February 24, 2020

U.S. Army Corps of Engineers, Jacksonville District
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Via EAAReservoir@usace.army.mil

RE: Comments on the Final Environmental Impact Statement (EIS) for Central and Southern Florida, Everglades Agricultural Area (EAA)

Dear Mr. LoSchiavo and Ms. Thompson:

Sierra Club, Center for Biological Diversity, and Friends of the Everglades submit the following comments on the Final Environmental Impact Statement (EIS) for the Central and Southern Florida, Everglades Agricultural Area (EAA), dated January 2020.

An EAA Storage Reservoir can be an integral component of the Comprehensive Everglades Restoration Plan (CERP), if adequately planned, designed, and constructed. An appropriately designed EAA Storage Reservoir can help solve South Florida's ongoing water crises and restore the globally unique and invaluable Everglades ecosystem, including Everglades National Park and Florida Bay. We support and advance an EAA Reservoir project that provides the long-term ecosystem restoration benefits that both people and the natural system need, especially in light of the challenges South Florida faces with sea level rise and other climate changes, and that meets, with greater certainty, all applicable water quality standards. We also want to support a restoration project that does not pose unnecessary risk to the people and properties in and near the EAA and downstream of the project area.

However, the U.S. Army Corps of Engineers' (USACE) alternatives fail to address these issues; therefore, we offer the following 20 major concerns with the goal of seeing Alternative 3 significantly improved. Alternative 3 only has minor design refinements from Alternative 2 (Alternative C240A in the Draft EIS), with the claim that these refinements had no substantial changes relevant to environmental concerns. Therefore, our underlying concerns about Alternative 3 remain substantially the same as with Alternative 2. Our concerns also continue to echo a number of the concerns expressed by the Office of the Assistant Secretary of the Army for Civil Works (ASA) and the USACE in its May 2018 Review Assessment of the SFWMD's recommended plan as described in their Section 203 Post Authorization Change Report (PACR), Integrated Feasibility Study, and Draft Environmental Impact Statement (March 2018, amended May 2018).

1. When the Florida Legislature passed Senate Bill 10 (SB 10) in 2017 (Chapter 2017-010, Florida Laws), it did not intend to remove SFWMD's authority to analyze alternatives with a larger land footprint. SB 10 did not prohibit the modeling of project alternatives with private lands from owners that at the time of SFWMD's scoping phase had expressed no interest to sell or swap lands.

Therefore, other possible alternatives should still be evaluated as they might produce a project that is more economically feasible, safer, carries less uncertainty in cost and benefits, and provides greater ecological benefits. It is in the public interest, and certainly in the federal interest, to study the feasibility of other less land-restricted alternatives.

We echo the Miccosukee Tribe's position, as stated in their July 17, 2018 comment letter, that the USACE has failed to conduct an independent "Alternative Analysis" that does not have the land footprint constraints that SFWMD chose to impose on itself when it conducted its evaluation using a flawed interpretation of SB10.

2. There is no legitimate reason to limit the feasibility study to alternatives within lands in state ownership in the A-1 and A-2 parcels and just west of A-2; nothing, including the removal of the eminent domain option in SB 10, imposed such a limitation. The study was overly restrictive in assuming that none of the current private landowners, in areas that could provide a more optimal footprint, would be willing to sell or swap land by the time the project is ready for the Pre-Construction Engineering and Design (PED) phase. Economics, politics, and other factors could motivate landowners to re-consider and sell or swap their lands with other state-owned land holdings. For instance, the state currently leases several thousand acres of land within or near the EAA with soils that are favorable to agriculture. It is premature to assume that no additional land can be acquired while the project is in the planning phase. In fact, SB 10 explicitly authorized SFWMD and the Board of Trustees of the Internal Improvement Trust Fund to amend or terminate leases in the EAA for exchange or use for the reservoir project. Failing to explore these options needlessly constrains the project.

3. It appears that the USACE Final EIS (section 3.1.5) incorrectly uses a US Senate committee report (Senate Report 106-362 on Title VI of WRDA 2000) as a "directive" to site the EAA reservoir features solely on publicly owned lands. The cited committee report was only referring to the EAA reservoir Phase I. There is nothing within the record, nor within SB 10, that requires the EAA Storage Reservoir be limited to publicly-owned lands.

