

MISSISSIPPI RIVER NUTRIENT MANAGEMENT: OPTIONS FOR INTERSTATE COLLABORATION

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I. INTRODUCTION

The Mississippi/Atchafalaya River Basin is one of the largest watersheds in the world with nearly unparalleled ecological and economic importance.² It provides drinking water for almost twenty million Americans, supports nearly 900 wildlife species, and accounts for ninety-two percent of the nation's agricultural exports.³ Unfortunately, all of these critical uses are threatened by an over-abundance of nitrogen and phosphorous that accumulate as the Basin drains forty-one percent of the continental United States.⁴ Nutrients enter waterways from both natural and anthropogenic sources, with significant contributions from agricultural runoff and municipal and industrial discharges.⁵ Input from these sources go largely unregulated under existing laws, and as a consequence, accumulated nutrients eventually settle and perpetuate a massive hypoxic zone in the Gulf of Mexico.

¹ Principal Author: Isabel Englehart, Senior Research Fellow. Special acknowledgments are also due to: Mark Davis, Director; Christopher Dalbom, Assistant Director; Haley Gentry, Senior Research Fellow; Jimmy Nieset, Consulting Advisor, Tulane Institute on Water Resources Law & Policy; as well as the Institute's undergraduate and law student research assistants. The Institute and author also thank the Walton Family Foundation, the Evolve Foundation, and the William B. Wiener, Jr. Foundation for their support.

² Nat'l Park Serv., *Mississippi River Facts*, <https://www.nps.gov/miss/riverfacts.htm> (last visited Apr. 30, 2023).

³ *Id.*

⁴ U.S. ENV'T PROT. AG. ET AL., *MISSISSIPPI RIVER RESTORATION AND RESILIENCY STRATEGY 1-2* (2022).

⁵ See U.S. Env't Prot. Ag., *The Sources and Solutions: Wastewater*, <https://www.epa.gov/nutrientpollution/sources-and-solutions-wastewater> (last visited May 9, 2023).

One of the most challenging aspects of managing nutrient enrichment in shared waterways is the disparity between who receives the benefits of excessive nutrient use and runoff and who assumes the costs.⁶ For example, as the most downstream states, Louisiana and Mississippi bear the brunt of the harm while contributing relatively little to its cause.⁷ Because the sources of pollution extend throughout the watershed, it is practical to address the problem with a watershed approach.⁸ Furthermore, it is imperative for the most affected downstream states to spur motivation and ensure implementation of nutrient reduction strategies in upstream states that are not directly affected by the water impairment they cause. As such, nutrient enrichment in shared waterways like the Mississippi/Atchafalaya River Basin and Gulf of Mexico should be addressed with collaborative, multi-state solutions.

Louisiana has several options for pursuing collaborative management of nutrient loads in the Mississippi River and Gulf of Mexico with other states throughout the Basin. Part II of this paper will introduce existing interstate entities that may continue to be employed and improved upon. Part III will discuss provisions in federal statutory law that facilitate interstate collaboration on water quality. Finally, Part IV will address limitations and opportunities for states to enter into agreements with each other.

II. CAPITALIZING ON EXISTING ENTITIES

U.S. environmental policy and regulation largely operates on one of two planes: federal and state. While this paper will discuss exceptions to this rule, interstate approaches are not generally favored or facilitated by the law. Therefore, efforts to improve collaborative

⁶ Benjamin Bryce & Robert Skousen, *Bloomin' Disaster: Externalities, Commons Tragedies, and the Algal Bloom Problem*, 21 U. DENV. WATER L. REV. 11 (2017).

⁷ *Id.* at 33.

