Reviving the Mississippi River: Riparianism and Equitable Remedies

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Nutrient run-off from midwestern agricultural operations into the Mississippi River has resulted in unconscionable destruction to the river[1]: ecological, economic,[2] and recreational. The sovereign interests of downstream riparian states—particularly Louisiana and Mississippi—in the use and health of their natural resources clash with the economic ambitions of upstream polluters. In response to this well-documented problem, the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force formed in 1997 to readdress eutrophication in the Gulf of Mexico, which is one of the most visible and impactful manifestations of nutrient pollution in the world. After twenty years, the effects have greatly worsened and the need to redress the harm immediately is imperative, lest the states resort to more direct, graver action to secure their rights to a usable river.[3]

When an individual's actions harm another's property, the injured individual can recover under a number of causes of action. When a state harms another state, the avenue for recourse is less clear but the stakes are much greater. Several pathways to fixing the nutrient pollution in the Mississippi River have been considered, including litigation via the Clean Water Act,[4] a federal common-law nuisance action,[5] and an interstate compact.[6] However, other states encountering

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1. *See* Tony Briscoe, *There's a Giant Dead Zone in the Gulf of Mexico—Thanks in Large Part to Pollution from Chicago*, CHI. TRIB. (June 14, 2019), https://www.chicagotribune.com/news/breaking/ct-met-dead-zone-gulf-of-mexico-midwest-20190612-story.html [https://perma.cc/3265-HHEF?type=image].

2. *See* Spike Johnson, *The Danger Downstream: Farm Pollutants from Multiple States Feed a Massive Dead Zone in the Gulf of Mexico. Shrimpers Pay the Price.* (Feb. 4, 2020), DAILYYONDER, https://www.dailyyonder.com/the-danger-downstream/2020/02/04/ [https://perma.cc/2ZDD-ZF2F?type=image].

3. *See* New Jersey v. New York, 283 U.S. 336, 342 (1931) ("Different considerations come in when we are dealing with independent sovereigns having to regard the welfare of the whole population and when the alternative to settlement is war.").

4. *See* City of Milwaukee v. Illinois & Michigan, 451 U.S. 304, 317 (1981).

5. Endre Szalay, *Breathing Life into the Dead Zone: Can the Federal Common Law of Nuisance Be Used to Control Nonpoint Source Water Pollution?*, 85 TUL. L. REV. 215, 239 (2010).

6. An interstate compact would likely fail, even if the improbable occurred and the midwestern states, Louisiana, and Mississippi agreed to one. For example, in 1992, Florida and Georgia signed the Apalachicola-Chattahoochee-Flint River Basin Compact in which they agreed "to develop an allocation formula for equitably apportioning the surface waters of the ACF Basin among the states while protecting the water quality, ecology, and biodiversity of the ACF," but the compact failed. *See* Apalachicola-Chattahoochee-Flint River Basin Compact, Pub. L. No. 105-104, § 1, Art. VII, 111 Stat. 2219, 2222-24 (1997) (expressing the intent of the signatory parties to develop a formula for equitable allocation); *see also* Charles T. DuMars & David Seeley, *The*

water problems have tried these options and failed. Prudence directs consideration of another solution.

One such solution, and the focus of this Article, is the pursuit of an equitable remedy through the assertion of riparian rights in an original jurisdiction action before the Supreme Court of the United States. An equitable remedy should take the form of an equitable apportionment decree. Such actions are becoming more frequent (even if asserted under other names). This Article will consider the strengths and weaknesses of bringing an original action before the Supreme Court of the United States for an equitable apportionment decree of the Mississippi River.

> "We're not catching no large shrimp. . . There's no explaining this here other than it's something's wrong with our water."
>
> —a Louisiana Shrimper[7]

Failure of the Apalachicola-Chattahoochee-Flint River Basin and Alabama-Coosa-Tallapoosa River Basin Compacts and a Guide to the Successful Establishment of Interstate Water Compacts, 21 GA. ST. U. L. REV. 373, 397 (2004) (arguing that where competing interests and political differences are strong, legislative means will likely fail to resolve interstate water disputes, like those of the Mississippi River).

7. Travis Lux, *Midwestern Farm Runoff Creates Headache for Louisiana Shrimpers*, ST. LOUIS PUB. RADIO (Oct. 17, 2019) https://news.stlpublicradio.org/post/midwestern-farm-runoff-creates-headache-louisiana-shrimpers#stream/0 [https://perma.cc/VW68-73GQ?type=image].

I. INTRODUCTION

"[S]omething's wrong with our water."[8] In fact, 6,952 square miles of wrong—6,952! That is close to the size of New Hampshire.[9] And that is the number of square miles of an oxygen-starved wasteland looming ominously off the shores of Louisiana and Mississippi in 2019, also known as the Gulf of Mexico dead zone.[10] It is the second largest dead zone in the world.[11]

Each year, rain falls upon farms in the Midwest, washing nitrogen- and phosphorus-saturated soil directly into the Mississippi River, which in turn dumps into the Gulf of Mexico and its estuaries.[12] The nutrient-rich soil fuels growth of phytoplankton, which decompose at the water bottom, sucking oxygen out of the water and producing destructive algal blooms.[13] This process results in the literal suffocation of all other water life, creating the dead-zone—a phenomenon known as hypoxia.[14]

The dead-zone has nearly doubled since 1985, the year that, ironically, Congress set as the national goal date for eliminating discharge of pollutants into navigable waters when it enacted the 1972 Amendments to the Federal Water Pollution Control Act, better known as the Clean Water Act (CWA).[15] The CWA's objective is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters, and the 1985 national goal deadline was one of the first ways Congress sought to realize this purpose.[16] The national goal to eliminate discharge of

8. *Id.*

9. *See* Spike Johnson, *Shrinking the Gulf Coast 'Dead Zone': Part II: Upriver*, THE LENS (Sept. 9, 2019), https://thelensnola.org/2019/09/09/shrinking-the-gulf-coast-dead-zone-part-2-upriver/ [https://perma.cc/E37M-UKKZ?type=image].

10. *Id.*

11. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA), WHAT IS A DEAD ZONE?, https://oceanservice.noaa.gov/facts/deadzone.html [https://perma.cc/Q9SA-MXYC?type=image]. This is just one of many ways by which nutrient pollution is harming downstream riparians of the Mississippi River.