4. The study should include the feasibility of alternatives with reservoir options that are between six (6) and twelve (12) feet in water depth (depths proposed in in 2000 and 2006 respectively) and that provide a *minimum* of 240,000 acre-feet of water storage, if not the final increment in Component G. If this project is to be considered the final increment, it then would be required to provide a *minimum* of 360,000 acre-feet of water storage.

5. The SFWMD's work that led to the 2006 Revised Draft Integrated Project Implementation Report (PIR) and Environmental Impact Statement (EIS) for the Everglades Agricultural Area (EAA) Storage Reservoirs project, which had recommended a 12-ft deep reservoir, should be considered as an alternative.

6. According to the final EIS, SFWMD's recommended plan provides only minor benefits to nearshore Florida Bay (via Taylor Slough). This again highlights the need for alternatives that more meaningfully improve hypersaline conditions in Florida Bay.

7. The SFWMD recommended plan should *not* be considered the final increment of surface storage within the EAA. We disagree with the SFWMD Section 203 report statement that SFWMD's preferred alternative is "the final step," instead of "the next increment," towards implementation of

Component G. Component G is set forth as providing a *minimum* of 360,000 acre-feet of water storage and therefore the provision of surface storage under CERP will not be finalized until *at least* 360,000 acre-feet of water storage has been achieved.

In the June 2018 Draft EIS, Section 3.1, USACE stated that "CERP identifies capacity for 360,000 acres [ft.] of storage south of Lake Okeechobee, for Component G. Considering anything short of 360,000 acre [ft.] storage option a final action could limit achievement of CERP goals related to Component G." We agree.

We therefore now strenuously oppose, are surprised by, and find no basis for the change in position by USACE found on page ES-2: "the project achieves the final increments of the required storage in the EAA (CERP Component G) and freshwater flows to Northwest and Central WCA3A (CERP Component II), providing the remaining one-third of the restoration flow goal identified in CERP and in CEPP." The current EAA Storage Reservoir design/plan should *not* be considered the final increment of surface storage within the EAA.

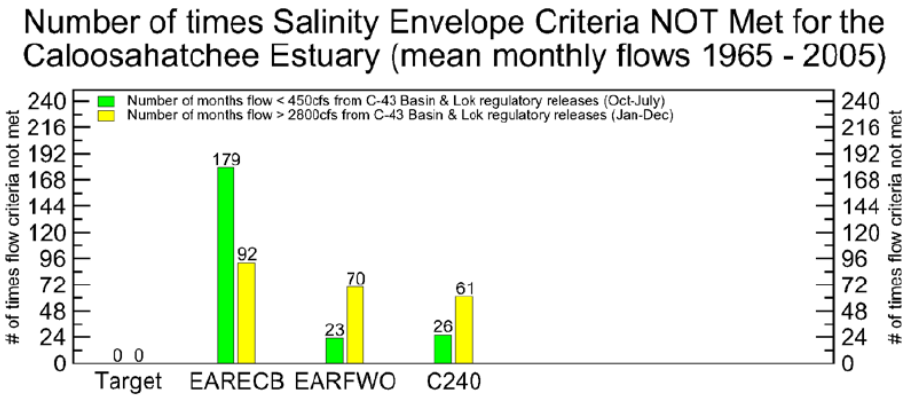
Note especially that the 2014 CEPP PIR stated that since the formulation of CERP, published studies "estimate that the northern inflow to the Everglades was an average of two million acre-feet (ac-ft.) annually" (pg. 3-3). The 2014 CEPP PIR (pg. 3-9) also states that "new science demonstrates that the need for flows passing through EAA is even higher than envisioned in CERP. This suggests that storage *greater than* 360,000 ac-ft., and necessary treatment, is likely needed if CERP goals and objectives are going to be fully achieved." These concerns are now amplified by the fact that the modeling performed by SFWMD did not take into account the greater freshwater flows that will be needed to effectively address climate changes already extant, and accelerating, including sea level rise.