⁸ See Sarah White, *Gulf Hypoxia: Can A Legal Remedy Breathe Life into the Oxygen Depleted Waters?*, 5 DRAKE J. AGRIC. L. 519, 528 (2000) (referencing the U.S. EPA Watershed Approach Framework).

management of nutrients throughout the Mississippi/Atchafalaya River Basin should begin by utilizing and optimizing frameworks of collaboration where such exceptions do exist.

a) Hypoxia Task Force

One of the most prominent entities enabling collaborative management of nutrient pollution in the Basin is the Mississippi River/Gulf of Mexico Hypoxia Task Force (“HTF”). Congress established the HTF in 1997 with the purpose of designing and implementing a Gulf Hypoxia Action Plan for which it has developed two iterations in 2001 and 2008, as well as a 2015 Goal Framework.⁹ However, due to inconsistent support from member states and inadequate resources, the HTF’s most consistent role has been as a forum for discussing nutrient reduction efforts and setting nutrient reduction goals, but not necessarily as an effective mechanism for achieving nutrient reduction.¹⁰ This is evidenced by its 2001 goal to “reduce the 5-year running average areal extent of the Gulf of Mexico hypoxic zone to less than 5,000 square kilometers”¹¹ When that goal was not met by the target date of 2015, the HTF extended the deadline to 2035 with an interim target of twenty percent nutrient load reduction by 2025.¹² That milestone is only two years away, and attainment seems questionable.

However, due to a historic increase in available resources, the past ineffectiveness of the HTF may not represent its future potential. In 2021, Congress passed the Infrastructure and Investment Jobs Act which included \$60 million over five years for actions in furtherance of the HTF’s Gulf Hypoxia Action Plan.¹³ Additionally, the Inflation Reduction Act of 2022 provided

⁹ Harmful Algal Bloom and Hypoxia Research and Control Act of 1998, Pub. L. No. 105-383, 112 Stat. 3447; U.S. Env’t Prot. Ag., *Hypoxia Task Force Action Plans and Goal Framework*, <https://www.epa.gov/ms-htf/hypoxia-task-force-action-plans-and-goal-framework#2015-goal-framework> (last visited May 2, 2023).

¹⁰ Harmful Algal Bloom and Hypoxia Research and Control Act of 1998, Pub. L. No. 105-383, 112 Stat. 3447.

¹¹ MISS. RIVER/GULF OF MEXICO WATERSHED NUTRIENT TASK FORCE, ACTION PLAN FOR REDUCING, MITIGATING, AND CONTROLLING HYPOXIA IN THE NORTHERN GULF OF MEXICO 9 (2001).

¹² MISS. RIVER/GULF OF MEXICO WATERSHED NUTRIENT TASK FORCE, 2015 REPORT TO CONGRESS 10 (2015).

¹³ Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429.

\$19.5 billion over five years for “climate smart agriculture” which will finance critical nutrient reduction projects.¹⁴ These funding streams provide the HTF the means to support nutrient reduction efforts unlike any opportunity it has had in its decades of existence.

b) Agency Commissions

While the HTF might be the most well-known entity of multi-state collaboration in the Basin, it is far from the only group addressing nutrient load issues. For example, the Lower Mississippi River Conservation Committee (“LMRCC”) is an organization of natural resource, environment, and fish and wildlife state agencies from Arkansas, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee, including the Louisiana Department of Environmental Quality and Department of Wildlife and Fisheries.¹⁵ The LMRCC promotes cooperative management, public education, and advocacy, focusing on “habitat restoration, long-term conservation planning and scientific assessment of the river’s health.”¹⁶ As such, nutrient load reductions are an indirect but crucial benefit of LMRCC projects. Additionally, LMRCC partners with other agencies including the U.S. Department of Agriculture Natural Resources Conservation Service (“NRCS”).¹⁷ NRCS is responsible for the Mississippi River Basin Healthy Watershed Initiative (“MRBI”) which promotes voluntary conservation efforts by farmers to improve water quality.¹⁸ MRBI utilizes several existing Farm Bill programs and focuses on

¹⁴ Press Release, U.S. Dep’t of Agric., *Biden-Harris Administration Announces Availability of Inflation Reduction Act Funding for Climate-Smart Agriculture Nationwide* (Feb. 13, 2023), [https://www.usda.gov/media/press-releases/2023/02/13/biden-harris-administration-announces-availability-inflation#:~:text=The%20Inflation%20Reduction%20Act%20\(IRA,Conservation%20Service%20\(NRCS\)%20implemets](https://www.usda.gov/media/press-releases/2023/02/13/biden-harris-administration-announces-availability-inflation#:~:text=The%20Inflation%20Reduction%20Act%20(IRA,Conservation%20Service%20(NRCS)%20implemets).