12. *See* Briscoe, *supra* note 1.

13. *See* Denise Breitburg et al., *Declining Oxygen in the Global Ocean and Coastal Waters*, 359 SCIENCE 46, 47 (2018).

14. *Id.* at 46.

15. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA), LARGE "DEAD ZONE" MEASURED IN GULF OF MEXICO (Aug. 1, 2019); 33 U.S.C. § 1251 *et seq.* (2006).

16. 33 U.S.C. § 1251(a)(1).

pollutants into navigable waters by 1985 not only failed, but in fact, water conditions in the Gulf of Mexico had worsened by then.[17] Due to the scale and scope of the harm to the Mississippi River downstream and state sovereigns' obligations to safeguard the natural resources within their borders, the states are best positioned to advocate for their water rights and seek redress for the harms to the waters. How can Louisiana and Mississippi take steps to stop nutrient pollution from upstream actors and ensure the health and protection of the waters on which their plants, animals, and people depend to survive?[18]

Some legal and policy thinkers, as well as courts, have posited that Louisiana and Mississippi should work within the confines of the CWA's framework to accomplish their objectives.[19] Efforts to regulate these discharges via the CWA have failed. Each Supreme Court test creates more confusion than the last, with the latest "fairly traceable test" in *County of Maui v. Hawaii Wildlife Fund* requiring future courts to evaluate whether a discharge into groundwater is "the functional equivalent of a direct discharge" by considering the distance the pollutant must travel from the point of discharge to the federal waterway and the time that it would take to do so, among several other factors.[20] This test perpetuates confusion in resolving interstate water pollution issues by creating a vague balancing

17. NOAA, *supra* note 15.

18. *See* Briscoe, *supra* note 1.1

19. *See* Milwaukee v. Illinois & Michigan, 451 U.S. 304, 306, 317 (1981). But the CWA is not comprehensive because it does not regulate non-point source discharge and the discharges from midwestern agricultural operations are non-point discharge. Thus, there is no exclusive remedy available via the Clean Water Act (CWA) that would make it possible to address the harm created by midwestern farms. Furthermore, even if the CWA was once believed to be comprehensive, recent jurisprudence and the Trump administration have sufficiently narrowed the scope of the CWA (e.g., by rolling back the Obama-era Waters of the United States (WOTUS) rule) such that it no longer has the strength to address the issues at hand. *See generally* Nadja Popovich, Livia Albeck-Ripka, and Kendra Pierre-Louis, *The Trump Administration Is Reversing 100 Environmental Rules. Here's the Full List.*, N.Y. TIMES (last updated July 15, 2020), https://www.nytimes.com/interactive/2020/climate/trump-environment-rollbacks.html [https://perma.cc/6VZS-DYRB?type=image]. In fact, the past ten years conclusively show that any solution dependent upon an executive agency to succeed is one unlikely to procure a favorable result. However, even if some favorable results can be obtained, the CWA is subject to the ebb and flow of executive agency whims and presidential elections, creating severe instability and unreliability such that it would be foolhardy, irresponsible, and negligent to put the health and welfare of Louisiana in the hands of the EPA's flighty CWA provisions. *See*, *e.g.*, Rapanos v. United States, 547 U.S. 715 (2006); *see also* United States v. Riverside Bayview Homes, Inc., 474 U.S. 121 (1985); *see also* Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng'rs, 531 U.S. 159 (2001).

20. Cnty. of Maui v. Haw. Wildlife Fund, 140 S. Ct. 1462, 1476-77 (2020).

test.[21] Other legal and policy thinkers have recognized that the CWA fails to address pollution from nonpoint sources, instead suggesting that the states of Louisiana and Mississippi should bring a federal common-law nuisance claim.[22] These options have their strengths and weaknesses, but another viable option remains unexplored, and so the focus of this Article is to evaluate another pathway to resolving interstate water pollution issues. Water rights in the midwestern and southern states along the Mississippi River derive from the doctrine of riparianism and the Supreme Court—exercising its Article III, Section 2 power to hear cases in which a state is a party—can settle disputes between riparian states through decrees of equitable remedies.[23] This Article asserts that a solution with the midwestern states may manifest through the assertion of riparian rights and an action for an equitable remedy, such as a decree for the equitable apportionment of the Mississippi River.

This Article first lays out the origins and framework of the riparian doctrine, equitable remedies, and Supreme Court original jurisdiction. Second, it outlines the history, law, and riparian rights precedent where equitable remedies were sought and discusses recent efforts to obtain equitable apportionment to resolve interstate disputes over water. Third, with the riparian doctrine and precedent in mind, this Article analyzes the strengths and weaknesses of Louisiana and Mississippi bringing an original jurisdiction action for equitable apportionment today.

II. RIPARIAN RIGHTS, EQUITABLE REMEDIES, AND ORIGINAL JURISDICTION ACTIONS

A. Riparian Rights

When people settled in the eastern half of the present-day United States of America, they did so along rivers to ensure access to water, and they adopted the English common-law doctrine of riparianism.[24] Under riparianism's most basic form, a person who has property alongside a waterbody has the right to access and use the water so long as the person

21. *Id.*

22. *See* Szalay, *supra* note 5, at 239.

23. The Judiciary Act of 1789 provides that the Supreme Court's original jurisdiction is exclusive in suits between two or more states. 28 U.S.C § 1251; *see also* JURISDICTION: ORIGINAL, SUPREME COURT, FEDERAL JUDICIAL CENTER (FJC), https://www.fjc.gov/history/courts/jurisdiction-original-supreme-court [https://perma.cc/VV7S-V5DM?type=image].