8. The SFWMD Draft EIS (March 2018) states that, based on modeling with the 41-year period of record (1965-2005), the SFWMD preferred alternative (C240A) "meets" the CERP goal for average annual flows to the central Everglades. As stated, this is a great concern as this erroneously implies that the approximate 370,000 ac-ft. increase in average annual flows to the central Everglades (via the C240A alternative) will be enough to meet the freshwater needs of South Florida's ecosystems. The 2014 CEPP PIR stated that since the formulation of CERP, published studies "estimate that the northern inflow to the Everglades was an average of two million acre-feet (ac-ft.) annually" (pg. 3-3). The 2014 CEPP PIR (pg. 3-9) also states that "new science demonstrates that the need for flows passing through EAA is even higher than envisioned in CERP. This suggests that storage greater than 360,000 ac-ft., and necessary treatment, is likely needed if CERP goals and objectives are going to be fully achieved." Amplifying this concern is the fact that the modeling performed by SFWMD did not take into account the greater freshwater flows that will be needed to cope with climate changes already taking place, and accelerating, including sea level rise.

9. All alternatives presented in the SFWMD feasibility study should include sufficient land to treat water to meet applicable water quality standards with a high degree of certainty. We share the concern stated in the ASA Review Assessment that the proposed project "poses a significantly high risk in feasibility, design, and construction in terms of cost and performance of a water quality treatment facility. This poses a significant risk that once constructed, the flows into the Everglades from this project will not meet water quality standards, and the project flows will be reduced significantly to meet those standards".

10. We agree with the decision to *not* re-purpose the existing A-1 Flow Equalization Basin (FEB) into either a reservoir or an STA as part of the recommended plan. The A-1 FEB is an important component of the Restoration Strategies Regional Water Quality Plan that is already operational. Meeting the Water Quality Based Effluent Limit (WQBEL) of the EAA STAs is of the utmost importance and there is land, other than the A-1, that should be utilized. We are gravely concerned that the FDEP Secretarial Final Order OGC No. 18-0138 suggested possible conversion of A-1 FEB into an STA in the event the WQBEL is not attained. If any EAASR design cannot be expected to meet the required WQBEL, with the all aforementioned ecological benefits, it is the wrong design.

11. SB 10 had been introduced and passed in recognition that high-volume freshwater discharges to the St. Lucie and Caloosahatchee estuaries must be resolved. Therefore, project alternatives should provide significantly more reductions of these high-volume discharges above what the previously authorized CEPP and other authorized projects will provide (also referred to as Future Without – FWO). Based on the information presented in Sections 3 and 4 of the Final EIS, the SFWMD C240A alternative, while it provides some added relief to both estuaries, the reductions are relatively minor in comparison to those provided by already authorized projects. To re-establish stable health to these estuaries more significant high-volume discharge reductions are needed. For instance, as noted in the model output figure below for the Caloosahatchee estuary, the high-volume discharges (with mean monthly flows above 2800 cfs) are only reduced by nine (9) months beyond the twenty-two (22) months anticipated with CEPP and other authorized projects (FWO) (Figures 3-4, Tables 3-3 and 4-1, Final EIS). This still leaves sixty-one (61) months of harmful discharges within the 41-yr period record. Again, while any relief to the estuaries is welcomed, project alternatives that provide higher benefits to the estuaries are needed.



12. The Final EIS still does not clearly indicate to stakeholders what percentages related to reducing damaging discharges to the northern estuaries are benefits that were already predicted to be realized by CEPP versus those gained by SFWMD's recommended plan. The EIS should not make this ambiguous, particularly to the decision makers that need to evaluate the lift the recommended plan would provide. For instance, the Final EIS states (pg. 4-1) "compared to the No Action Alternative, the CEPP PACR Recommended Plan (Alternative 2) and CEPP New Water Modification (Alternative 3) provides an overall 55% reduction in freshwater release volumes and a 63% reduction in the number of freshwater release events to the Northern Estuaries from Lake Okeechobee, in conjunction with other authorized projects." For clarity and transparency, the report needs to include the portions of those percentages that are being realized by the recommended plan.