¹⁵ *Id.*

¹⁶ Lower Miss. River Conservation Comm., *What We Do*, <https://www.lmrcc.org/about-us/what-we-do/> (last visited Apr. 30, 2023).

¹⁷ See LOWER MISS. RIVER CONSERVATION COMM., *RESTORING AMERICA’S GREATEST RIVER: A HABITAT RESTORATION PLAN FOR THE LOWER MISSISSIPPI RIVER* 15 (2015).

¹⁸ Nat. Res. Conservation Serv., *Mississippi River Basin Healthy Watershed Initiative*, <https://www.nrcs.usda.gov/programs-initiatives/mississippi-river-basin-healthy-watersheds-initiative> (last visited Mar. 31, 2023).

tributary watersheds that significantly contribute to nutrient loading in the mainstem Mississippi River. The scale of the initiative and the consistency in its continued funding makes it one of the most impactful federal programs for addressing nutrient enrichment and Gulf hypoxia.

Therefore, NRCS is a key organization already designed to facilitate collaboration and receive resources within existing legal frameworks.

Another existing inter-agency commission is the Mississippi Interstate Cooperative Resource Association (“MICRA”). Dwarfing the LMRCC in scale, MICRA is a partnership of fish and game agencies from twenty-eight states within the Mississippi/Atchafalaya River Basin, including the Louisiana Department of Wildlife and Fish.¹⁹ These agencies currently collaborate according to a non-binding management agreement that improves coordination and cooperation.²⁰ However, MICRA is interested in establishing a Mississippi River Basin Fisheries Commission (“MRB Fisheries Commission”) that would allow for more “interagency planning, implementation and evaluation of fishery research and management”²¹ The idea of a MRB Fisheries Commission is based on the Great Lakes Fishery Commission which cooperatively manages the international fishery resources of the Great Lakes according to a 1954 Convention.²² The Great Lakes Fishery Commission, in collaboration with several partner organizations, has developed strategies for managing nutrients in the shared waters.²³ While

¹⁹ Miss. Interstate Coop. Res. Ass’n, *About*, <http://www.micrarivers.org/about/> (last visited Mar. 31, 2023). MICRA also includes several Federal and Tribal members. MICRA focuses on the cooperative management of inter-jurisdictional fisheries and aquatic resources of the Basin. *Id.*

²⁰ MISS. INTERSTATE COOP. RES. ASS’N, A JOINT STRATEGIC PLAN FOR MANAGEMENT OF MISSISSIPPI RIVER BASIN FISHERIES (2021).

²¹ UPPER MISS. RIVER BASIN ASS’N, 164TH QUARTERLY MEETING H-14 (2022), available at https://umrba.org/sites/default/files/attachments/UMRBA_Full_Packet_Nov_2022_Meeting_0.pdf

²² *Id.* at H-4, H-15.

²³ THE GREAT LAKES AND ST. LAWRENCE COLLABORATIVE, ACTION PLAN TO PROTECT THE GREAT LAKES AND ST. LAWRENCE 2020-2030: IMPLEMENTING INNOVATIONS IN SCIENCE AND IN GOVERNANCE (2020).

these strategies have fallen significantly short of reduction goals,²⁴ efforts by the Great Lakes Fishery Commission serve as an instructive model as states develop new approaches.

These multi-state agency commissions offer valuable opportunities beyond the fact that they represent existing forums for collaboration. First, they are avenues for influencing critical policies and practices without the need for new legislation, a barrier which is increasingly difficult to overcome. Additionally, the agencies involved are largely focused on fisheries and wildlife habitat as opposed to natural resource management or pollution control. Recent court cases demonstrate that nutrient impacts to fisheries may be one of the strongest footholds to compel action on nutrient pollution in the Lower Basin. In *Harrison County v. U.S. Army Corps of Engineers*, the U.S. District Court for the Southern District of Mississippi held that the Corps was obligated to consult on openings of the Bonnet Carré Spillway that diverts water from the Mississippi River into Lake Pontchartrain and, eventually, Lake Borgne and the Mississippi Sound.²⁵ Plaintiffs' argument that the National Environmental Policy Act required the Corps of Engineers to study the environmental impacts prior to opening the spillway did not carry the day, but they were successful in securing a ruling that the Magnuson-Stevens Act required some sort of consultation between the Corps and NOAA to minimize the impacts of spillway openings on Essential Fish Habitat,²⁶ which certainly would include the impacts of nutrient rich river water.