24. Joseph Dellapenna, *The Evolution of Riparianism in the United States*, 95 MARQ. L. REV. 53, 55-60 (2011).

does not interrupt the natural flow of the water.[25] Out of this English common-law tradition, the "reasonable use" version of riparianism developed in the United States, whereby riparian property owner water rights are allocated based on ownership of land abutting the water and riparians "are entitled to the reasonable use of water flowing by their property in a natural stream and likewise have the right to create a *reasonable* amount of pollution."[26] This doctrine of riparianism governs water rights in the eastern United States.[27] Upstream riparian owners must use the water in a reasonable manner so as not to harm downstream riparians.[28]

Riparian rights entitle riparians to water flow absent unreasonable diminution in *both* quantity and quality.[29] For example, in *Strobel v. Kerr Salt Co.*, riparian owners on the Oatka creek in New York brought suit against a salt manufacturer who was polluting the water with salt residue from its operation.[30] The salt manufacturer's operation resulted in water so salty that the cattle could not drink from it and the salt-polluted water destroyed most of the fish and vegetation in the river.[31] In reversing a lower court decision for the defendant and remanding for a new trial, the New York's highest court reasoned that the salt manufacturer had an obligation to "exercise ordinary care so as not to inflict unnecessary injury to the lower proprietors," as "a riparian owner is entitled to reasonable use of the water flowing by his premises in a natural stream . . . and to have it transmitted to him without sensible alteration in *quality*," and the salt manufacturer's actions violated this duty by diminishing water quality so greatly that it amounted to a "virtual confiscation of the property."[32] The court emphasized that the rights of small, long-established businesses

25. *Id.* at 59-60.

26. ROBERT W. ADLER, ROBIN KUNDIS CRAIG, AND NOAH D. HALL, MODERN WATER LAW: PRIVATE PROPERTY, PUBLIC RIGHTS, AND ENVIRONMENTAL PROTECTIONS (2013). Riparian doctrine governs water rights for the eastern United States, whereas in the western United States, where water is scarce, the doctrine of prior appropriation allocates water rights on the basis of "first in time, first in right," meaning that whoever gets to the water first has the first right to the water. *See* Nebraska v. Wyoming, 325 U.S. 589, 617; *see also* Frank J. Trelease, *Policies for Water Law: Property Rights, Economic Forces, and Public Regulation*, 5 NAT. RES. J. 1, 7-12 (1965).

27. Trelease, *supra* note 26, at 7.

28. *See Nebraska v. Wyoming*, 325 U.S. at 645; *see also* Strobel v. Kerr Salt Co., 58 N.E. 142, 147 (N.Y. 1900).

29. Strobel, 58 N.E. at 142.

30. *Id.* at 142-43.

31. *Id.* at 145.

32. *Id.* at 145, 147 (emphasis added).

do not yield to new and greater industries, and that when the upstream user harms the downstream user such that the stream is not fit for ordinary use, and such action is continual and repetitive, a court of equity will impose an injunction.[33]

Although *Strobel* is a New York state law case, it illustrates: (1) the fundamental, common-law water rights of those in riparian states; (2) that water rights entitle a riparian to reasonably undiminished water with respect to *quality* as well as *quantity*; and (3) that one riparian's rights do not trump another's rights.[34]

Under this construction, suits for equitable apportionment may be brought by a complaining, downstream state against an upstream state that is allegedly using the water unreasonably, and, in so doing, causing substantial harm to downstream users.[35] While such suits rarely lead to a decree of equitable apportionment, where they do, the decree is a strong solution. The case of the Mississippi River is ripe and ideal for equitable apportionment in ways that the most recent equitable apportionment cases were not.

The pursuit of a remedy based on water *quality* is an important component for a plaintiff to include in seeking an equitable apportionment decree of a water because the water quantity may not be—and in the case of the Mississippi River, is not—the problem. A U.S. First Circuit case supports and illustrates how integral *quality* is to riparian rights.[36] In *Smith v. Staso Milling Co.*, a riparian property owner sought to recover from harm to a brook, where a defendant's manufacturing process led to particulate matter and sludge "defiling" the waterway.[37] Judge Hand, in discussing the available recourse for one whose riparian rights have been violated, said: "When in ordinary course this [waste] is carried into the brook through the settling beds, it is the equivalent of directly defiling the stream itself, becomes a wrong, and subjects the defendant to some form of action, *either at law, in equity, or both*."[38] Consequently, the court ordered injunctive relief because the defendant's actions were "so substantial and the wrong so deliberate."[39] Judge Hand's words reinforce the importance of a riparian property owner's duty to use water in a way

33. *Id.* at 146-47.
34. *Id.*
35. *See*, *e.g.*, Wyoming v. Colorado, 259 U.S. 419 (1922); New Jersey v. New York, 283 U.S. 336 (1931); Nebraska v. Wyoming, 325 U.S. 589 (1945).
36. Smith v. Staso Milling Co., 18 F.2d 736 (1st Cir. 1927).
37. *Id.*
38. *Id.* at 737.
39. *Id.* at 738.

that protects both the quantity and *quality* of the water that flows downstream to their neighbors.

Riparian rights extend beyond individuals because they represent a doctrine to which an entire state may subscribe, and therefore, states can and do invoke riparian rights in efforts to enjoin other states from harming their water streams.[40]

B. Equitable Remedies and Supreme Court Original Jurisdiction

In order to enforce the riparian rights discussed above, states should seek equitable remedies. Equitable remedies are non-monetary relief that a court grants when monetary relief will not adequately redress the harm.[41] Equitable relief is particularly applicable to water law actions because if a court only grants monetary damages for water pollution, then an upstream defendant could simply pay for the harm and continue polluting. In contrast, equitable remedies may include injunctive relief requiring a defendant to cease harming the waterbody, or an equitable apportionment decree ordering the defendant to limit harm to the waterbody in quantity and/or quality.[42]

The doctrine of equitable apportionment is the most promising equitable remedy that Louisiana and Mississippi could seek to redress the nutrient pollution to their waters. Equitable apportionment is a doctrine whereby the Supreme Court, through its original jurisdiction, will apportion interstate waters between states.[43] That is, when states disagree over the use and quantity of interstate waters, they may call upon the Supreme Court to resolve the water dispute, and the Court will employ the doctrine of equitable apportionment.[44] Under this doctrine, the Supreme Court of the United States has inherent authority as part of the

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40. *See*, *e.g.*, New Jersey v. New York, 283 U.S. 336 (1931) (granting an injunction to restrain New York from diverting water from the Delaware River in excess of 440 million gallons of water daily).

41. Samuel L. Bray, *The System of Equitable Remedies*, 63 UCLA L. REV. 530, 552-53 (2016).

42. *Id.* at 553.

