



September 5, 2018

Via Email and U.S. Mail

Major General Richard G. Kaiser
Commander, Mississippi Valley Division
U.S. Army Corps of Engineers
1400 Walnut Street
Vicksburg, MS 39180

**Re: Integrated Draft Feasibility and Environmental Impact Statement; Pearl River Basin, MS,
Federal Flood Risk Management Project, Hinds and Rankin Counties, MS**

Dear General Kaiser,

On behalf of National Audubon Society, including two state offices, Audubon Louisiana and Audubon Mississippi ("Audubon"), who represent millions of members and supporters from around the country, we urge the Corps to reject a dubious, ecologically harmful civil works project locally known as "One Lake".

For more than a century, Audubon has worked to protect birds and their habitats through the belief that where birds thrive people prosper. Our decades-long presence in the Mississippi River Flyway and Gulf of Mexico reflects their significance as rich ecosystems that annually support over 100 million migratory, nesting and wintering birds. The Pearl River with its diversity of birds, fish, wildlife, and their habitats, serves as a key environmental lynchpin, and is recognized as one of the most intact river systems in the southeast U.S.

We request our letter of opposition be made part of the official public record on the Integrated Draft Feasibility and Environmental Impact Statement; Pearl River Basin, Mississippi, Federal Flood Risk Management Project, Hinds and Rankin Counties, Mississippi (DEIS). The DEIS was prepared by the local sponsor, Rankin-Hinds Pearl River Flood and Drainage Control District (Drainage District), which has selected One Lake as their preferred alternative, Alternative C (Channel Improvement/Weir/Levee Plan).

Upon our review, we have concluded that the DEIS is a biased, faulty document that is technically deficient and scientifically unsound. Further, given the anticipated extensive and irreversible environmental impacts associated with this proposal, its effort to downplay or ignore downstream impacts, and the pursuit of a DEIS process that does not comply with all required federal laws, we find One Lake unacceptable.

Our resolute objection to One Lake is based on a number of consequential issues and unanswered questions, including the following:

Deficient Analyses and Faulty Science

Overall, we find this DEIS to be sloppy, incomplete, and scientifically unsound. The document is missing key analyses, lacks sufficient documentation of methodologies, and is rife with unsubstantiated assertions and conclusions that are made without appropriate scientific references. Examples of these grave deficiencies include:

- Falsely asserting that Mississippi does not have a state threatened and endangered species program (see DEIS Sect. 2.5.7.1. p. 80 line 27) when in fact it does¹.
- Citing “blue bird” as a species of bird, which it is not; however, Eastern Bluebird is. Further, “Several other song bird species” grossly underestimates the diversity of the Pearl River. For example, eBird² lists 196 species for three hotspots within or immediately adjacent to the project area, including many listed as conservation priority species in Mississippi’s State Wildlife Action Plan (see DEIS Sect. 2.5.4.1. p. 77 line 28-29).
- Erroneous claims that “At present, no data exists of observations of Wood storks in the Project Area.” (see DEIS Sect. 2.5.7.1. p. 84 line 24). The DEIS provided no reference to validate this claim. Again, eBird has records to refute this for 11 July 2009, 6 documented sightings; 24 July 2011, 5 documented sightings; 14 July 2013, 2 documented sightings.

The DEIS study area ends just south of the project site, which represents an egregious omission of the project’s true cumulative impacts. The study area must be expanded to consider both upstream of the project site through and above the existing Ross Barnett Reservoir and Spillway, and extended southward along the 200-mile downstream stretch of the Pearl River and out into Mississippi Sound, Lake Borgne, and the Gulf of Mexico. Impacts to the neighboring state of Louisiana must be evaluated along with impacts to the coastal zones of Louisiana and Mississippi.