III. WORKING WITHIN FEDERAL FRAMEWORKS

Water quality of interstate waterbodies is largely governed by federal statutes, although many programs are administered by the states.²⁷ As such, these statutes naturally employ

²⁴ All. for the Great Lakes & Ohio Env't Council, *THE COST TO MEET WATER QUALITY GOALS IN THE WESTERN BASIN OF LAKE ERIE 2-3* (2023).

²⁵ No. 1:19CV986-LG-RPM, 2023 WL 2585661, at *8 (S.D. Miss. Jan. 18, 2023).

²⁶ See *Harrison Cnty. v. Mississippi River Comm'n*, No. 1:19cv986-LG-RPM, 2021 WL 4164679, at *10-*11 (S.D. Miss. Sept. 13, 2021) (*aff'd*, 63 F.4th 458 (5th Cir. 2023)).

²⁷ CLAUDIA COPELAND, CONG. RSCH. SERV., RL30030, *CLEAN WATER ACT: A SUMMARY OF THE LAW 2* (2016).

mechanisms catered to regulation and implementation carried out by one of these discrete levels of government. Nonetheless, there are opportunities for Louisiana to pursue collaborative interstate approaches to nutrient management within the bounds of existing federal frameworks.

a) Clean Water Act

The primary source of nutrient enrichment in the Mississippi/Atchafalaya River Basin and Gulf of Mexico is runoff from fertilizers applied to row crops such as corn and soybeans and manure from meat and poultry operations.²⁸ These fall under the category of nonpoint source (“NPS”) discharges from agricultural operations under the CWA. The CWA is primarily designed to apply to point source discharges, which it defines as, “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.”²⁹ Furthermore, several provisions of the CWA explicitly exempt agricultural discharges.³⁰ Therefore, the CWA’s ability to control nutrient pollution is limited. Nonetheless, two sections apply to management of nutrient loads, both of which offer opportunities for interstate collaboration.

1. Section 319(g): Interstate Water Management Conferences

Section 319(g) outlines the procedure for states to convene an *interstate management conference* when “any portion of the navigable waters in any State which is implementing a management program approved under [the CWA] is not meeting applicable water quality standards . . . as a result, in whole or in part, of pollution from nonpoint sources in another

²⁸ Dale M. Robertson and David A. Saad, *Nitrogen and Phosphorous Sources and Delivery from the Mississippi/Atchafalaya River Basin: An Update Using 2012 SPARROW Models*, 57 J. AM. WATER RES. ASS’N 406, 414, 422 (2021). These inputs are amplified by the use of drainage systems such as tiles and ditches. Secondary contributors include inputs from industrial and municipal sources.

²⁹ 33 U.S.C. § 1362(14).

³⁰ *Id.* §§ 1342(l), 1362(14).

State[.]”³¹ However, affected states may only petition the EPA for a conference.³² At that point, it is at the EPA’s discretion whether or not to grant a conference. Furthermore, a conference is merely a gathering of states and does not compel a commitment to act.

The State of Louisiana has never petitioned EPA for a conference. However, in 1995, the Sierra Club Legal Defense Fund petitioned Louisiana state officials and the EPA to convene an interstate management conference under Section 319(g).³³ In response, the Gulf of Mexico Program, an intergovernmental, community-based program created by the EPA, worked with the Louisiana Department of Environmental Quality (“LDEQ”) to convene fourteen states that border the Mississippi and Ohio Rivers.³⁴ The petition resulted in the completion of a series of *State of the Science* reports and the formation of a Science Advisory Team and what would eventually become the HTF.³⁵ It is questionable whether a new petition and conference would be impactful. The previous conference bore a striking resemblance to subsequent meetings of the HTF.³⁶ Furthermore, the petition led to the formation of frameworks that are still in place and have simply not risen to their potential. In other words, given existing frameworks of collaboration at work in the Basin, a Section 319(g) petition or resulting meeting may not produce any direct additional value.

