United States Department of the Interior

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June 14, 2023

IN REPLY REFER TO:
2022-0006708a

Eric Williams
U.S. Department of Defense,
Army Corps of Engineers
7400 Leake Avenue
New Orleans, Louisiana 70118

Pearl River Flood Risk Management Project, Rankin and Hinds Counties, Mississippi

Dear Mr. Williams:

The U.S. Fish and Wildlife Service (Service) has reviewed your agency's Notification of Intent to Prepare a Draft Environmental Impact Statement dated May 18, 2023, for the Pearl River Basin, Mississippi Federal Flood Risk Management Project, Hinds and Rankin Counties, Mississippi. Our comments are submitted under the authority of the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The United States Army Corps of Engineers, Vicksburg District (MVK) is proposing flood control measures along the Pearl River, providing economic and flood control benefits for the Jackson metropolitan area. As stated in our June 12, 2023, cooperating agency concurrence letter, the Service plans to cooperate in providing fish and wildlife resources information, reviewing all environmental documents, and participating in coordination meetings as they relate to the Pearl River Basin, Mississippi Federal Flood Risk Management Project. However, based on the Corps' SMART Planning Process and time needed to analyze impacts and prepare reports, this project timeline does not provide adequate time to fulfill the necessary work, particularly impact analysis of the alternatives, authorized under FWCA. Without adequate time to analyze impacts to include in a draft FWCA report, including recommendations, there is a risk of the project not fulfilling Section 2b of the FWCA. Furthermore, based on our review of the Notice of Intent and the non-federal interest's preferred alternative, Channel Improvements Plan (Alternative C), we have identified areas of concern and provide recommendations to reduce impacts on natural resources.

The Pearl River and its associated oxbows, tributaries, and forested wetlands support biologically diverse species and their habitats. Bottomland hardwoods comprise the primary wildlife habitat type in the floodplain, while cypress-tupelo swamps add to the diversity of this system. Coastal wetlands of the Pearl River also provide nursery and foraging habitat that supports economically important marine fishery species. Some of these species serve as prey for other commercially and/or recreationally important fish species.

The forested floodplain serves as habitat and a travel corridor for deer, squirrel, wood duck, migratory birds, furbearers, and other species. This riparian corridor also provides important bank stabilization and erosion protection. Riparian forested areas are an important source of deadwood and other allochthonous materials that provide habitat for many species inhabiting the Pearl River and its tributaries. The river itself is considered one of the most biologically diverse in the country, supporting 140 species of fish (including bass, bluegill, sunfish, crappie, catfish, etc.), 14 species of turtles (including the endemic Pearl River map turtle and ringed map turtle), 40 species of mussels, and other aquatic species. There is significant acreage along the Pearl River within the study area that provides habitat unique for a metropolitan area.

Project Impacts

Based on current project information, approximately 2,069 acres of terrestrial habitat could be converted to aquatic habitat. Approximately 1,861 acres of wetlands and ''other waters of the U.S.'' and approximately 487 acres of existing surface water bodies, including the Pearl River channel and its tributaries, may be impacted. Additionally, converting the portion of the Pearl River within the project area from a riverine system to a lake system could have impacts on threatened and endangered species, and other resources downstream.

The Pearl River and its associated riparian and wetland habitats in the study area encompass habitat for several threatened, endangered, and at-risk species including Gulf sturgeon, inflated heelsplitter, Louisiana pigtoe, Monarch butterfly, northern long-eared bat, tri-colored bat, alligator snapping turtle, ringed map turtle, and Pearl River map turtle. These species could be impacted by actions in each of the alternatives presented. In alignment with Section 7(c) of the ESA, the Service recommends that the Corps prepare a biological assessment to determine the effects of the recommended plan on the above-mentioned species.

As stated by your agency, we also anticipate that Alternatives A and A1 would have minimal impacts on natural resources, and therefore, we'll focus our comments on actions proposed in other alternatives: Alternative C and the hybrid/combination, thereof. It's unclear why the levee setback/improvements (formerly known as Alternative B) plan was no longer provided as an alternative but should some degree of levee setback/improvement still be necessary in a hybrid or combination of alternatives project, then we anticipate such actions could impact natural resources, depending on exact design and action area footprint. Levee construction could result in impacts to existing wetland habitat and associated species, as well as riparian habitat for fish, mussels, and turtles. However, levee construction, depending on scale, could still be one of the least damaging alternatives if no weir or impoundment is constructed that would permanently alter velocity and flow of the river, such as in Alternative C.

We also anticipate impacts from other channel improvement actions such as dredging and widening of the channel. Such actions could cause direct and indirect harm to natural resources. Dredging can reduce prey species, remove shelter and spawning habitat, and cause mortality to turtles, mussels and fish. Channel widening could destabilize the banks, change flow regime, alter instream and terrestrial habitat, increase water temperatures, and cause direct mortality of some species. Additionally, sediment plumes from these actions can smother species both within the project footprint and downstream. However, depending on the morphology, structure, and depth of the river after dredging, some species may recolonize if no barriers exist.

The Channel Improvements Plan (Alternative C) is the most damaging alternative for both terrestrial and aquatic resources. This plan proposes dredging, channel widening, and construction of a large weir near RM 284.3 that could permanently alter the water regime over 9 miles of the Pearl River, transforming the river into a more lentic (lake-like) water body, while altering geomorphology downstream. While some species can thrive in lentic habitats, others, such as riverine obligates (e.g., Pearl River map turtle, Louisiana pigtoe), cannot exist in such habitats. As demonstrated by the models, velocities in the proposed action area could be significantly reduced 75% of the time, interrupting important life history strategies (i.e., prey sources, breeding substrate, etc.).

In addition to a loss of species and habitat diversity due to an altered flow regime, there could be a direct and indirect loss of terrestrial habitats and their functions important for wildlife. There may also be a loss of sandbar habitat due to increased water levels or to undesirable vegetation encroachment resulting from stabilized water levels. Additionally, the potential for up- and downstream channel re-adjustments may cause other hydrogeomorphic changes to the Pearl River and its tributaries within and outside of the project area. Other concerns include impacts to conservation lands within and downstream of the project area, the reduction in sediments to coastal marshes, and loss of flows.

There is a demonstrated need for flood protection within the Jackson area. The Service recommends examining existing non-structural alternatives along with a flood protection solution that doesn't permanently alter water velocities and flow regimes within the action area. Such a solution may include non-structural alternatives including pinch-point removal, levee setbacks, channel improvements etc., without construction of a large weir or impoundment. We also recommend that the draft EIS consider the inclusion of measures to promote aquatic organism passage throughout the project area.

To ensure that fish and wildlife resources receive equal consideration with other project purposes, the Service recommends that important riverine habitats, their functions, values, and aquatic communities be conserved, protected, and restored where practicable to provide natural river habitats including flowing waters, heterogeneous microhabitats, and connectivity to backwaters and oxbow lakes. We also recommend important terrestrial habitats be conserved, protected, and restored.

Sincerely,

JAMES AUSTIN

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James Austin
Field Supervisor
Mississippi Field Office

cc: Mississippi Department of Wildlife, Fisheries, and Parks
Cathy Breaux, Louisiana Ecological Services Field Office