



To:

Rankin Hinds Pearl River Flood and Drainage Control District

Via email: rankinhinds@gmail.com

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Flowood, MS 39232

From:

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RE: Comments submitted on the Integrated Draft Feasibility Study and Environmental Impact Statement, Pearl River Watershed, Hinds and Rankin Counties, MS

Date: **August 31, 2018**

Pearl Riverkeeper has reviewed the Rankin Hinds Pearl River Flood and Drainage Control District's Draft Environmental Impact Statement (DEIS) with associated appendixes and attended the project public meeting in Jackson. Pearl Riverkeeper and our members and supporters are vehemently opposed to the "tentatively selected plan" to dredge, widen and deepen 10 miles of the Pearl River, destroying over 1,500 acres of productive wetlands. We respectfully submit the following comments and issues to be addressed:

- **Ross Barnett Reservoir coordination and low flow compliance:** The discharge permits for the already beleaguered Savannah Street Sewage Treatment Plant rely on stable, freshwater flow from the Pearl. The present low flow "floor" is 227 cubic feet/sec (cfs) which ensures Savannah Street an adequate dilution as required by their NPDES discharge permit. A recent presentation to the LA Senate by Dr. deEtte Smythe, Regulatory Manager, St. Tammany Parish, revealed that this critical low flow has been violated 1613 times since 1960 or 7.7% of individual daily observations.¹ Since these low readings take place in the low flow months of June-October, these occurrences are significant. How the Ross Barnett Reservoir releases will coordinate with the new 1900-acre lake has not been determined. Constructing another lake with no currently defined low flow requirement would complicate this existing problem. The project proponents must be required to designate a critical low flow number for the new impoundment. The

¹ http://senate.la.gov/video/videoarchive.asp?v=senate/2018/08/081318PEARLRIVER_0

proponents should also be required to stipulate what governing body and regulations will be used to ensure flow coordination between the Ross Barnett Reservoir and the new impoundment.

- **Increased flash flooding in Jackson neighborhoods:** The proposed elevation of the water that would be pooled at the new project weir is 258', 8 feet higher than the water level of the current weir at Jackson Waterworks (250'). The new impoundment water level of 258' could impact the current urban creek and tributary flow rates. The current flash flooding events in Jackson neighborhoods could be exacerbated as the storm drain runoff is slowed down by the backed-up tributaries. The DEIS lacks detailed information regarding the new impoundment's impacts to urban creek flooding. Studies on potential engineering designs, such as tributary gates with head pressure to prevent backflow and allowing for adequate drainage away from the neighborhoods in the City of Jackson, must be completed.
- **Hazardous waste sites on City of Jackson property:** The Drainage District's cost projections oversimplify and undercut the expense of removing the hazardous waste sites, creosote slough and landfills along the river. The DEIS states that the environmental impacts associated with the removal could include, "the temporary addition of large additions of sediment to the Pearl River, the release or exacerbation of current releases of leachate and/or solid and hazardous substances to the groundwater and/or surface water..." (AllenES Environmental Evaluation of Hazardous, Toxic and Radiological Waste (HTRW) Sites, Sept 2014, p.14). The DEIS does not adequately detail the remediation efforts that will be required at each of the 3 main HTRW locations during removal.

The DEIS does not provide documentation to validate their \$8 million cost estimate for "landfill removal". The project proponents must conduct a more detailed study of the HTRW sites to determine exact monetary costs for removal. The project proponents should be required to conduct detailed soil, ground and surface water testing at each HTRW site and to develop a detailed project plan for removal of the HTRW contaminants in compliance with appropriate regulations.

These HTRW sites are a current and ongoing threat to human health and the environment. According to the AllenES report, unregulated landfill leachate, creosote and other hazardous substances are currently being released into the groundwater, surface water and sediments. Impacts include, "potential human health effects, biota impacts, impacts to important habitats such as wetlands, recreational impacts and other various environmental impacts from continued exposure to hazardous substances..." The cleanup of these HTRW sites is of vital importance and must not be predicated on choosing Alternative C.

- **Flood plain development:** The One Lake project would bulldoze riverside forests, dredge and dig 25 million cubic yards of riverbanks to elevate 1861 acres and get them ready for lakeshore development. These wetlands along the river provide vital ecosystem services such as natural

flood protections for our community, groundwater replenishment, water purification and pollutant removal and natural erosion control. The loss of trees has the potential to impact air quality and consequently industry and government compliance with air quality discharge permits. This plan goes against the national trend of dam removal and wetlands protection.