³¹ *Id.* § 1329(g)(1).

³² *Id.*

³³ Mary L. Belefski & Larinda Tervelt Norton, *Hypoxia in the Gulf of Mexico: A Historical and Policy Perspective*, 12 TUL. ENV’T L.J. 331, 341 (1999) (citing Letter from Robert Wiygul et al., Sierra Club Legal Defense Fund, to Carol Browner, U.S. EPA Administrator 1 (Jan. 24, 1995) (Ref. 08-886)).

³⁴ *Id.* at 339, 342.

³⁵ See U.S. Env’t Prot. Ag., *Hypoxia in the Northern Gulf of Mexico: Assessing the State of the Science*, <https://www.epa.gov/ms-htf/hypoxia-northern-gulf-mexico-assessing-state-science> (last visited May 3, 2023).

³⁶ See *id.* at 342 (“Representatives from these States were briefed on the problem and the need for their assistance in reducing nitrogen loadings. The [Gulf of Mexico Program] also organized a conference . . . to present information on the effects of hypoxia, data to link nutrient loadings in the Mississippi and Atchafalaya Rivers as a causative agent, and current watershed management activities underway in the basin.”).

Instead, a Section 319(g) petition may primarily provide meaningful benefits if it comes from Louisiana's state government as a symbolic gesture emphasizing the seriousness of Louisiana's position and willingness to collaborate with upstream states. The impetus behind the initial petition was a lack of state action and wavering state engagement and support of the Hypoxia Action Plan continues to hinder the effectiveness of the HTF. Therefore, the true benefit would come from increased state participation in Basin-wide efforts, and Section 319(g) of the CWA provides a channel through which Louisiana could demonstrate that intention.

2. Section 303(d): Multi-Jurisdictional TMDLs

The CWA also addresses NPS pollution through Section 303(d) that applies where existing effluent limitations are insufficient to meet water quality standards. In such a case, states should (1) identify impaired waters, (2) establish a priority ranking of impaired water based on the severity of pollution and uses of the waters, and (3) develop a total maximum daily load ("TMDL") for the problem pollutant within that waterbody.³⁷ Courts have repeatedly affirmed that TMDLs must account for both point source and NPS pollution.³⁸ After developing a TMDL for an impaired waterbody, a state ideally establishes and enforces an implementation plan to meet the standard; however, implementation is a widely-acknowledged shortcoming of the TMDL program as it is not required by Section 303(d).³⁹ In other words, the CWA's reach ends at the creation of the TMDL.

While TMDLs are generally created and implemented by individual states (if at all) and developed in isolation from other impaired waters, the CWA does not prohibit, and EPA

³⁷ 33 U.S.C. § 1313(d)(1).

³⁸ *See, e.g.*, *Am. Farm Bureau Fed. v. EPA*, 792 F.3d 281, 297 (3d Cir. 2015); *Sierra Club v. Meiburg*, 296 F.3d 1021, 1025 (11th Cir. 2002).

³⁹ CLAUDIA COPELAND, CONG. RSCH. SERV., R42752, CLEAN WATER ACT AND POLLUTANT TOTAL MAXIMUM DAILY LOADS (TMDLS) 17 (2014).

encourages,⁴⁰ the development of TMDLs according to a watershed approach.⁴¹ These *multi-jurisdictional TMDLs*—which are just a cluster of individual TMDLs—often involve collaboration between several states. For example, the largest multi-jurisdictional TMDL was developed by EPA for the Chesapeake Bay watershed and applies to 64,000 square miles across Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia, and the District of Columbia.⁴² Unfortunately, multi-jurisdictional TMDLs are plagued by the same enforcement and implementation issues as traditional TMDLs.⁴³ Therefore, there is limited motivation for states to fulfill commitments, especially for states that do not directly feel the cumulative impacts of their nutrient contributions.⁴⁴ Nonetheless, multi-jurisdictional TMDLs offer another opportunity for states to collaborate on managing nutrient pollution in a shared watershed.

b) Farm Bill

The Farm Bill is the primary policy tool for Congress to address issues relating to food and agriculture.⁴⁵ Despite the comprehensiveness of the Farm Bill, the one thing it is not is a pollution control act. However, because most nutrient enrichment in the Mississippi/Atchafalaya River Basin originates as agricultural runoff, it is one of the most influential pieces of legislation for reducing nutrient levels.