13. The 6,500-acre STA proposed for the EAA Storage Reservoir has not been proven adequate for water quality treatment. The Final USACE EIS fails to adequately answer the questions raised by wetlands ecologist Dr. William J. Mitsch, director of Florida Gulf Coast University's Everglades Wetland Research Park, in his peer-reviewed paper in the journal *Ecological Engineering*.[1] The USACE has failed to prove or guarantee that "an additional minimum of at least 17,500 ha (43,000 acres) of treatment wetlands (STAs or passive wetlands) will be needed to treat the water flowing south"[1] is not accurate.

    In fact, Annex F of the SFWMD Draft EIS (F.6 Conclusion) states:

    "However, while water quality is expected to improve, **compliance with Appendix A cannot be quantified given the high level of uncertainty from changes in flow distributions proposed under the TSP**.

    Similar to CEPP, it is important to note that this CEPP PACR only includes a qualitative rather than quantitative assessment of Appendix A compliance at SRS. Although water quality is expected to improve with respect to P concentrations because of both CEPP and CEPP PACR, **the impact of the project on Settlement Agreement compliance is uncertain** because of the qualitative nature of the analysis A quantitative prediction of future SRS TP concentrations was not done because the uncertainties were considered to be unacceptably high. The limitation of predictive tools, uncertainties in the systems response and the lack of historical data that reflects the substantially altered flow and loading patterns contribute to these uncertainties. Also, with future Appendix A compliance methodology currently under review by the TOC, these quantitative predictions may be premature at this time.

    CEPP PACR project features cannot proceed unless/until it is determined through the Comprehensive Everglades Restoration Plan Regulation Act (CERPRA) permitting process that construction and/or operation of the feature 1) will not cause or contribute to a violation of water quality standards; 2) will not cause or contribute to a violation of the permit(s) discharge limits or specific conditions; and, 3) reasonable assurances exist that demonstrate adverse impacts on flora and fauna in the area influenced by the project element will not occur. The tentative feature implementation sequence is designed to minimize the potential for temporary increases in TP during project construction, commissioning, and long-term operations. **Given the magnitude of the hydrologic changes proposed in CEPP and the CEPP PACR, this project presents some risk of future non-compliance with water quality criteria particularly in the SRS.**"

14. We are not appeased or convinced by the USACE response in the Final EIS to the concerns raised in the ASA Review Assessment in regards to analysis of potential failure modes, consequences of failure/life loss, and seepage analysis. The failure to (1) provide guarantees of the stated ecological benefits of this project and (2) ensure the project is properly designed for the safety of people and property within and near the EAA and downstream of the project is unacceptable and contrary to the responsibilities held by USACE and the SFWMD.

15. A 23-ft. deep reservoir of nutrient-rich water will promote the same or more profound conditions that fuel intense, frequent, and long-duration Harmful Algae Blooms (HABs) than those currently

[1] Mitsch, W.J. 2019. Restoring the Florida Everglades: Comments on the current reservoir plan for solving harmful algal blooms and protecting the Florida Everglades. Ecological Engineering 138: 155-159. https://www.sciencedirect.com/science/article/pii/S2590290319300094

fueling HABs in Lake Okeechobee. The human health impacts related to these toxic algae blooms are well known – for example, an Ohio State University study identified a "cluster" of nonalcoholic liver disease in areas with significant blue-green algae blooms from 1999-2010.[2]

A reservoir design that promotes conditions favorable to more intense, frequent, and longer duration toxic cyanobacteria blooms is contrary to the interests of public health. The scientific literature abounds with relevant data. The South Korea Four Major Rivers Project (FMRP) provides the perfect cautionary tale: To secure water resources for industrial, agricultural, drinking, and recreational uses, a project that included the construction of sixteen (16) in-stream weirs, two reservoirs, three dams, and dredging of sediments in four major river basins was launched in 2008 and completed in 2012 with an investment of $20 billion.[3] "Contrary to the original purposes and expected outcome of the project, several controversies arose over ecological issues after completing the project in the four major river areas."[4] The FMRP increased water levels and retention time in the Nakdong, Geum, and Yeongsan rivers, and all three experienced an increase in the severity of HABs after project completion.[5] "One important finding across the study areas is that there was a significant association between HABs and liver diseases after the FMRP completion," "whereas no significant relationship was observed in non-project areas."[2] Studies in the U.S.[2], Canada, and Serbia have shown similar significant association between cyanobacteria and liver disease.[3]