DEIS, Appendix B, p. 25 states, "There will be land available on both Hinds County and Rankin County sides of the expanded Pearl River banks. The elevations of these lands will be greater than the 0.2 percent chance exceedance and therefore, out of the flood plain." The DEIS does not adequately address the potential impacts of climate change and the hazards of increased flood plain development.

- **Water quality degradation:** Trapped pollution in a wider, slower lake will cause greater water quality degradation than would take place if the discharges are diluted and flushed through the system by a faster-flowing river. The DEIS, page 173 states that, "Alternative C is expected to result in indirect moderate long-term beneficial impacts to low water due to changes in hydrology from future development and the resulting increased runoff from developed impervious surfaces." Increased runoff from impervious surfaces should not be listed as a flood control benefit. In addition to the water quantity issues posed by more impervious surfaces, increased urban runoff from new development will also have a negative impact on water quality. For example, the DEIS Appendix D : Environmental Water Quality, page 133 states, "Water quality data collected from the project reach in July 2014 indicates that a localized storm over the area (i.e., Jackson Metropolitan area) could result in low dissolved oxygen water entering the Pearl River and temporarily depressing dissolved oxygen levels upstream of the existing low-level weir before upstream dilution water returns dissolved oxygen to pre-storm levels. Without improvements to minimize the impacts of urban runoff, similar conditions could occur with the implementation of Alternative C." The DEIS does not adequately address the water quality impairments that will occur in a slow-moving lake with larger surface area impacted by increased contaminants from urban runoff.
- **Loss to public lands:** A significant section of LeFleur's Bluff State Park, Jackson's equivalent to NYC's Central Park, would be permanently under water, according to the map published in the DEIS. The DEIS fails to account for the socioeconomic losses that would be incurred by the destruction of a portion of the LeFleur's Bluff State Park recreational resource. The DEIS also fails to take into account the potential land loss and bank sloughing along the MDOT mitigation bank at the Fannye Cook Natural Area.
- **Loss of critical wetlands and bottomland hardwoods:** Less than 25% of the pre-Columbian bottomland hardwood forests remain in the southeastern United States.² The bottomland

² Carter, J and Biagas, J. "Prioritizing bottomland hardwood forest sites for protections and augmentation", *Natural Areas Journal*, vol 27, no. 1, 2007, pp. 72-82

hardwood forest habitat along the Pearl River in the project area has already been decimated by previous river channelization efforts. DEIS, Appendix D: Site Description of the Project Area, page 20: "This former bottomland hardwood forest ecosystem was once a functioning and sustainable habitat. However, increasing human encroachment and disturbances have degraded the area to its current condition." "These habitats are believed to perform functions vital to the prominent streams, including water control and purification, groundwater recharge, soil enrichment and erosion control." DEIS, Appendix D: Wetland Delineation and Determination, page 11: the Alternative C habitat loss would total 2,848 acres to include 1,017.221 acres forested wetlands, 266.120 acres scrub-shrub wetlands, 65.128 acres emergent wetlands and 150.125 acres cypress/tupelo slough. This is an unacceptable level of vital habitat loss. Restoration of this section of the Pearl River should be prioritized over more destruction.

- **Deficiency in endangered and threatened species studies:** The DEIS does not sufficiently address the project impact to several rare, threatened and endangered species:
 - inflated heelsplitter mussel (*Potamilis inflatus*) is listed as threatened under the Endangered Species Act and is considered critically imperiled in the state of Louisiana. "Unionid Mussels are the most endangered freshwater organisms, with roughly three quarters of the species in the United States considered in peril. Risks include habitat loss or alteration, riparian development, disruption of host fish dispersal by impoundments, pollution and invasive species."³ Further study should be conducted to determine species impact.
 - Frecklebelly madtom (*Noturus munitus*) is a candidate species for federal protection.⁴ This species requires a riverine habitat with gravel shoals free of sedimentation. DEIS, Appendix D, page 3 states, "Though it is thought that the Frecklebelly madtom occurred throughout the Pearl River Basin historically, more recent survey information indicates that the population no longer exists in the main channel of the Pearl." Current studies being conducted by Matt Wagner, Conservation Resource Biologist, State Ichthyologist/Curator of Fishes, MS Museum of Natural Science indicate that this species is prevalent in the main stem of the Pearl River. Further evaluation should be taken to determine impact to this species.
 - Gulf sturgeon (*Acipenser oxyrhynchus desotoi*) is listed on both the federal and state threatened species lists. This species conducts anadromous migrations that will be impacted by further impoundments on the Pearl River. Current USFWS project

³ BROWN, KENNETH M., and WESLEY M. DANIEL. "The Population Ecology of the Threatened Inflated Heelsplitter, *Potamilus Inflatus*, in the Amite River, Louisiana." *The American Midland Naturalist*, vol. 171, no. 2, 2014, pp. 328–339., www.jstor.org/stable/43822737.