The Farm Bill has become increasingly expansive over the years, and conservation funding has emerged as a major segment.⁴⁶ For example, conservation was among the four titles that accounted for ninety-nine percent of the mandatory spending in the 2018 Farm Bill

⁴⁰ U.S. ENV'T PROT. AG., EPA 840-S-96-001, WATERSHED APPROACH FRAMEWORK (1996).

⁴¹ COPELAND, *supra* note 39, at 10.

⁴² *Id.* at 11-12.

⁴³ Alyssa Sieja, *Can We Agree to Agree? Forming Interstate Agreements to Address Water Pollution*, 90 GEO. WASH. L. REV. 989 (2022)

⁴⁴ *See id.* at 1012-13 (noting that, in the case of the Chesapeake Bay TMDL, “Pennsylvania and New York—the states furthest from the Bay—are the ones that are lagging behind”).

⁴⁵ CONG. RSCH. SERV., IF12047, FARM BILL PRIMER: WHAT IS THE FARM BILL? 1 (2023).

⁴⁶ *Id.*

alongside nutrition, commodities, and crop insurance.⁴⁷ All Farm Bill conservation programs are voluntary, and most are implemented through public and private partnerships.⁴⁸ One such program is the Regional Conservation Partnership Program (“RCPP”) which awards competitive grants for natural resource challenges on agricultural land and divides funding into two pools: (1) projects in critical conservation areas and (2) single or multistate projects.⁴⁹ The Mississippi River Basin is designated as a critical conservation area due to inadequate habitat, insufficient water/drought, and water quality degradation.⁵⁰

There are ongoing RCPP projects in Louisiana which either address nutrient enrichment or demonstrate multi-state partnership, but none that do both.⁵¹ For example, the project *Improving Water Quality Using Practices 590* addresses sediment and nutrient loadings from agricultural lands in Louisiana’s southwest parishes.⁵² Additionally, Louisiana has partnered with Arkansas and Mississippi for the *Conjunctive Water Use Protects Mid-South Aquifers* project which “help[s] farmers implement practices and systems that increase the availability of surface water resources for irrigation while increasing irrigation efficiency, with the aim of reducing dependency on dwindling Mid-South aquifers.”⁵³ Ducks Unlimited, Ltd., a nonprofit organization that promotes duck hunting and waterfowl habitat conservation, is the lead partner on both projects.⁵⁴

⁴⁷ *Id.* at 1-2.

⁴⁸ U.S. Fish & Wildlife Serv., *Farm Bill Conservation Programs*, <https://www.fws.gov/service/farm-bill-conservation-programs> (last visited Apr. 4, 2023).

⁴⁹ Nat. Res. Conservation Serv., *Regional Conservation Partnership Program*, <https://www.nrcs.usda.gov/programs-initiatives/rcpp-regional-conservation-partnership-program> (last visited May 9, 2023).

⁵⁰ Nat. Res. Conservation Serv., *Critical Conservation Areas*, <https://www.nrcs.usda.gov/programs-initiatives/rcpp-regional-conservation-partnership-program/critical-conservation-areas> (last visited Apr. 4, 2023).

⁵¹ Nat. Res. Conservation Serv., *Louisiana Regional Conservation Partnership Program*, <https://www.nrcs.usda.gov/programs-initiatives/rcpp-regional-conservation-partnership-program/louisiana/louisiana-regional> (last visited Apr. 4, 2023).

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

Louisiana could utilize the RCPP program to facilitate collaborative approaches to nutrient management by partnering with other watershed states to improve conservation practices in the Basin. For example, Indiana and Illinois have partnered on a project called *Unlocking societal and environmental benefits in the Kankakee watershed by expanding conservation efforts*.⁵⁵ The project aims “to address flooding and nutrient issues in the Kankakee and Iroquois watershed.”⁵⁶ Notably, the Indiana State Department of Agriculture is the project’s lead partner. Louisiana’s state government could similarly initiate and lead a project aimed at collaboratively addressing nutrient levels in the Mississippi/Atchafalaya River Basin and Gulf of Mexico using RCPP funding provided in the upcoming 2023 Farm Bill.

