STATEMENT OF THE MISSISSIPPI SOUND COALITION TO THE MISSISSIPI RIVER COMMISION - 2026 ANNUAL HIGHWATER INSPECTION

March 27, 2026

The members and associate members of the Mississippi Sound Coalition are local governments within Hancock, Harrison, and Jackson County, Mississippi; non-profit organizations representing commercial fishermen and tourism businesses; and individual citizens, with the mission of restoring and protecting the ecosystem of the Mississippi Sound estuary and the way of life and economies of coastal communities that depend on it.[1] The Mississippi Sound Coalition seeks win-win solutions to the challenges facing the Sound. based on good science and fair public policy. The Coalition's scientific research, public education, and advocacy focus on avoiding where possible or mitigating where necessary harm to the Mississippi Sound caused by federal management of the Mississippi River & Tributaries Project, including the Bonnet Carré Spillway.

As set out below, operation of the Bonnet Carré Spillway in flood years like 2011 and 2019 have caused extreme adverse effects on the fisheries and natural resources of the Mississippi Sound with cascading damage to the local economy, especially in seafood and tourism businesses. In addition, proposed diversions of Mississippi River water must be managed to prevent damage to the Mississippi Sound. Finally, the hypoxic "dead zone" caused by nutrient pollution in the Mississippi has now been documented to extend to the east of the Mississippi, adjacent to the Mississippi Sound.

The Mississippi Sound Coalition appreciates the Commission's solicitation of concerns and ideas regarding the Mississippi River system and its management; we hope the realities identified in these comments will be acknowledged and addressed as part of the Commission's ongoing river management.

[1] Members of the Coalition include Harrison County, Hancock County, the cities of Biloxi, D'Iberville, Gulfport, Long Beach, Pass Christian, Diamondhead, Bay St. Louis, Waveland, Ocean Springs, Gautier, Pascagoula, and non-profits the Mississippi Hotel & Lodging Association and the Mississippi Commercial Fisheries United, Inc.

I. OPERATION OF THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT HAS HAD DIRECT AND CATASTROPHIC IMPACTS ON THE MISSISSIPPI SOUND AND THE COMMUNITIES THAT DEPEND ON IT

The Mississippi Sound is not directly connected to the Mississippi River through any major natural distributary. The impacts of Mississippi River water on the Sound are dictated almost entirely by the Corps of Engineers' management of the Mississippi River and operation of the Mississippi River and Tributaries Project, in particular the Bonnet Carré Spillway. In major flood years, the impacts of the Corps' management decisions are often devastating. This was dramatically illustrated in 2019.

The Bonnet Carré Spillway was opened from February 27, 2019, through April 11, 2019, and again from May 10, 2019, through July 27, 2019, for a total of 123 days. This is the largest number of days of operation of the spillway since it was completed in 1932. Over 10 trillion cubic feet of Mississippi River water was discharged into the area of the Mississippi Sound.

As a consequence of this massive discharge, salinities in Mississippi coastal waters plummeted. Salinities were near zero in many areas, rather than the more saline water usually found in the summer months. The influence of the Mississippi River water released through the spillway extended from the western parts of the Mississippi Sound, to points outside the barrier islands, and to the easternmost monitoring stations in the Mississippi Sound and even into Mobile Bay Linhoss, et al. 2023 demonstrated that salinity impacts of modeled Bonnet Carré Spillway openings reached to the Mississippi-Alabama border. The Linhoss modeling also demonstrated that decreases in salinity in Lake Borgne lasted more than a year.[2] Modeling also demonstrates that salinity impacts of Bonnet Carré Spillway openings extend to the Chandeleur chain.[3]

---

[2] Linhoss, A.; Mickle, P.; Osorio, R.J. Simulating How Freshwater Diversions Impact Salinity Regimes in an Estuarine System. *J. Mar. Sci. Eng.* **2023**, *11*, 2349. https://doi.org/10.3390/jmse11122349

[3] Darnell, Kelly M., et al. "Spatial and Temporal Patterns in Thalassia Testudinum Leaf Tissue Nutrients at the Chandeleur Islands, Louisiana, USA." *Estuaries and Coasts*, vol. 40, no. 5, 2017, pp. 1288–300.