⁴ Bennett, Micah G., et al. "Status of the Imperiled Frecklebelly Madtom, *Noturus Munitus* (Siluriformes: Ictaluridae): A Review of Data from Field Surveys, Museum Records, and the Literature." *Southeastern Naturalist*, vol. 7, no. 3, 2008, pp. 459–474. JSTOR, JSTOR, www.jstor.org/stable/20204015.

discussions underway to remove the sills at Poole's Bluff will allow for increased Gulf sturgeon migration upriver to the project area.

- Ringed map turtle (*Graptemys oculifera*) is listed as threatened under the Endangered Species Act. According to FWS, "if the proposed reservoir is completed, it would likely result in the extirpation of the known ringed map turtle population (south of the current reservoir)"⁵. Recent survey data from Dr. Will Selman indicates that "ringed sawbacks can occur in great abundance along the One Lake Project Area and recruitment/reproduction are better in this stretch than what has been observed in other ringed sawback populations."⁶

- **Inadequate public engagement and lack of public support:**
 - The DEIS was released without significant documents that would allow for full public and scientific review including the Fish & Wildlife Coordination Act Report, the Biological Opinion and the Independent External Peer Review Report.
 - The proponents failed to adequately engage and educate the public regarding the tentatively selected plan and the DEIS. Although the Drainage District was urged in writing by multiple organizations, including Pearl Riverkeeper and Gulf Restoration Network, to conduct their public meetings with open mic question and answer periods in order to allow for full discussions of the issues, the District decided to forego that option in favor of format that stifled public discourse. The Drainage District website is difficult to navigate, requires a submission of name and email address before the DEIS can be mailed to your inbox, and does not prominently display the public comment portal.
 - The DEIS states in Appendix A on page 36/37, "The local community, the State of Mississippi, and local leadership has supported and continues to support this alternative (C)...This alternative would have a high level of acceptability within the project area...Because Plan 15 and Plan 16 (Alternative C) have a high level of flood reduction along with a high level of acceptability, they seem to have the community support." The DEIS does not contain any supporting documents to back up this claim. Attached to this document is a petition with over 2,000 signatories and commenters in opposition to the Drainage District's selected plan.

- **Riverine habitat loss:** The Pearl River Watershed Feasibility Study, Two Lakes Flood Control Plan, Aquatic Evaluation 2006 completed by the ERDC Environmental Laboratory staff was utilized as a part of the updated Habitat Evaluation Procedures analysis for the current DEIS.

⁵ FWS, Ringed Map Turtle, 5-year review : Summary and evaluation 4 (2010), https://ecos.fws.gov/docs/five_year_review/doc3270.pdf

⁶ Selman, Will, "Diamonds in the Rough: Status of Two Imperiled *Graptemys* species (*Graptemys oculifera* and *G. pearlensis* in the Pearl River of Jackson, MS", 31 July 2018

Page 513, Abstract of the Aquatic Evaluation 2006 states that “the lake Habitat Suitability Index for facultative riverine species was more than 50% lower than for existing conditions”. The 2006 report also “indicates that obligate riverine species will become rare or extirpated from the project area after construction is completed. Habitat Units for the Facultative Riverine guild actually increased post-project but this was due to the increased water surface area of the lake, not increased habitat value. Major biological tradeoffs are evident with riverine species declining and lacustrine species increasing” by converting a river into a lake. The 2006 report also discusses several Mitigation requirements (reconnecting secondary channels, reconnecting or managing water levels of backwaters, protection/creation of gravel bars, and construction of in-lake wires to constrict flow and increase velocity).

Despite referencing the 2006 report, the DEIS determines that a compensation analysis would be required for terrestrial habitat only. The riverine mitigation requirements mentioned in the 2006 report are not discussed at all in the current DEIS. According to the DEIS, aquatic species would ultimately benefit from project implementation with the Channel Improvements Plan and the associated increase in aquatic habitats within the project area. Since the project would destroy approximately 250 acres of riverine habitat, the DEIS compensation analysis must be expanded to include aquatic habitat losses. The DEIS should differentiate between riverine and lacustrine aquatic habitat and must take into account net loss of riverine species.