43. *See*, *e.g.*, Colorado v. New Mexico, 459 U.S. 176, 183 (1982) (citing Kansas v. Colorado, 206 U.S. 46, 98 (1907); Connecticut v. Massachusetts, 282 U.S. 660, 670-71 (1931)) "Equitable apportionment is the doctrine of federal common law that governs disputes between States concerning their rights to use the water of an interstate stream.").

44. *See*, *e.g.*, *Kansas v. Colorado*, 206 U.S. at 97-99; *Colorado v. New Mexico,* 459 U.S. at 183.

Constitution's grant of original jurisdiction to equitably apportion interstate streams between States.[45]

The body of case law on equitable apportionment is small, comprising very few cases throughout the past 112 years.[46] During that time period, the Supreme Court has only equitably apportioned three rivers—the Delaware River, the Laramie River, and the North Platte River.[47] Two of these rivers, the Laramie and the North Platte, are in states that subscribe to the doctrine of prior appropriation, rather than riparianism.[48]

However, here, even if the Supreme Court of the United States chooses to abstain from issuing an equitable apportionment decree, the Court could guide the development of a compact to resolve the dispute in a way that the states would not otherwise consider without the influence of Supreme Court oversight. That is, midwestern states like Illinois and Iowa that know of the harm their nutrient pollution causes to downriver states would be incentivized to cooperate with downriver states out of concern that if they did not compromise, the Supreme Court might issue an equitable apportionment decree unfavorable to them. Similarly, downriver states like Louisiana and Mississippi, recognizing that failure to cooperate with upriver states could result in an unfavorable equitable apportionment decree for them, might be more likely to arrive at an interstate compact with upriver states. Thus, where state-initiated compacts fail, a Supreme Court directed interstate compact would have a better chance of succeeding.

III. PAST EQUITABLE APPORTIONMENT DECREES AND RECENT EFFORTS

A. Historical Background and Process

In 1907, the Supreme Court of the United States decided the first case in which one state had sued another for equitable apportionment of water: *Kansas v. Colorado*.[49] Kansas filed a bill in equity against Colorado for inhibiting the flow of the Arkansas River to Kansas.[50] Kansas premised its

45. U.S. CONST. art III, § 2, cl. 2.

46. *See* FJC, *supra* note 23.

47. *See* Wyoming v. Colorado, 259 U.S. 419, 496 (1922) (Laramie River); New Jersey v. New York, 283 U.S. 336, 346 (1931) (Delaware River); Nebraska v. Wyoming, 325 U.S. 589, 656 (1945) (North Platte River).

48. *See Wyoming v. Colorado*, 259 U.S. at 488-89; *Nebraska v. Wyoming*, 325 U.S. at 617.

49. Kansas v. Colorado, 206 U.S. 46, 117 (1907).

50. *Id.* at 47.

assertion on the principle that "one must use his own so as not to destroy the legal rights of another."[51] The dispute between Kansas and Colorado over the Arkansas River resulted in five subsequent cases over the next ninety-eight years, eventually resulting in the Arkansas River Compact in 1949, an order for Colorado to pay damages for violation of that compact in 1985, and an order that Colorado use a hydrologic-institutional model to bring the state into compliance with the compact in 2009.[52]

In order to equitably apportion a water stream, the Supreme Court needs to first look to what doctrine of water ownership the state(s) in the case subscribe: riparianism or prior appropriation. The majority of states follow the doctrine of riparianism,[53] and Louisiana, Mississippi, and the upstream midwestern states at issue here are no exception.[54] As discussed above, under the doctrine of riparianism, one who owns land appurtenant to water is a riparian owner, and each riparian owner "has an equal right to make a reasonable use of the waters of the stream, subject to the equal right of the other riparian proprietors likewise to make a reasonable use." The key inquiry is *reasonable use*.[55] Thus, upstream riparian owners must *reasonably use* water such that it does not harm downstream riparian owners.[56] The test for what is a reasonable use is whether or not the use injures other proprietors.[57]

When states bring their water disputes to the Supreme Court, the Court may equitably apportion the water, not through formulas, but by ascertaining reasonable predictions about future use of the water.[58] The complaining state will bear the burden to show by clear and convincing evidence that the present use is unreasonable such that it has caused a serious injury.[59]

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51. *Id.* at 48 (quoting Kansas v. Colorado, 185 U.S. 125, 146 (1902)) (internal quotation marks omitted).

52. *See* Kansas v. Colorado, 533 U.S. 1, 4 (2001); *see also* Kansas v. Colorado, 556 U.S. 98, 104-05 (2009).

53. United States v. Willow River Power Co., 324 U.S. 499, 504 (1945).

54. *See* A.N. YIANNOPOULOS, 2 LA. CIV. L. TREATISE § 7:16 (5th ed. 2015).

55. *See Willow River Power Co.*, 324 U.S at 505.

56. *Id.*

57. Tyler v. Wilkinson, 24 F. Cas. 472, 474 (Cir. Ct. D.R.I. 1827) (No. 14,312) (adopting the maxim "*sic utere tuo ut alienum non laedas*," meaning to use your property so as not to injure that of another).

58. *See* New Jersey v. New York, 283 U.S. 336, 342-43 (1931); *see also* Colorado v. New Mexico, 467 U.S. 310, 322 (1984).

59. Connecticut v. Massachusetts, 282 U.S. 660, 669 (1931); *see also* Washington v. Oregon, 297 U.S. 517, 522 (1936).

Upon proving standing such that the Court is satisfied that the complaining state has suffered a redressable, serious injury from an upstream state(s), the Court will apportion the interstate water by considering the following "relevant factors"[60]:

> physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas, [and] the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former.[61]

In order to evaluate these factors, the Court will undergo an extensive fact-finding process.[62] To conduct this fact-finding process, the Court will employ a Special Master.[63] Using the Special Master's findings, the Court will then make its determination as to whether or not to equitably apportion the water and if so, how to do it.[64]

B. Precedent

The Supreme Court has equitably apportioned interstate waters three times.[65]

First, in *Wyoming v. Colorado*, the Court apportioned the Laramie River to protect established irrigation uses of the Laramie River in Wyoming by limiting an upstream diversion to a different watershed in Colorado.[66] In so holding, the Court upheld the prior appropriation rights of Wyoming.[67]

Second, in *New Jersey v. New York*, the Court issued its first and only equitable apportionment decree directed at states that follow riparian doctrine.[68] New Jersey sought to enjoin New York from diverting water from the Delaware River or its tributaries.[69] New York proposed diverting water to increase water supply to the City of New York while New Jersey sought to protect, among other interests, its water power and ability to