The results of the FMRP, and the 2019 Seungjun Lee et al study combined, present a strong argument for extreme caution here in South Florida. Although "the original intention of the project was for enhancing water security and sustainability"[6] the outcome of FMRP was contrary to water quality protection and anathema to public health. The USACE is responsible for ensuring that the "fix" for one HAB problem and the Florida residents it endangers, does not become yet another HAB problem that endangers another group of Florida residents.

16. We agree with the Miccosukee Tribe, as stated in their July 17, 2018 letter to USACE, that Tribal lands in WCA-3 should not be used as a "Mixing Zone" or biological filter to treat upstream sources. We share their concerns that with an undersized STA lacking sufficient treatment, the additional water flows from Lake Okeechobee will not only violate the Tribe's Water Quality Standard of 10 ppb for phosphorus, but will fail to deliver on assurances to the Tribe of an 80% phosphorus load reduction. An undersized STA, leading to more instances of water bypasses which discharge polluted water to WCA 3, and thereby adding phosphorus to muck sediments and degrading Everglades habitats, whether intended to do so or not, is unacceptable.

    Again, the scientific literature provides examples of why a 23-ft. deep reservoir will become another source of nutrient pollution at risk of polluting downstream waters. Restoration of flow-through lakes – Theory and practice, published in *Ecohydrology & Hydrobiology* (2018), by Julita A. Dunalska et al, studied flow-through lakes (similar to retention reservoirs) in Western Poland.

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[2] Zhang, F., Lee, J., Liang, S. et al. Cyanobacteria blooms and non-alcoholic liver disease: evidence from a county level ecological study in the United States. *Environ Health* 14, 41 (2015). https://doi.org/10.1186/s12940-015-0026-7

[3] Seungjun Lee, Jinnam Kim, Boseung Choi, Gijung Kim & Jiyoung Lee (2109) Harmful algal blooms and liver diseases: focusing on areas near the four major rivers in South Korea, *Journal of Environmental Science and Health*, Part C, 37:4, 356-370. https://www.tandfonline.com/doi/full/10.1080/10590501.2019.1674600

[4] Lah TJ, Park Y, Cho YJ. The four major rivers restoration project of South Korea: an assessment of its process, program, and political dimensions. *J Environ.* 2015; 24(4):375-394. https://journals.sagepub.com/doi/abs/10.1177/1070496515598611

[5] Srivastava A, Ahn CY, Asthana RK, et al. Status, alert system, and prediction of cyanobacterial Bloom in South Korea. *Biomed Res. Int.* 2015; 2015:1. https://www.hindawi.com/journals/bmri/2015/584696/

[6] Lee JH, Gwon JN, Yang SY. Seasonal variation of phytoplankton community in the Naktong River. *Algae.* 2002;17(4):267-273. https://www.e-algae.org/journal/view.php?doi=10.4490/ALGAE.2002.17.4.267

The study found that flow-through lakes cannot be effectively restored when the nutrient inflow is too high. Despite large financial support, such lakes become a source of algal blooms and a threat to downstream populations.[7] Another problem will be the bottom sediments; theoretically, bottom sediments in lakes have an endless stock of phosphorus and nitrogen, and the so-called 'internal supply' can sustain primary production for many years.[8] The fix for Lake Okeechobee is not another source of muck and HABs.

17. The timeframe provided to external agencies for the Agency Technical Review (ATR) was extremely tight and particularly unfair to the local government agencies within the study area that were invited to participate. It is our understanding that the ATR kick off meeting was held Friday, February 16, 2018, just before the President's Day holiday, and that participants were asked to provide written comments by noon on Monday, February 26, 2018 (five business days later). This likely explains why only one county (Broward) provided written comments. In fact, in its comments, Broward County via Carolina Maran, stated that "the established time frame was insufficient to provide the extensive review required for this type of document." Given the importance of this project to South Florida, adequate time should have been allocated to allow for careful review of the draft report and for meaningful input before SFWMD issued its final Section 203 report.