The entire wild oyster population of the Western Mississippi Sound was wiped out in a single year, and five years later the reefs were still severely depleted, although a small amount of recovery has occurred through state replanting efforts.. Morgan and Rakocinski (2022) found that Bonnet Carré Spillway operations completely decimated spawning stocks of oysters in the Western Mississippi Sound, and early oyster recruitment was effectively eliminated. Gledhill, et al also state that their 2020 study "clearly demonstrates the decimation of oyster reefs caused by the extended freshwater release flowing east from the [Bonnet Carré Spillway.]" This study further states that "[h]istorically, oyster populations in Mississippi have been able to recover from naturally occurring environmental stressors but have been less resilient to anthropogenic stressors" and "oyster populations in Mississippi could remain unsustainable for harvesting unless future freshwater intrusions are incorporated into management planning."[4] Pruett et al. (2021) found low salinity assays based on 2019 Bonnet Carré Spillway opening water quality data significantly reduced shell growth, and hypoxia decreased both larval growth and survival.[5]

It was only in 2024 that Mississippi was able to resume an extremely limited oyster harvest. 2025 oyster harvest was more significant but still far below even 1990-2010 levels. The loss of an entire fishery for six years results in participants moving to other jobs as well as loss of processing infrastructure and markets.

Oyster mortality on the scale caused by large openings of the Bonnet Carré Spillway also causes long lasting habitat effects. Pace, et al studied the loss of oyster shell mass after a 2016 mass mortality event and found that by April 2019 deterioration of shell surface was ubiquitous, and many valves had

[4] Gledhill, J.H., A.F. Barnett, M. Slattery, K.L. Willett, G.L. Easson, S.S. Otts, D.J. Gotchfeld. 2020. Mass Mortality of the Eastern Oyster in the Western Mississippi Sound Following Unprecedented Mississippi River Flooding in 2019. Journal of Shellfish Research. 39:2, 235-244.

[5] Pruett, J.L., Pandelides, A.F., Willett, K.L., Gochfeld, D.J. (2021). Effects of flood-associated stressors on growth and survival of early life stage oysters (Crassostrea virginica)(2021). Journal of Experimental Marine Biology and Ecology, 544, art. no. 151615. DOI:10.1016/j.jembe.2021.151615

disappeared.[6] This clearly indicates that after mass mortality events like that caused by the Bonnet Carré Spillway in 2019, the habitat function of oyster reefs degrades quickly.

In addition to disrupting natural salinity regimes, the Mississippi River water from the Bonnet Carré was laden with nutrient pollution from sources in the upstream states. Concentration of nitrates in Mississippi waters was far above normal. The combination of fresh water, high nutrient pollution loads, and warm temperatures resulted in blooms of toxic blue green algae, which can cause illness in humans and death in pets and other animals. In 2019, the impacts of spillway operations included algae blooms that closed recreational use of Mississippi Sound for the entire summer, causing huge losses to tourism-related businesses.

The Coalition further notes that these impacts are likely to be exacerbated by climate change-related impacts and changing conditions on the Mississippi. The 2023 Fifth National Climate Assessment projects increases in droughts, floods, and runoff events across the Mississippi River basin and the Great Lakes.[7] This variability, and the possibility of frequent major flood events on the Mississippi, must be fully considered.