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60. South Carolina v. North Carolina, 558 U.S. 256, 271-72 (2010).
61. Nebraska v. Wyoming, 325 U.S. 589, 618 (1945).
62. *See*, *e.g.*, Colorado v. New Mexico, 459 U.S. 176, 189-90 (1982).
63. Florida v. Georgia, 138 S. Ct. 2502, 2515 (June 27, 2018).
64. *See id.*
65. *See* Wyoming v. Colorado, 259 U.S. 419, 496 (1922); *see also* New Jersey v. New York, 283 U.S. 336, 346 (1931); *see also Nebraska v. Wyoming*, 325 U.S. at 665.
66. *See Wyoming v. Colorado*, 259 U.S. at 496.
67. *Id.*
68. *See New Jersey v. New York*, 283 U.S. at 347.
69. *Id.* at 341.

develop it, sanitary conditions of the river, and oyster and shad fisheries.[70] The Court, following analysis of the Special Master's report, issued a decree limiting the diversion of water by New York from the Delaware River to the equivalent of 440 million gallons of water per day.[71] Additionally, the Court mandated the creation of a sewage treatment plant to reduce organic impurities.[72] The Court provided New Jersey and Pennsylvania with the right to inspect the damns, reservoirs, and other works constructed by the City of New York and to inspect the diversion areas.[73]

Third, in *Nebraska v. Wyoming*, Nebraska brought a bill in equity against Wyoming to equitably apportion the North Platte River.[74] The Supreme Court issued a decree that limited Wyoming and Colorado in their use of water of North Platte River.[75] The Court, in deciding to issue the decree, found that Nebraska had met its high burden of showing that it had suffered substantial injury due to the over-appropriation of water.[76] Additionally, in developing its equitable apportionment decree, the Court articulated a number of factors to be considered: the amount of return flows, climatic conditions, environmental factors, the importance of established uses, economies dependent upon regular supplies of water, the amount of waste, and the availability of storage water.[77]

C. Recent Equitable Apportionment Litigation

The Supreme Court recently heard an equitable apportionment case concerning the Apalachicola-Chattahoochee-Flint (ACF) River basin.[78] In *Florida v. Georgia* (hereafter, *Florida*), Florida, a downstream state of the ACF River basin, brought suit against Georgia for injury due to decreased flow into the Apalachicola River.[79] Florida's injury manifested itself in ecological and economic harm, including detriment to the state's oyster industry.[80] The Court appointed a Special Master to assess the injury and

70. *Id.* at 342-43.
71. *Id.* at 346.
72. *Id.*
73. *Id.* at 347.
74. Nebraska v. Wyoming, 325 U.S. 589, 591-92 (1945).
75. *Id.*
76. *Id.* at 610.
77. *Id.* at 618.
78. Florida v. Georgia, 138 S. Ct. 2502 (2018).
79. *Id.*
80. *Id.* at 2509.

redressability of the injury.[81] The Court rejected the Special Master's conclusion that the Court would not be able to fashion an appropriate equitable decree and instead reserved judgment on a decree of equitable apportionment, but did hold that Florida had made a "legally sufficient showing as to the possibility of fashioning an effective remedial decree."[82] The Court remanded the case to the Master for further findings as to whether the harm could be remedied through equitable apportionment.[83] The decision to remand illustrates a common concern the Court contends with in these cases: Would a decree of equitable apportionment actually remedy the harm?

In 2010, the case of *South Carolina v. North Carolina* (hereafter, *South Carolina*) established a precedent for non-state parties to intervene in an equitable apportionment case.[84] The case arose due to South Carolina's concerns about North Carolina's newly enacted Interbasin Transfer Statute, which permitted transfer of water from one basin to another, including the Catawba River.[85] The Catawba River runs through both South Carolina and North Carolina and, under the Interbasin Transfer Statute, North Carolina permitted transfer from the Catawba basin without a permit so long as the transfer amounted to less than two million gallons per day.[86] The statute's construction thus left South Carolina at risk of losing an important water supply during drought periods, and so South Carolina brought suit against North Carolina seeking an equitable apportionment decree.[87] The Court's decision focused on which parties would be permitted to intervene, including the City of Charlotte, North Carolina, the Duke Energy Corporation, and the Catawba River Water Supply Project (CRWSP).[88]

In order to intervene in a suit between two states, the party must demonstrate a compelling interest "apart from his interest in a class with all others citizens and creatures of the state, which interest is not properly represented by the state."[89] The Court held that CRWSP and the Duke Energy Corporation met this standard but that the City of Charlotte did not because the City was a subdivision of the State and thus sufficiently

81. *Id.* at 2510-11.
82. *Id.* at 2526-27.
83. *Id.* at 2527.
84. South Carolina v. North Carolina, 558 U.S. 256 (2010).
85. *Id.* at 259-260.
86. *Id.* at 260.
87. *Id.*
88. *Id.* at 259.
89. New Jersey v. New York, 345 U.S. 369, 373 (1953).

represented by the State.[90] South Carolina and North Carolina arrived at a settlement whereby North Carolina agreed to consult South Carolina in withdrawals from the river.[91] *South Carolina* would likely provide persuasive guidance to the Supreme Court in a future equitable apportionment decree case among the Mississippi River downstream and upstream states in terms of what parties will be permitted to intervene, and also as a demonstration of the Court's success in facilitating out-of-court settlement of interstate water disputes among states.[92]

Mississippi v. Tennessee (hereafter, *Mississippi*) is a third recent original jurisdiction action that may provide guidance for Louisiana and Mississippi in its effort to acquire redress for harms to the flows within their borders.[93] In 2014, Mississippi sought leave from the Supreme Court of the United States to file an original action to seek relief from Tennessee, whose pumping operation was taking 252 billion gallons of groundwater from the Memphis Sands Aquifer, fed by the Sparta Sands Aquifer.[94] Mississippi had initially challenged Tennessee's pumping in 2009, but the Fifth Circuit dismissed the lawsuit for failing to name Tennessee in the suit, which was required because the aquifer was an interstate resource, and, further, because the dispute was between Mississippi and Tennessee, the Supreme Court alone had original jurisdiction over the dispute.[95] The Supreme Court granted Mississippi's motion for leave to file a bill of complaint.[96] Tennessee argued that the aquifer was an interstate resource and that the Court should therefore determine how much water each State is entitled to withdraw.[97] However, Mississippi argued that the aquifer was Mississippi State property and considered Tennessee's pumping to be a trespass and taking of Mississippi property, and therefore sought damages,

90. *South Carolina v. North Carolina*, 558 U.S. at 274.