- **Vague mitigation plans:** Appendix D: Habitat Evaluation Procedure Report, page 27 delineates 3 different Management Plan scenarios: Acquisition: acquiring existing forestland which can be somewhat related to preservation of existing habitats (estimates 17,190 acres of existing forestland purchased), Restorative: every existing habitat type within the project area would be restored at some other location in the Pearl River Basin (“would include the restoration of existing agricultural land through conversion to forestland”...“a total of approximately 9,076 acres of restoration of existing agricultural lands”) and, Regenerative: only predominant bottomland hardwood forestland would be replaced (5,850 acres of reforestation of existing agricultural lands). The project proponents should reveal which Management Plan scenario has been chosen and provide detailed plans for proposed mitigation area locations and designs.
- **Downstream Impacts:** The DEIS inadequately addresses downstream impacts.
 - The MS Governor’s Oyster Council Final Report in June 2015 stated that challenges facing the oyster industry and threats to success include insufficient water quantity and “alterations in the amount and natural fluctuation of freshwater flow”. The report Recommendations for Action or Research includes: “discourage freshwater depleting projects and educate decision-makers on impacts of major freshwater depleting projects.”⁷

⁷ The Governor’s Oyster Council Restoration & Resiliency, Final Report, June 2015

- Feb. 2018, “Effects of Annual Droughts on Fish Communities in Mississippi Sound Estuaries” states that, “ With an increasing human population in central and south Mississippi, pressure on freshwater resources is likely to increase, resulting in possible changes in the fish community dynamics of the Mississippi Sound.” In addition, (p. 1483) “Anthropogenic impacts such as water withdrawal from surface waters and aquifers as well as impoundments can have a profound effect on coastal regions by disturbing fundamental qualities of estuaries or even exacerbating already naturally occurring processes (Dynesius and Nilsson 1994; Hopkinson and Vallino 1995). In order to manage an estuarine system appropriately, it is important to understand how these systems are affected by natural fluctuations as well as anthropogenic stressors.”⁸
- Over 100 discharge permit holders in Mississippi and Louisiana rely on stable, freshwater flow from the Pearl for adequate dilution and compliance.
- The DEIS does not adequately address the changes to sediment transport that will impact the health of our Gulf Coast estuaries.

Complete modeling of the Pearl River should be conducted before any further modifications to the system. Without concrete data on current flow rates and downstream water quantity and quality requirements, any large-scale impoundment project would be an experiment.

- **Inadequate evaluation of the alternatives:**

- General Accounting Office after-action report from the 1979 flood stated that the main issues were a lack of early planning, Reservoir actions, and an improperly maintained West Bank Levee.⁹ The Drainage District should evaluate enhanced management of the Ross Barnett Reservoir for increased flood control. Improvements to current deteriorating Jackson-area stormwater systems should also be considered.
- DEIS Alt B proposes 8 levee systems (NE, LeFleur, I20, South Jackson, Belhaven, Flowood, Fairgrounds, E Jackson) and \$311,609,907 worth of pumping plants. The Aug 2018 USFWS Fish & Wildlife Coordination Act Report questions the need for these expensive pumps. The report is critical of the lake alternative and suggests that the sponsors re-evaluate a levee option. This plan would change the position of certain levees to alleviate narrow areas in the flood plain and would concentrate any dredging and removal of bed or bank materials to the already disturbed mowed area below U.S. Hwy 80. These suggestions, along with the USFWS’s questioning of the need for expensive pumps, both point to using the existing floodplain as intended, and not

⁸ Mickle, P.F., Herbig, J.L., Somerset, C.R. et al. *Estuaries and Coasts* (2018) 41: 1475.

<https://doi.org/10.1007/s12237-017-0364-5>

⁹ Report by the Comptroller General of the United States, “Improvements being made in flood fighting capabilities in the Jackson, Mississippi area”, Dec 18, 1979

removing nearly 3 square miles of forested wetlands to convert present floodplain to open water.

The “tentatively selected plan”, Alternative C, in the DEIS is not “environmentally acceptable” in the form presented.

The logical alternative to the “One Lake” project is a greenway linking existing nature preserves and parks and creating new ones to better utilize the river for recreation, tourism, and outdoor-related development, coupled with a flood control alternative. A greenway would have greater potential to improve the region’s quality of life in a sustainable way, for far less money and without sacrificing a river that is crucial to the environment far beyond Jackson.

Sincerely,

Abby Braman
Executive Director, Pearl Riverkeeper