

LOSOM PDT

Agency Preferred Alternative Recommendation

July 12, 2021

DOI Talking Points

Lake Okeechobee System Operating Manual (LOSOM)

Preliminary LOSOM Foundational Alternative from Iteration 2

DOI's Role in South Florida

- The Department of the Interior (DOI), through the National Park Service, U.S. Fish and Wildlife Service, and Bureau of Indian Affairs, manages approximately one-half of the remaining greater Everglades ecosystem, including four national park units, 15 national wildlife refuges, protection/recovery of numerous threatened and endangered species that rely on Lake Okeechobee, the estuaries, and the Everglades, as well as important trust responsibilities in support of the Seminole and Miccosukee Indian Tribes of Florida.
- DOI's long-term vision for Lake Okeechobee and the greater Everglades ecosystem is to recover, given modern constraints, a natural system with the ecological functions, hydrological connectivity, spatial and temporal patterns, and diversity and abundance of species that characterized the historical Everglades ecosystem.
- While we recognize that this new ecosystem will be smaller than the pre-drainage system, the recovered system should no longer act like a set of managed, disconnected habitats, but rather a reconnected landscape, exhibiting more of the defining characteristics and resilience of the pre-drainage greater Everglades ecosystem.

DOI's Vision for Lake Okeechobee and the Greater Everglades

- The water management operational improvements envisioned within the LOSOM primarily include reducing damaging flows to the Caloosahatchee and St. Lucie estuaries by redirecting these flows back to the central/southern Everglades, which does not receive sufficient flow volumes, particularly during the dry season. These improvements should be achieved while maintaining Lake Okeechobee water levels closer to the optimum Lake stage envelope, to the extent possible, to maintain or improve the Lake's marsh and overall Lake ecology.
- Since DOI manages important natural and cultural resources within Lake Okeechobee and throughout the greater Everglades ecosystem, we must recommend the most ecologically-balanced alternative plan in our recommendations to the U.S. Army Corps of Engineers (USACE) during the final phase of the LOSOM plan development process.
- While we fully recognize and support the requirements in the LOSOM to maintain public health and safety, meet authorized flood control, navigation, and recreation goals, and improve water supply performance, DOI's focus is primarily on enhancing the ecology of Lake Okeechobee, the northern estuaries, and the broader south Florida ecosystem, achieving water quality standards, and meeting the Seminole and Miccosukee Tribes of Florida water supply demands.

DOI's LOSOM Evaluation Findings and Recommendations

- When compared to the No-Action base condition (represented by NA25), several of the Iteration 2 balance plan alternatives perform well across multiple objectives. With the exception of objective #4 - enhancing the ecology of Lake Okeechobee, where all alternatives appear to reduce current performance.
- Based on the Iteration 2 results, DOI believes combining key operational components from various plans has the best chance of achieving the overall LOSOM requirements. Our internal DOI review process suggests that the best alternative to use as a foundation to build on is a modified version of Alternative CC, with no Zone F, and including operational guidelines from the upper zones of Alternative DD to further enhance Lake Okeechobee ecology.
- The DOI believes that overall LOSOM performance can be improved by modifying Alternative CC via removal of Zone F, thereby delivering larger dry season flows to the Everglades and Caloosahatchee estuaries up to the water shortage management band. We anticipate that these modifications will also keep Lake Okeechobee closer to the target water stage envelope, reduce some of harmful higher water impacts. We expect that this modified alternative will be modeled and optimized iteratively, to balance benefits to Lake Okeechobee, northern estuaries, and the south Florida ecosystem.

Further Investigations of the Preliminary Foundational Alternative from Iteration 2

There are additional opportunities to optimize the modified Alternative CC, and concerns remain about potential modeling artifacts or operational constraints. During the Iteration 3 optimization phase, we recommend:

- Further investigations into the cause of projected reductions in water levels and hydroperiods in the ARM Loxahatchee NWR (Refuge). Actions should be taken to hold the Refuge harmless in all the planned LOSOM operational changes. We need assurances that the benefits simulated in Northeast Shark River Slough are not the product of over-draining the Refuge and that flows reaching STA's 2 and 3/4 are not originating from the eastern EAA basin, thus directly decreasing flows reaching the Refuge.
- Verifying that the quantity of water delivered to the Seminole Tribe of Florida meets their demand. It is our understanding and expectation that the water supply of the Seminole Tribe of Florida is a constraint required in all LOSOM alternatives.
- Further evaluation of water quality treatment options, to assure that the water quality based effluent limit (WQBEL) is achieved in all future LOSOM plan refinements. Unlike Restoration Strategies plan modeling, NA25 and all the alternatives modeled for LOSOM have relatively small volumes of water delivered to the Everglades Protection Area without treatment (diversions). It should be assumed for NA25 and all the alternatives that all simulated STA diversion flows are treated by the STAs in the DMSTA modeling. This assumption will provide a margin of safety that protects against uncertainties in the models.