91. Susan Stabley, *Settlement Reached in N.C.-S.C. Water War*, CHARLOTTE BUS. J. (Nov. 12, 2010), https://www.bizjournals.com/charlotte/news/2010/11/12/settlement-proposed-in-nc-sc-water.html.

92. *See generally*, *South Carolina*, 558 U.S. at 259.

93. Mississippi v. Tennessee, 135 S. Ct. 2916 (2015).

94. Brief for the United States as Amicus Curiae, at 8, Mississippi v. Tennessee, 135 S. Ct. 2916 (2015) (mem.).

95. Mississippi v. City of Memphis, 570 F.3d 625 (5th Cir. 2009).

96. Orders in Pending Cases, Mississippi v. Tennessee, No. 22O143 (June 29, 2015).

97. *See* Brief of the City of Memphis, Tennessee; and Memphis Light, Gas & Water Division in Opposition to the State of Mississippi's Motion for Leave to File Bill of Complaint in Original Action at 11-12, Mississippi v. Tennessee, 135 S. Ct. 2916 (2015) (No. 22O143) (describing the aquifer as an interstate resource to which equitable apportionment applies).

injunctive, and other equitable relief.[98] While the case was a groundwater law case and thus governed by different law, it illustrates the difficulty in characterizing the legal theories, rights, and actions in interstate water disputes.[99] Nevertheless, *Mississippi* demonstrates that regardless of how the causes of action are named, these disputes rise to a level of contention that is best addressed in an original jurisdiction action before the Supreme Court of the United States.

IV. THE VIABILITY OF AN EQUITABLE REMEDY TODAY: BRINGING A SUIT ON BEHALF OF LOUISIANA

> "[A]s conflicts over water heat up it is likely that judicial apportionment will be a gamble increasingly worth taking by some states."[100]

A. Where Louisiana and Mississippi Stand in Relation to Precedent

As discussed in Part I, the people of Louisiana and Mississippi are suffering trifold hardships that affect the state on economic, social, and cultural bases due to the inundation of nutrient pollution into the Mississippi River causing hypoxia in the Gulf.[101] Additionally, as demonstrated in Part II, the states whose interests are implicated in this dispute over the Mississippi River nutrient water pollution are all of those riparian states that can invoke riparian rights to access and reasonably use the water and that can seek equitable remedies to enforce those rights. In order to evaluate the likelihood that Louisiana and Mississippi would succeed in securing an equitable remedy from the Supreme Court, it is helpful to situate their case amongst successful and recent actions for an equitable remedy before the Supreme Court.

In the three cases where the Supreme Court granted a decree for equitable apportionment, *Wyoming v. Colorado*, *New Jersey v. New York*, and *Nebraska v. Wyoming*, the decrees specified limits on water quantity

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98. The State of Mississippi's Motion for Leave to File Bill of Complaint in Original Action, Complaint, and Brief in Support of Motion at 11, Mississippi v. Tennessee, 135 S. Ct. 2916 (2015) (No. 22O143).

99. *See generally*, *Mississippi v. Tennessee*, 135 S. Ct. at 2916.

100. Mark Davis, *Preparing for Apportionment: Lessons from the Catawba River*, 2 SEA GRANT L. & POL'Y 44, 45 (2009) (discussing the increasing likelihood of equitable apportionment suits).

101. *See* Johnson, *supra* note 9; Spike Johnson, *Shrinking the Gulf Coast 'Dead Zone': Part I*, ECOLOGIST (Sept. 23, 2019), https://theecologist.org/2019/sep/23/shrinking-gulf-coast-dead-zone-part-i [https://perma.cc/V8SQ-WQHK?type=image].

that one state could divert from another state using the same waterbody.[102] Here, Louisiana and Mississippi are not at risk of receiving too little water, but are instead receiving unusable, poor-quality water.[103] The closest case to this is *New Jersey v. New York*, but even there, the oyster and fishery industries of New Jersey were affected by New York's use of the Delaware River due to diminished quantity, rather than quality, of the water.[104] Nevertheless, two riparian water law cases lend support for a claim that Louisiana and Mississippi are owed reasonable use of the Mississippi River from a water quality perspective, too.

In *Strobel v. Kerr Salt Co.*, the court clearly articulated that when an upstream riparian unreasonably alters the water quality of a waterbody, it amounts to a "virtual confiscation of the property."[105] Here, as in *Strobel*, the agricultural operations in the Midwest are deliberately and unreasonably diminishing the quality of the Mississippi River by not taking steps to prevent the massive amount of nutrient run-off into the Mississippi River.[106] Moreover, the damage amounts to a confiscation of property in that the economic and ecological consequences over the past several decades are irreparable.[107] Furthermore, as Judge Hand articulated in *Staso Milling Co.*, injunctive relief is appropriate because the upstream riparians' actions cause such a degree of harm to their downstream neighbors, Louisiana and Mississippi, that their actions can best be characterized as "so substantial and the wrong so deliberate."[108]

While *Strobel* and *Staso Milling Co.* are distinguishable from the present conflict over the Mississippi River because this controversy is amongst states, the validity of the precedent and applicability is no less poignant.[109] All the states in the present conflict are riparian rights states and, as Judge Hand articulated in *Strobel*, there exists a common right to all riparians to assert these rights and enjoy injunctive relief should the situation merit such a remedy.[110] Additionally, the situation is rather more compelling, and it is thus imperative for the Supreme Court to issue

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102. *See* Wyoming v. Colorado, 259 U.S. 419 (1922); *see also* New Jersey v. New York, 283 U.S. 336 (1931); Nebraska v. Wyoming, 325 U.S. 589 (1945).

103. *See* Johnson, *supra* note 9; *see also* Johnson, *supra* note 101.

104. *See New Jersey*, 283 U.S. at 336.