18. While public scoping meetings were held later in 2017 by SFWMD in West Palm Beach and Clewiston, they were inadequate in scope and timing. In addition, neither SFWMD nor USACE provided meaningful and accessible NEPA-compliant in-person public participation in the stakeholder process to all those that stand to benefit from, or be impacted by, this project. While public meetings were held in West Palm Beach, Clewiston, Fort Myers, and Stuart, both agencies failed to provide any public participation opportunities south of the reservoir project where restored water flows are intended to flow. In particular, residents of Miami-Dade and Monroe counties (where Everglades National Park and Florida Bay are located) were not afforded equal representation and equal opportunity for public engagement. The Southeast Florida region experiences significant traffic congestion during the times that SFWMD and USACE conducted its public hearings – travel time and distance made the availability of meetings in only the northernmost part of the project area a sizable barrier to public engagement. We raised this concern repeatedly because webcast recordings and SFWMD Governing Board meetings did not provide accessible, quality, and open public engagement opportunities.

19. The Final USACE EIS failed to address nineteen (19) enumerated and specific comments and/or questions in the July 24, 2018 comment letter regarding the Draft EIS submitted by Sierra Club, Friends of the Everglades and Bullsugar Alliance. In addition, USACE neglected to respond to other stakeholder questions found in the comment letters in Appendix C (Pertinent Correspondence). These stakeholder questions/comments must still be addressed, and the failure to respond needs to be explained.

[7] Dunalska, Julita A., et al. "Restoration of Flow-through Lakes – Theory and Practice." *Ecohydrology & Hydrobiology*, vol. 18, no. 4, 2018, pp. 379–390. https://www.sciencedirect.com/science/article/abs/pii/S1642359318300910

[8] Dunalska, J.A., Wiśniewski, G., 2016. Can we stop the degradation of lakes? Innovative approaches in lake restoration. *Ecological Engineering*. 95, 714-722. https://www.researchgate.net/publication/305846106_Can_we_stop_the_degradation_of_lakes_Innovative_approaches_in_lake_restoration

Moreover, the Final USACE EIS only partially responded to comments submitted by Sierra Club to SFWMD as part of their scoping and Draft EIS (between November 21, 2017 and February 26, 2018). While our comments were included in the Appendix C, only a portion of our comments were addressed. The reason provided was that "the Draft EIS and SFWMD Section 203 Report should address all other comments and questions." However, those documents produced by SFWMD failed to do so; our comments, timely submitted to EAAreservoir@sfwmd.gov, were left out of those documents. If this failure is not fully explained and redressed, we will be left to understand that SFWMD cherry-picked the public comments to which it ultimately responded.

20. The NEPA regulations provide (40 CFR 1502.22): "When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking."

    Further, under subsection (a) "If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement."

    This Final EIS for the reservoir is premature; the public has not received information critical to reasoned choice among alternatives because the SFWMD has yet to prepare a final EIS for the TSP. Currently, there is only a draft EIS for the TSP and additional alternative(s) could be considered and selected by the SFWMD before it issues a final EIS. Any new alternatives considered by the SFWMD would be relevant for determining the impacts of the EAA storage reservoir and thus this information needs to be included in the Final EIS for the EAA storage reservoir.

Finally, we would like to point out that the EAASR, as currently designed, is yet another industrial-scale plumbing project that is as far from being a natural system as possible. Florida, and the USACE, have an unflattering history of investing billions of dollars into large plumbing projects that in turn must be reversed, or mitigated, because of the failure of those projects to work as well as the natural system does to protect people, property, and the environment.

The USACE response to Dr. Mitsch in the Final EIS clearly illustrates the folly that is planned anew: "The purpose of the EAA reservoir is to hold water in order to provide freshwater to the Everglades during the dry season when needed. The intent is not for the reservoir to be reverted back to the natural Everglades ecosystem." This project cannot, and does not purport to, restore the Everglades to the greatest extent possible both spatially and functionally. It is therefore time to return to the drawing board.

We look forward to receiving a response to all of our concerns.

Sincerely,

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