Changes in river conditions also affect operations of the Mississippi River and Tributaries Project, exacerbating risks to the Mississippi Sound. Corps of Engineers documents indicate that that the Old River Control Structure has deficiencies which could result in more frequent operations of the Bonnet Carré Spillway. A 2019 report on the Old River Control Project specifically notes the deficiencies in the ORCC and states that they "pose a serious threat to the continued safety, reliability, and proper functioning of the project, particularly during an emergency situation."[8] This report further states that loss of capacity

[6] Sara M. Pace, Leanne M. Poussard, Eric N. Powell, Kathryn A. Ashton-Alcox, Kelsey M. Kuykendall, Laura K. Solinger, Kathleen M. Hemeon, Thomas M. Soniat "Dying, Decaying, and Dissolving into Irrelevance: First Direct in-the-Field Estimate of *Crassostrea virginica* Shell Loss—a Case History from Mississippi Sound," Journal of Shellfish Research, 39(2), 245-256, (26 August 2020).
[7] https://nca2023.globalchange.gov/downloads/NCA5_Ch24_Midwest.pdf
[8] Structures and Operation of the Old River Control Complex, 7 Feb. 2019.

at the Old River Control Complex "would result in more frequent, and less planned, operations of the Bonnet Carré and/or Morganza Floodways, in order to prevent overtopping of Mississippi River levees."[9]

The Coalition notes that operations of the Bonnet Carré Spillway can be consistent with protection of the natural resources and economy of the Mississippi Sound. The 2025 spillway opening was accomplished without major damage. The Coalition is prepared to work cooperatively with the Commission and the Corps to ensure that future openings do no harm as well. The Coalition will shortly be supplying the Corps and the Commission with modeling that will allow setting discharge levels and timing that are consistent with protection of resources in the Mississippi Sound.

In short, the operation of the Bonnet Carré Spillway for extended periods of time has direct and severe impacts on the Mississippi Sound. These impacts must be acknowledged and considered in Mississippi River management and in particular the operation of the Mississippi River and Tributaries Project.

II. MISSISSIPPI RIVER NUTRIENT POLLUTION REMAINS A THREAT TO THE MISSISSIPPI SOUND AND FISHERIES

The Commission is familiar with the extensive literature documenting nutrient pollution in the Mississippi River and the resulting area of hypoxia – the "dead zone" - in the Gulf of Mexico. Despite efforts through a federal task force and voluntary measures, the dead zone continues and is documented to cover up to 8,000 square miles.[10] The 2025 dead zone was fortunately below average, but remained approximately the size of the state of Connecticut. Nitrate flux from the Mississippi to the Gulf has tripled since the 1950's, causing not just the well-known dead zone off the mouth of the Mississippi River, but

[9] *Id.* at 12.
[10] *E.g.* Rabalais and Turner, Gulf of Mexico Hypoxia: Past, Present and Future (2019), available at https://doi.org/10.1002/lob.10351.

also algae blooms in Lake Pontchartrain and the Mississippi Sound when the Bonnet Carré Spillway is opened.

Despite over 30 years of best management practices and other efforts to control fertilizer runoff from industrial agriculture and other sources, nitrate pollution has remained stubbornly high, and phosphorus pollution has according to some studies actually increased. The increased precipitation and flooding identified in the National Climate Assessment exacerbates nutrient runoff. The effect on habitat for marine species, and the resulting impacts on the fisheries economy, is enormous.

The dead zone was commonly thought to cover an area to the west of the mouth of the Mississippi. However, in July 2024 Louisiana State University researchers found a hypoxic area extending to the east of the Mississippi to the area just south of the barrier islands bordering the Mississippi Sound. The full extent of this area of the dead zone was not documented.[11]

The Mississippi Sound Coalition recognizes that the Commission currently has no direct regulatory authority over sources of pollution in the Mississippi River. However, the Commission must take pollution in the river into account in its management, including in assessing alternatives for operation of the Mississippi River and Tributaries Project. As noted above, the extended 2019 opening of the Bonnet Carré Spillway resulted in algae blooms in Mississippi waters.