IV. CREATING NEW AGREEMENTS

A final method that states could employ to collaborate on nutrient reduction policies and strategies is entering into agreements with other states that contribute to and are affected by the issue of nutrient enrichment in the Mississippi/Atchafalaya River Basin and Gulf of Mexico.⁵⁷ Several interstate compacts exist that address regional watershed issues, including nutrient enrichment in impaired waterbodies.⁵⁸ For example, the Chesapeake Bay TMDL is accompanied by an interstate agreement.⁵⁹ The Chesapeake Bay Watershed Agreement, signed by the six watershed states and the District of Columbia in 2014, outlines partnership expectations related to several areas of aquatic habitat vitality and water quality.⁶⁰

⁵⁵ Nat. Res. Conservation Serv., *Regional Conservation Partnership Program 2022 Projects*, <https://www.nrcs.usda.gov/programs-initiatives/rcpp-regional-conservation-partnership-program/regional-conservation-partnership-program-2022-projects> (last visited May 16, 2023).

⁵⁶ *Id.*

⁵⁷ Sieja, *supra* note 43.

⁵⁸ *See id.* at 997 n.54 (listing the Louisiana-Mississippi Tangipahoa River Waterway Compact of 1988, the New England Interstate Water Pollution Control Compact of 1947, the Ohio River Valley water Sanitation Compact of 1948, and the Potomac Valley Compact of 1970 as examples of interstate compacts used to address water pollution).

⁵⁹ *See* CHESAPEAKE BAY PROGRAM, THE CHESAPEAKE BAY AGREEMENT OF 1983 (1983).

⁶⁰ CHESAPEAKE WATERSHED AGREEMENT OF 2014 (2022).

At least fourteen interstate compacts govern various issues of shared water resources management throughout the Mississippi/Atchafalaya Basin; however, none of them touch the mainstem river.⁶¹ The last and only time an interstate compact was attempted on the mainstem Mississippi River, Louisiana was the only signatory.⁶² In 1989, Congressman Baker (R-LA) introduced the a bill requesting congressional consent for the Mississippi River Interstate Pollution Phase-Out Compact.⁶³ The compact included the ambitious target “[t]o reduce and then eliminate river pollution by January 1, 1998.”⁶⁴ The compact may have failed as a result of scoping issues—the proposed compact would have “appli[ed] to the Mississippi River System, from its headwaters to its mouth at the Head of Passes, and laterally between its ordinary high water marks and its major tributaries consisting of the Missouri, Ohio, Obion, Hatchie, Tennessee, St. Francis, White, Arkansas, Yazoo, Big Black, and Homochitto Rivers.”⁶⁵ This is an enormous and diverse area to encompass as the character of the River and its bordering states drastically change in ecological, economic, and political priorities from headwaters to mouth.

The Mississippi River Interstate Pollution Phase-Out Compact also demonstrates how congressional approval can serve as another ostensible barrier to developing an interstate compact, of any scale. The Compact Clause of the Constitution states: “No State shall, without the Consent of Congress, . . . enter into any Agreement or Compact with another State”⁶⁶ For years there was a dispute over the distinction between the terms “agreement” and “compact” under the Clause.⁶⁷ Some posited that the difference was in degree of formality, with

⁶¹ MARK DAVIS, MULTI-STATE COMPACTS AND REGIONAL WATER MANAGEMENT 10 (2012).

⁶² 510, 101st Cong. (1989-90).

⁶³ *Id.*

⁶⁴ *Id.* art. I.

⁶⁵ *Id.* art. III.

⁶⁶ U.S. CONST. art. I, § 10.

⁶⁷ David E. Engdahl, *Characterization of Interstate Arrangements: When is a Compact Not a Compact*, 64 MICH. L. REV. 63, 75 (1965).