We find the alternatives analysis in the DEIS is totally inadequate. A report³ completed by the Mississippi Legislative PEER Committee concluded that, “The plans incorporating economic development cost more than levees.” Their study found that the flood control plans developed before 1996 offered less costly options that better address flooding concerns as compared to One Lake. These options include improvements to existing levees, raising buildings and homes, or buying out properties with historical flooding problems. If the purported goal of this DEIS is to provide flood control for the metro Jackson area, the Drainage District should be required to evaluate less ecologically damaging, more comprehensive flood control measures that could be implemented alone or in combination, such as

¹ Mississippi Museum of Natural Science (2014). *Endangered Species of Mississippi*. Mississippi Department of Wildlife, Fisheries, & Parks, Mississippi Museum of Natural Science, Jackson, MS. See https://www.mdwfp.com/media/3231/endangered_species_of_mississippi.pdf.

² Launched in 2002 by the Cornell Lab of Ornithology at Cornell University and the National Audubon Society, eBird is a widely respected online database that gathers basic data on bird abundance and distribution at a variety of spatial and temporal scales. See www.ebird.org.

³ Joint Legislative Committee on Performance Evaluation and Expenditure Review (PEER) Report for the Mississippi Legislature (2010 Oct 12). *A Review of Flood Control Options for the Jackson Metropolitan Area, 1979-2010* (PEER Report #540). Jackson, MS: The Mississippi Legislature PEER Committee.

better management of the Ross Barnett Reservoir to reduce flooding⁴; flood-proofing existing homes and buildings; selectively elevating structures, buy-outs or relocations; setbacks existing from levees; restoring sections of the Pearl River floodplain and its tributaries; development and implementation of a comprehensive flood and stormwater Master Plan for the metro Jackson area to guide flood management, stormwater drainage and stormwater quality.

Further, Audubon finds it reprehensible that the DEIS is missing key information that is required by federal law to provide proper public and natural resource agency review of this monumental project. This includes the Fish and Wildlife Coordination Act Report, a Biological Opinion (in response to the Biological Report that was released late into the public comment period), and Independent External Peer Review Report; these documents are required per the Water Resources Development Act of 1996, the Endangered Species Act and the Fish and Wildlife Coordination Act. In a July 3, 2018, letter to Corps Vicksburg District Commander, Colonel Michael Derosier, Audubon joined 24 other concerned non-profit groups asking the agency to take over the DEIS process and restart the comment period when all necessary documents are made publicly available. We reaffirm our request as this has not happened nor have we received any acknowledgement of this letter by the Corps.

Finally, if One Lake is constructed, it will result in promoting extensive new development in and around the project site as well as the Pearl River floodplain. Given this far-reaching outcome, the Drainage District should be required to complete a Programmatic Environmental Impact Statement to more accurately quantify the project's primary, secondary, and cumulative impacts on the Pearl River's flora and fauna, and downstream resources.

Serious and Irreparable Ecological Damage

The preferred alternative involves dredging 25 million cubic yards of sediment from a 10-mile stretch of the Pearl River and constructing a dam to create a 1,900-acre impoundment (i.e. lake) purportedly to provide flood control for the metropolitan area of Jackson, Mississippi.

One Lake poses significant, irreversible damages – directly, indirectly, and cumulatively – to the Pearl River, birds and their habitats. These ecological impacts are not just limited to the immediate project footprint but also to the downstream resources that lie along the 200-mile stretch of the Pearl below the proposed dam as well as Mississippi Sound, Lake Borgne, and the Gulf.

The preferred alternative will directly destroy over 2,500 acres of habitat that supports Bald Eagles and several species of conservation priority songbirds, as well as a variety of fish and other wildlife. The proposal will eliminate or alter critical habitat for several federally threatened species like the Wood Stork, Gulf Sturgeon, Ringed Sawback (map) Turtle, and Northern Long-eared Bat. Not only are these habitat impacts unacceptable, the DEIS fails to present the required mitigation plan; this is yet another example of the technical omissions prevalent throughout the DEIS. Additionally, DEIS Appendix D (Environmental) appears to have substantial shortcomings that require close scrutiny as outlined in Attachment A.

