled flows to Caloosahatchee than any other alternative. Zone D has more decision tool choices based on seasons and weather. From PPT slide “Lake O releases too ambivalent about southward flows, need to make them a goal.” CERP is not complete. Alt CC will increase water flow to the south ~194.3 acre feet vs current systems of 59.78 acre feet?

Corps holding public sessions from now until August 5, this is the chance for public comment. Zone E should be lowered to allow Everglades as much flow as possible. Opportunity to get more water for the natural system.

### **Member Discussion of Dr. Gray’s presentation:**

Discharges of Caloosahatchee could be causing turbidity in Key West. Alt CC has highest discharges to Caloosahatchee as any other alternative.

Q: Curious if water releases are affecting water clarity in Lower Keys? Algal blooms?

A: Not sure about ocean currents and circulations. Lake O water can be measured 5 miles out into the ocean after heavy releases.

Q: Regarding the decision tree, are the FL Keys impacts measured or considered for releases?

A: No. Lake O releases based on management regime based on lake too high or too low, in the past not based on impacts to estuaries to east, west, or south.

Q: Are there differences in N and P levels that are released based on level of Lake O?

A: Would need to ask hydrologists.

There used to be some water quality monitoring on the South Florida shelf by the SFWMD that could have answered those questions but is no longer funded. FKNMS Water Quality Protection Program (WQPP) will have a discussion about water quality monitoring on Friday, July 23 (9 am to 1:15 pm; link to meeting registration below) and potential changes including new tools and techniques to monitor between Florida Keys and Lake O releases.

Q: What precautions are there, and what guarantees that the water that is released south is not too high in P?

A: There is modeling by ACOE within LOSOM of the capacity of the EEA water, rainwater, and Lake O water, to consider P enrichment in that water. Stormwater treatment areas (STA) hold water from EEA or Lake O and go through filter marshes; ideal goal for P around 10 ppb.

Next steps? We know Corps recommending Alt CC. When can we expect to see changes in flow? Corps will have listening sessions until August 5. ACOE working to optimize LOSOM Alt CC from Aug 5 until Oct 14. ACOE will be modelling benefits and optimization of Alt CC. Everglades Foundation has experts that have been working on these models as well.

ACOE asking for stakeholders input on how to modify Alt CC. ACOE will be performing more modelling. Should be complete by Oct 14 and then will review all performance indicators again. Feb 2022: draft EIS will be released, plus more public meetings for NEPA process. Drafting of the water control plan. Based on weather, antecedent conditions, all taken into account within the framework of the water regulations.

Working group has a couple of approaches to influence water flows from Caloosahatchee and into Florida Bay. We have some more time now to comment on LOSOM, more formally and specifically. Need to ask Corps to model inputs according to possible beneficial scenarios south and for Florida Keys (until October 14).

Everglades Foundation has been modelling. Need to be strategic regarding time spent at SAC meetings since there are other priorities. Could ask for bullet list of recommendations from Steve Davis and Raj? Could remove lower green line? Each member can represent their own organization or constituency, or individually, and sent public comments to the Corps. There are lingering concerns that water sent south will be eutrophic. Need that type of information to SAC and public. The process is set up to prevent that from happening.

**11:15am Public Comment (10 min)** none

**11:25am Team Member Updates (30 min)**

FKNMS WQPP steering committee on Friday. Discussion about water quality monitoring, what questions we want to answer, and what should we change? Quarterly grab samples for decades by FKNMS, FIU, and limited WQ testing by other entities. Many questions are not answered by this WQ Monitoring program and it has limitations. How does Everglades restoration affect WQ in Sanctuary?

Vessels in KW Harbor? Many tools now available and cheaper. Need more information on Caloosahatchee outflows circulation and impacts to lower Keys.

68 CERP projects and integrated delivery schedule (IDS) will be on WebEX on August 5<sup>th</sup> and August 19<sup>th</sup>.

HWY836 Extension proposed for 14 miles of road in Miami Dade to go through Bird Drive Basin, this is inside CERP and the Everglades footprint. The Governor rejected stopping this highway even though it was previously blocked by a judge. This area recharges the Biscayne aquifer and was originally part of Shark River Slough. Should consider a SAC Resolution or statement from this working group. Construction of this highway extension could profoundly disrupt Everglades restoration and will impact FKNMS and Florida Bay.

Monroe County Fertilizer ordinance passed unanimously a month or two ago. Will limit fertilizers and timing to prevent nearshore runoff.

January 23, Friday 9 am to 1:15 pm link to Water Quality Protection Program Meeting information:  
[https://ocean.floridamarine.org/FKNMS\\_WQPP/steering.htm](https://ocean.floridamarine.org/FKNMS_WQPP/steering.htm)

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Need future meeting agenda about Highway 836 Extension. BBSEER includes Bird Basin, which would be impacted by Highway 836 Extension. Cara will work with the Corps to see if we can get this on the next agenda meeting.

Homestead Airforce Base may increase flights and could increase commercial activity (Amazon, FedEx) and perhaps personal jets. NPCA has been closely tracking this threat at the Homestead Air Reserve Base and has weighed in with both Miami-Dade County and the U.S. Air Force. Anyone who wants to learn more or get engaged can contact me (ccapp@npca.org)

Of note: Letters going to agencies to re-establish the Task Force will be going to NOAA for representation.

Future consideration for agenda items: (ideas from members) Piney Point phosphate releases into Tampa Bay, company bankruptcy and then public foots the bill. Decommissioning costs should be built into business model before being permitted. Stopping permitting of septic systems. Invited Miami Water and Sewer for a foundational understanding of how their system works, septic conversion hotspots, and start from there? Invite FL Keys agencies for updates about the advanced wastewater treatment.

Miami Dade County BCC is voting today on "Ordinance creating the Miami County Attorney Dade County Biscayne Bay Watershed Management Advisory Board; creating article CLXIV of chapter 2 of the Code; providing for the composition and duties of the board and other related matters." Will codify the former \_\_\_\_\_ Task Force.

Miami working on a septic tank disclosure ordinance, whether inspected and whether or not septic on the property?