III. RECOMMENDATIONS FOR MISSISSIPPI RIVER MANAGEMENT

To address the issues outlined above, the Mississippi Sound Coalition urges the Commission to take the following actions:

1. Amend policies of the Commission and the U.S. Army Corps of Engineers regarding the

[11] Louisiana State University, Report from the 2024 Hypoxia Cruise East of the Mississippi River, available at https://gulfhypoxia.net/wp-content/uploads/2024/08/new-REPORT-FROM-2024-HYPOXIA-CRUISE-EAST-OF-THE-MISSISSIPPI-RIVER.pdf.

Mississippi River and Tributaries Project to require that the Commission and the Corps of Engineers shall, to the maximum extent consistent with safely passing the Project Design Flood, operate the Bonnet Carré Spillway, the Morganza Spillway, and all other Mississippi River spillways, river-water diversions, backwater areas, and floodways to prevent adverse impacts, mitigate any unavoidable adverse impacts, and improve the natural and economic values of the estuaries of the northern Gulf of America in Louisiana, Mississippi, and Alabama, including without limitation the Mississippi Sound. These recommendations are within the Corps' existing authority. However, the Mississippi Sound Coalition has drafted and presented for introduction in Congress the Northern Gulf Estuary Protection Act of 2025, which incorporates these and other protective management measures. We urge the Commission to support this legislation.

2. Incorporate recent research regarding the extent and timing of Bonnet Carré Spillway operations necessary to avoid impacts to fisheries and tourism. The Mississippi Sound Coalition will in the immediate future be delivering to the Commission and Corps technical reports demonstrating the operations parameters for the Bonnet Carre Spillway necessary to protect the natural resources and economy of the Mississippi Sound.
3. Complete the Lower Mississippi River Comprehensive Management Study. The Mississippi congressional delegation, at the request of the Mississippi Sound Coalition, has led a bipartisan and multistate effort that has succeeded in obtaining an appropriation to allow completion of the LMRCP. The Commission and the Corps should complete the LMRCP with all due haste.
4. Recommend to Congress that it make the following findings and appropriate changes in current law that may be necessary to implement the policy changes recommended in the preceding paragraph and in these findings:
    a. Recognizing the economic, ecologic, and cultural value of the diverse

interjurisdictional fishery resources in the estuaries of the northern Gulf and the complexity and severity of issues facing resource management agencies and flood control by the Mississippi River Commission and the United States Army Corps of Engineers, Congress acknowledges the need for

i. amendment to the membership and authority of the Mississippi River Commission and related policies of the United States Army Corps of Engineers regarding management of the Mississippi River and Tributaries Project, collaboration in the establishment of shared management objectives, and

ii. collaborative planning, evaluation and implementation of actions with affected state and local governments to provide for long-term biologic, economic, and cultural sustainability of interjurisdictional fishery resources in the northern Gulf as well as sustainability of the seafood and tourism economies and businesses dependent upon a healthy Gulf.

b. It is in the long-term interests of the United States economy and United States food security that the Mississippi River Commission and the United States Army Corps of Engineers manage flood control of the Mississippi River not just to protect human life and property from flood waters, but also, and simultaneously, to avoid when possible and minimize when necessary any harm to the estuaries of the northern Gulf in Louisiana, Mississippi, and Alabama caused by Mississippi River water released through River distributaries ,spillways and other elements of the Mississippi River and Tributaries Project, and any other diversions of Mississippi River water.

c. For the dual purposes of (1) protection of human life and property from flood waters while keeping the Mississippi River navigable for interstate and

international commerce and (2) protection of marine and human life and property from negative effects of Mississippi River water on the estuaries of the northern Gulf, Congress should authorize and fund the Mississippi River Commission and the United States Army Corps of Engineers to replace the Bonnet Carré and Morganza Spillways with new, modern structures based on the best engineering and scientific data available, to allow the new structures to be opened and closed in tandem and more cost-effectively, precisely, and quickly in flood fights and to prevent them from leaking.

Respectfully submitted this 27th day of March 2026,

MISSISSIPPI SOUND COALITION

BY: _____
Robert Wiygul, Counsel
Gerald Blessey, Manager and Co-counsel