“agreements” being less formal than “compacts.”⁶⁸ However, this theory has been largely discredited and the Supreme Court has held that the terms are practically equivalent.⁶⁹ Furthermore, the level of formality does not dictate the applicability of the Clause. In other words, the Compact Clause requirements should apply to even informal agreements or compacts between states if their impact would impair the interests of the federal government.⁷⁰ Instead, in considering the applicability of the clause, “[t]he relevant inquiry is to the potential impact on the federal structure and the threat of encroachment or interference through enhanced state power.”⁷¹

Because interstate waterways are articles of commerce,⁷² any agreements between states concerning them will likely raise the prospect of interfering with federal jurisdiction sufficient to require conformance with the Compact Clause. Therefore, collaborative state management of interstate waters may encroach on the federal government’s powers under the Commerce, Property, or Treaty Clauses. As such, it appears that any interstate compact regarding nutrient management on a watershed level would require congressional consent. Furthermore, given the current Congress’s aversion to agreement, consent to such a compact seems even less likely than it was in 1989.

Nonetheless, there are several examples of interstate agreements over shared, cross-jurisdictional water resources that do not amount to the level of a congressionally approved compact. For example, neither the Upper Mississippi River Basin (“UMRB”) Charter, nor the Great Lakes Charter upon which it was based, ever received congressional consent. The Upper Mississippi River Basin Charter was signed in 1989 (the same year Congressman Baker failed to

⁶⁸ *Id.* at 88-89.

⁶⁹ *Id.* at 101.

⁷⁰ MEGHAN REILLY, CONN. OFF. OF LEGISLATIVE RES., 2008-R-0221, CONSTITUTIONALITY OF INTERSTATE COMPACTS (2008), available at <https://www.cga.ct.gov/2008/rpt/2008-R-0221.htm>.

⁷¹ *Id.* (citing *U.S. Steel Corp. v. Multistate Tax Commission*, 434 U.S. 452 (1978)).

⁷² 29 C.F.R. § 776.29(a).

achieve congressional consent for the Mississippi River Interstate Pollution Phase-Out Compact) by the Governors of Illinois, Iowa, Minnesota, Missouri, and Wisconsin.⁷³ The most actionable clause of the UMRB Charter relates to notice and consultation in the event of proposals to divert waters out-of-basin.⁷⁴ However, the UMRB Association that administers the Charter is also expanding its programs to include nutrient reduction strategies in the five Upper Basin states.

Despite the language of the Compact Clause, failing to receive congressional approval generally does not invalidate the agreement but merely makes it unenforceable under the law, at least under federal law. However, there are still benefits to unenforceable agreements, including the development of a forum for collaboration and the establishment of shared goals. As such, interstate agreements of varying degrees of formality and enforceability may provide beneficial opportunities for Louisiana to initiate collaborative approaches to nutrient management in the Mississippi/Atchafalaya River Basin and Gulf of Mexico.

V. CONCLUSION

The delicate balance between nutrients that are essential for life and nutrients that make aquatic and marine environments unable to support life makes management of nitrogen and phosphorous runoff a particularly challenging environmental problem. This challenge is magnified when applied at the scale of one of the largest and most complex watersheds in the world. Accordingly, meaningfully reducing nutrient loadings in the Mississippi/Atchafalaya River Basin and Gulf of Mexico cannot be achieved through isolated state action. As the state that endures the greatest direct impacts of excess nutrients from Basin-wide runoff, Louisiana should play a leading role in encouraging collaborative management efforts. In this endeavor, it

⁷³ The UPPER MISSISSIPPI RIVER BASIN CHARTER (1989).

⁷⁴ *Id.* Principle II.

could utilize existing governance and regulatory frameworks or enter into new cooperative agreements.

Ultimately, the interstate nature of the problem's sources and impacts encourages an interstate solution. However, none of the thirty-one states in the watershed should view unilateral efforts as futile. Nutrient reductions at any level and at any point are beneficial. But perhaps most importantly, unilateral efforts are the first step in demonstrating a willingness to engage with larger collaborative actions that are fundamentally essential to achieving a Mississippi River and Gulf of Mexico of the quality necessary to support the economy, ecology, and communities that depend on them.