105. Strobel v. Kerr Salt Co., 58 N.E. 142, 145 (N.Y. 1900).

106. *See* Johnson, *supra* note 9; *see also* Johnson, *supra* note 101.

107. *Id.*

108. 18 F.2d 736, 738 (1st Cir. 1927).

109 *Strobel*, 58 N.E. at 147; Smith v. Staso Milling Co., 18 F.2d 736, 736 (1st Cir. 1927).

110. *Strobel*, 58 N.E. at 148.

equitable relief here, because otherwise, as conditions inevitably continue to worsen, the states could resort to more combative measures.[111] As the Court in *New Jersey v. New York* warned, "different considerations come in when we are dealing with independent sovereigns having to regard the welfare of the whole population and when the alternative to settlement is war."[112] While war may seem an extreme prediction, the effects on Louisiana and Mississippi have truly been detrimental across economic, ecological, and social spheres, no progress has been made, and at the end of the day, water is a necessity for life.

In relation to *Florida*, Mississippi and Louisiana are experiencing the same problem in that the upstream riparians, Georgia and midwestern states, respectively, are unreasonably using interstate water bodies to the detriment of downstream riparian states.[113] The concern as to whether an equitable apportionment decree would remedy the harm in question, as discussed in *Florida*, seems like it would be less of an issue with regards to the Mississippi River conflict.[114] That is, while it may be disputable whether limiting the amount of water Georgia uses out of the ACF will substantially rectify the harm Florida is experiencing, there can be no doubt that curbing midwestern states' nutrient pollution of the Mississippi River would immensely improve the quality and usability of the River for Louisiana and Mississippi.[115]

South Carolina v. North Carolina's relevance to Louisiana, Mississippi, and the midwestern states would appear to be that should one state, e.g., Louisiana, bring action against another, e.g., Iowa, Mississippi and other midwestern states impacted by the Mississippi River nutrient pollution issues could intervene.[116]

The different claims at issue in *Mississippi v. Tennessee* illustrate that, regardless of how an action is characterized in the pleadings, the Supreme Court is the proper judicial body to hear interstate water disputes.[117] Thus, while Louisiana and Mississippi may bring a bill in equity before the Supreme Court seeking an equitable apportionment decree with respect to water quality, ultimately what matters most is (1) that the Supreme Court facilitates a resolution of this dispute, before states take more direct,

111. *See*, *e.g.*, New Jersey v. New York, 283 U.S. 336 (1931).
112. *Id.* at 342.
113. Florida v. Georgia, 138 S. Ct. 2502, 2510 (2018); *see* Johnson, *supra* note 9; *see also* Johnson, *supra* note 101.
114. Florida v. Georgia, 138 S. Ct. at 2511, 2518.
115. *See id.* at 2511, 2518; *see also* Johnson, *supra* note 101.
116. *See generally* South Carolina v. North Carolina, 130 S. Ct. 854 (2010).
117. *See* Mississippi v. Tennessee, 135 S. Ct. 2916 (2015).

assertive, or extrajudicial action; and (2) that the Court issue some kind of equitable remedy that prevents the midwestern states from continuing to harm their downstream riparian neighbor states, whether or not that is specifically an equitable apportionment decree.

B. Standing and Equitable Remedy Constraints

Section IV(A) demonstrated (1) that states can assert riparian rights and seek an equitable remedy for an apportionment of the Mississippi River and (2) that Louisiana and Mississippi have a strong case that the Supreme Court should grant an equitable apportionment decree, and in so doing could remedy the harms to downstream riparian states. Before the Supreme Court grants certiorari, Louisiana and Mississippi must establish standing; they likely will. In response, opponents of their action may assert several defenses, i.e., "equitable constraints," including the specificity requirement, equitable ripeness laches, and unclean hands.[118] Louisiana and Mississippi and those who would support them in their action for an equitable apportionment decree would need to explore the merits of such defenses and how they might be overcome,[119] a topic beyond the scope of this Article.

1. Bona Fide Dispute

First, however, before the Court will exercise its original jurisdiction over a suit brought by Louisiana and Mississippi against upstream midwestern defendants, Louisiana and Mississippi will have to show that there is a *bona fide* dispute between the states over an interstate water,[120] because the Court prefers that states settle controversies through "mutual accommodation and agreement."[121] Louisiana will likely be able to demonstrate a *bona fide* dispute. The harm Louisiana and Mississippi endure is ongoing and has not improved despite collaborative efforts.[122] It

118. Bray, *supra* note 41, at 13.

119. *See id.*

120. Davis, *supra* note 100, at 48 (2009) (applying the term *bona fide* to emphasize the type of equitable apportionment dispute the court will hear).

121. Arizona v. California, 373 U.S. 546, 564 (1963) (quoting Colorado v. Kansas, 320 U.S. 383, 392 (1943)).

122. *See* Xander Peters, *Why the Mississippi River Needs a Bill of Rights*, EARTHER, Sept. 30, 2019, https://earther.gizmodo.com/why-the-mississippi-rivers-needs-a-bill-of-rights-183862 2650 [https://perma.cc/WH6Q-GVAP?type=image]; *see also* Briscoe, *supra* note 1; EPA, *History of the Hypoxia Task Force*, https://www.epa.gov/ms-htf/history-hypoxia-task-force [https://perma.cc/Q9M9-PGFG?type=image].

is well established that the harm is flowing from upstream riparian agricultural endeavors, as the U.S. Geological Survey determined that "agricultural sources in the watersheds of the river's basin contribute to more than 70% of the nitrogen and phosphorus" entering the river and causing the dead zone in the Gulf.[123]

In response, as noted earlier, the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force ("the Hypoxia Task Force") was established in the fall of 1997.[124] The task force's purpose was "to understand the causes and effects of eutrophication in the Gulf of Mexico; coordinate activities to reduce the size, severity, and duration; and ameliorate the effects of hypoxia."[125] However, more than twenty years have passed since this Hypoxia Task Force began and the dead zone has only grown.[126] Leaders of the Task Force, including its co-chair Mike Naig, do not support agricultural regulation for fear that it will "breed bitterness" between the farmers and government.[127] In light of the history of worsening conditions and present sentiments put forth by the leaders of the Hypoxia Task Force, the prospect that the Hypoxia Task Force will meet its 2025 goal of a twenty percent reduction of nitrogen and phosphorus is illusory.[128] Therefore, Louisiana will be able to show a *bona fide* dispute because the harm is well recorded and the collaborations to resolve the harms have failed and show no prospect of improving. Thus, another path to remedy must be employed and that path is equitable apportionment.