⁴ In 2013, the Lake Pontchartrain Foundation advised that, "An alternative that includes proper management of the Ross Barnett Reservoir should be included in the EIS and receive strong consideration. At the public meeting held in St. Tammany Parish on November 20, 2013, members of the [Drainage District] indicated that the main source of flooding in Jackson and surrounding municipalities was from water release from the Ross Barnett Reservoir."

Of particular concern are priority bird species that Audubon has identified in the proposed project area, affected Pearl River Basin and downstream areas: Prothonotary Warbler, Swainson's Warbler, Swallow-tailed Kite (Mississippi State Listed Endangered)¹, Reddish Egret, Clapper Rail, and Wood Stork (Federal and Mississippi State Listed Endangered)¹.

Audubon is also concerned about the impacts that may occur to Important Bird Areas (IBAs)⁵. For example, the Drainage District has made claims that the proposal has been modified in such a way that it will no longer affect LeFleur's Bluff State Park. LeFleur's Bluff State Park is recognized as an IBA due in large part to the 20-year-long effort by our local chapter, Jackson Audubon Society, to steward and manage the park's habitat as a premier nesting area for Prothonotary Warblers. Notably, the *State of North America's Birds 2016*⁶, a report developed by the North American Bird Conservation Initiative, of which Audubon is a partner, found the Prothonotary Warbler to be a species of high conservation concern. According to maps in the DEIS, however, dredging is still planned on park property. Other IBAs that are directly imperiled by One Lake include Hancock County Marsh Coastal Preserve (MS), East Delta Plain (LA), and Pearl River (LA; nominated). Audubon considers such impacts to IBAs unacceptable.

The Pearl River is a key source of freshwater for Mississippi Sound, Lake Borgne, and the Gulf of Mexico. The preferred alternative poses significant alterations to downstream river flows, sediment transport, water quality, and the fresh-salt water interface. We anticipate these significant changes to upstream flow will permanently alter downstream hydrology, resulting in substantial alterations to - and further loss of - habitats in the lower Pearl River basin, Mississippi Sound, and southeast Louisiana, including Biloxi Marsh. These wetland habitats provide crucial buffering protection from flood and storm events; the DEIS must also assess the potential result of increased storm surge and flooding in the Pearl River Delta and Central Gulf.

Other imperiled habitats and wildlife corridors from One Lake include over 125,000 of designated conservation lands such as Bogue Chitto National Wildlife Refuge, Hancock County Coastal Preserve, Pearl River Wildlife Management Area, Ben's Creek Wildlife Management Area, Marion County Wildlife Management Area, Old River Wildlife Management Area, 2,200 acres protected by The Nature Conservancy, and the 87-acre Fischer Wildlife Sanctuary that is owned and managed by Orleans Audubon Society, a local Audubon chapter. Many of these areas are comprised of vast stretches of bottomland hardwood forests and wetlands that require a specific and frequent hydrologic regime to provide the appropriate balance of nutrients, sediments, and freshwater to remain healthy and productive.

Our concerns about the altering or loss of downstream habitats includes consequences to foraging, nesting, and breeding habitats that birds depend on in the Pearl River basin. For example, the lower basin is recognized to provide important stopover habitat for Neotropical migratory birds as well as supporting valuable nesting and foraging habitat for an array of bird species. Along with Mississippi Sound, Breton Sound, and the Central Gulf, this region provides vital foraging habitat for birds by supporting oysters, fish, shrimp, crabs, insects, small mammals and other aquatic/terrestrial vertebrates and invertebrates as well as plants.

⁵ An IBA is an area that has been identified using an internationally agreed to set of criteria as being globally important for the conservation of bird populations. National Audubon Society administers the program in the U.S.

⁶ See <http://www.stateofthebirds.org/2016/resources/species-assessments/>.

The potential for altered upstream flows to impact bird foraging habitat, as well as the broader food web, is demonstrated by a recent scientific paper⁷ that examined how droughts can alter river and tributary inputs into Mississippi Sound and result in dramatically changing the fish community structure. Of the eight species studied, researchers found “...the abundance of seven species significantly decreased while the abundance of one species significantly increased.” The DEIS must fully assess these consequences.

Audubon has had a long-standing involvement in efforts to restore the Mississippi River Delta and in guiding Gulf recovery efforts from the 2010 Deepwater Horizon oil disaster. The proposal jeopardizes the multi-million dollar restoration projects planned or underway across the Central Gulf Coast. Accordingly, the DEIS must include an assessment of impacts to these restoration projects.

Notably, the Pearl River has been recognized by the National Park Service⁸ for its scenic, recreational, fish and wildlife values, thereby being listed on the Nationwide Rivers Inventory (NRI) as a potential candidate for inclusion in the National Wild and Scenic River System. One Lake would impact all designated 151 River Miles (RM), namely RM 161 (above the City of Columbia, MS) to RM 312 (one mile south of Jackson, MS). Under the Wild and Scenic Rivers Act section 5(d)(1) and related guidance, all federal agencies – or in this case the Drainage District - must seek to avoid or mitigate actions that would adversely affect NRI river segments. Further, the proposal threatens several natural and scenic tributaries designated by the State of Louisiana that are located in the lower Pearl River basin.

Finally, we are concerned about ecological and public health threats posed by numerous hazardous and/or contaminated sites that have been identified in the project area. Given the massive dredge and fill undertaking of the preferred alternative, extensive water and soil sampling should be required in and around the project footprint and downstream.

In summary, the multitude of outstanding ecological concerns and technical questions associated with this complex, questionable, and environmentally harmful project requires the highest degree of accurate scientific rigor and comprehensive, complex analyses. The current DEIS is fundamentally flawed.

In conclusion, the DEIS is missing crucial sections that are required by federal law for adequate public and scientific review. The incomplete proposal makes many ecological and economic assumptions, and it requires more rigorous study of downstream impacts. Audubon is wholly opposed to One Lake and respectfully asks the Corps to protect the Pearl River, its ecological resources, local and downstream communities, and the regional economy, by rejecting this ill-conceived, destructive proposal.

⁷ Mickle, Paul F., J.L. Herbig, C.R. Somerset, B.T. Chudzik, K.L. Lucas, and M.E. Fleming. 2018. Effects of annual droughts on fish communities in Mississippi Sound estuaries. *Estuaries and Coasts* 41: 1475-1485.

⁸ According to the NRI (<http://www.nps.gov/ncrc/programs/rtca/nri/>) the Pearl River is cited for, “Numerous endangered, threatened and rare species; excellent example of large Gulf Coastal Plain river with extensive swamplands; upper reach very scenic.” The National Park Service provides instructions on the process of consulting on projects potentially affecting NRI segments. See <https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm>.

Please contact Jill Mastrototaro at Audubon Mississippi (jmastrototaro@audubon.org) if you have any questions or would like additional information.

Sincerely,

Audubon Louisiana

Audubon Mississippi

National Audubon Society

Cc: Rankin-Hinds Pearl River Flood and Drainage Control District

Attachment

ATTACHMENT A

Audubon has identified an array of shortcoming and deficiencies in DEIS Appendix D (Environmental) that require thorough attention and correction, including, but not limited to the following:

Threatened and Endangered Species (T&E) Biological Assessment

Wood Stork

- There are three eBird reports in the project area (11 July 2009, 6 documented sightings; 24 July 2011, 5 documented sightings; 14 July 2013, 2 documented sightings). This contradicts the statement that “there are no documented sightings of the Wood Stork within the project area.” The DEIS fails to provide any methodology or details to support this statement.
- There are several additional eBird reports in the lower Pearl River basin, from Bogalusa, Louisiana, south to Interstate-10. There is no assessment how the One Lake project would impact Wood Stork foraging habitat there.

Bald Eagle

- The statement in the Wood Stork section: “would not likely jeopardize the continued existence of the species” (Appendix D, page 32) and in the Bald Eagle section: “...that would not likely affect the population’s stability across its range” are not appropriate thresholds by which impacts to T&E species should be evaluated.

Gulf Sturgeon

- It is acknowledged that limited is available data in the upper reaches of the Pearl River basin (i.e. Project Area) on page 41 (and elsewhere), and we agree that surveys are needed to evaluate potential impacts, but before design and construction phases in contrast to the statement in the third paragraph: “...further coordination will need to take place through the project design and construction phases...”. Efforts to restore Gulf sturgeon elsewhere may result in local or regional population increases and the re-occupancy of currently unused suitable habitat (Critical Habitat), so the current presence/absence of sturgeon may not be relevant to future use of the Project Area. “Would not likely jeopardize” (end of 3rd paragraph, page 41) is not good enough. Critical Habitat should not be removed.

Ringed Sawback (map) Turtle

- “Temporary” displacement cannot be guaranteed, and “could” re-populate the area is also not guaranteed. Again, coordination with US Fish & Wildlife Service (USFWS) is critical before moving forward with any project. Audubon does not support temporary impacts to this or other T&E species.

Northern Long-eared Bat

- Lack of data in the DEIS is a problem. A recovery from white nose syndrome could allow the project area to be occupied even if not occupied today.

Habitat Evaluation Procedures (HEP) Report

- The HEP is limited to the project construction area, and only evaluated two alternatives, B (Levee Plan) and C (Channel Improvement/Weir/Levee Plan).
- It only considered “direct impacts associated with the two proposed structural alternatives”, and fails to consider indirect impacts of reduced hydrology throughout the lower Pearl River basin including Mississippi Sound, Lake Borgne, and the Gulf.
- Does not consider ‘conservation priority species’ as a selection method for choosing species to include, rather it uses ecological, recreational, or economic value, and to represent a suite (guild) of species, which is not the same.
- According to USFWS, the HEP “is directly applicable only to the evaluation species selected. The degree to which predicted impacts for these species can be extrapolated to a larger segment of the wildlife community depends on careful species selection.” (<https://www.fws.gov/policy/ESM102-3.PDF>).
- The bird species selected, with the exception of Eastern Meadowlark, are generally habitat generalists, meaning that they can occupy a wide variety of habitat types, including suburban, residential, a variety of forest types, and so on. Thus, they are poor choices to extrapolate impacts to conservation priority species, and those that are relatively specific in their habitat needs.
- We recommend the goals of the HEP should be improved, which are defined as understanding impacts to the target species, and recommend that the HEP be revised to select conservation priority species. See MS State Wildlife Action Plan (SWAP) Species of Greatest Conservation Need (SGCN) rankings: that serve as specific representatives of distinct habitat types (rather than generalists) impacted by Alternative B (Levee Plan) and Alternative C (Channel Improvement/Weir/Levee Plan) ([https://www.mdwfp.com/media/251788/mississippi_swap_revised_16_september_2016_reduced .pdf](https://www.mdwfp.com/media/251788/mississippi_swap_revised_16_september_2016_reduced.pdf)). Habitat suitability models are available for a variety of conservation priority species potentially impacted here; for examples see Tirpak et al. 2009, *Journal of Wildlife Management* 73). Alternative species with MS SWAP SGCN rankings could include: Little Blue Heron (S2), White Ibis (S2), Red-headed Woodpecker (S4S5), Prothonotary Warbler (S5), Kentucky Warbler (S5), Painted Bunting (S4), Prairie Warbler (S5), Wood Thrush (S5), and Rusty Blackbird (S2).
- Because of our concerns about the selection of HEP species, we have reservations that the Compensatory Analysis is neither suitable nor applicable.
- We also recommend a thorough investigation of downstream impacts to fish and wildlife. Top conservation species listed in the Louisiana Wildlife Action Plan that would potentially be impacted include the Swallow-tailed Kite (S1S2), American Woodcock (S5), and Swainson’s Warbler (S4), as identified as “trigger” species in the Pearl River Important Bird Area.