After satisfying the *bona fide* requirement, Louisiana and Mississippi will next have to establish that they meet the three elements of standing required for a decree of equitable apportionment from the U.S. Supreme Court.[129] To establish standing in an equitable apportionment case, Louisiana will have to demonstrate (1) it has suffered a wrong; (2) through the action of another state, i.e., the wrong is fairly traceable to the upstream riparians (here, the midwestern states, particularly actors engaged in agricultural pursuits); and (3) its injury is likely redressable by an

123. *See* Peters, *supra* note 122; *see also* Briscoe, *supra* note 11.

124. *See* EPA, *supra* note 122.

125. *See id.*

126. *See* Breitburg et al., *supra* note 1313; *see also* Mark Schleifstein, *Gulf Dead Zone No Smaller, Yet Hypoxia Task Force Cites Improvements*, THE TIMES-PICAYUNE (Dec. 7, 2016), https://www.nola.com/news/environment/article_5f47c0e8-b78d-519d-8302-fc71b1319390.html [https://perma.cc/EEQ2-UP8F?type=image].

127. *See* Johnson, *supra* note 101.

128. *See* Breitburg et al., *supra* note 13; *see also* Johnson, *supra* note 101.

129. *See* Maryland v. Louisiana, 451 U.S. 725, 735-36 (1981).

equitable apportionment of the interstate water stream (here, the Mississippi River).[130] Second, the complaining state must show by clear and convincing evidence a "threatened invasion of rights . . . of serious magnitude."[131] Third, the complaining state must demonstrate by clear and convincing evidence that the benefits of apportionment substantially outweigh the harm.[132] Finally, should the state satisfy these requirements, the Court is obligated to grant a decree regardless of the difficulty apportionment might present.[133]

2. Injury

The Mississippi River runs through Louisiana into the Gulf of Mexico.[134] As discussed in Part I, the nutrient pollution of the Mississippi River by upstream midwestern states has led to economic and ecological harm for the people of Louisiana and Mississippi.[135] Louisiana and Mississippi can look to other states, who obtained an equitable apportionment decree, to determine what would likely satisfy the Court's requirement that they have sustained a substantial injury.[136] In *New Jersey v. New York*, New Jersey alleged sufficient allegations of injury, including affecting the sanitary conditions of the River, increasing the salinity of the water, harming the oyster industry, injuring the shad fisheries, and injuriously affecting the river for recreational purposes.[137] There, even though the Court, through analysis of the Master's findings, did not issue the decree based on the alleged harm to the sanitary conditions or fisheries, it did find that, indeed, harm would result to the oyster fisheries and issued the decree based on this harm.[138] Thus, Louisiana and Mississippi need to allege their injuries, but it is not necessary for the Court to make favorable findings of fact for each one.[139] Here, however, given the body scientific studies and reports and that the Hypoxia Task Force was created to address

130. *See id.*

131. New York v. New Jersey, 256 U.S. 296, 309 (1921).

132. *See Colorado I* at 188 (where the Court first utilized the "balance-of the harms" test to decide whether a State is entitled to equitable apportionment.).

133. *See* Idaho *ex rel.* Evans v. Oregon (*Idaho I*), 444 U.S. 380, 390 (1980).

134. *Mississippi River Facts*, NAT'L PARKS SERV., https://www.nps.gov/miss/riverfacts.htm [https://perma.cc/7SEM-W3AJ?type=image].

135. *See generally* Part I.

136. *See* Wyoming v. Colorado, 259 U.S. 419 (1922); *see also* New Jersey v. New York, 283 U.S. 336 (1931); Nebraska v. Wyoming, 325 U.S. 589 (1945).

137. 283 U.S. at 343.

138. *See id.* at 345.

139. *See id.*

this injury, Louisiana and Mississippi should easily be able to establish an injury in fact.[140]

In analyzing the competing interests in riparian rights and assessing the relative injuries caused by either judicial inaction or by court-imposed remedy, courts consider, among others, the following factors[141]:

> physical and climatic conditions, the consumptive use of water in several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas [and] the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former.[142]

Here, the Special Master, who would undertake to make factual findings for the Court in an equitable apportionment case, should focus on "the character" of the return flows and "the damage to upstream areas as compared to the benefits to downstream areas."[143] The Special Master would likely find that the character of the water is of such a diminished quality that when upstream riparians permit nitrogen and phosphorus runoff from their farms to enter the Mississippi River, the resulting harm to downstream riparians in Louisiana[144] constitutes an *unreasonable* use of the water that violates upstream states' duties under the doctrine of riparianism. Furthermore, a Special Master would also likely find that given the extreme harm to the Gulf of Mexico—which is the second largest dead zone in the world—and given the importance of the oyster industry to Louisiana's economy, on balance, the benefit a degree of equitable apportionment would provide to Louisiana would more than outweigh the harm that it would cause to upstream agricultural operations, who would have to change how they operate and what and how much runoff they permit to go into the Mississippi River.[145]

The harmful effects of nutrient pollution to downstream riparians of the Mississippi River are exacerbated annually by spring flooding.[146] When snow melts in the Midwest and April showers down rain, flow of

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140. *See* EPA, *supra* note 122; *see also* Schleifstein, *supra* note 126.

141. South Carolina v. North Carolina, 130. S. Ct. 854, 857 (2010) (quoting *Colorado I*, 459 U.S. at 183).

142. *See Nebraska*, 325 U.S. at 618.

143. *Id.*

144. *See* EPA, *supra* note 122; *see also* Schleifstein, *supra* note 126.

145. *See* Schleifstein, *supra* note 126.

146. *See* Kate Sheppard, *The Mississippi River Flooding, Explained*, MOTHER JONES (May 9, 2011), https://www.motherjones.com/politics/2011/05/mississippi-river-flooding-explained/ [https://perma.cc/MW45-86DH?type=image].

the Mississippi increases to the point that southern riparians experience massive flooding.[147] This flooding has worsened in recent years.[148] For example, in New Orleans, the Army Corps of Engineers (hereafter, Corps) responds to the floods by opening the Bonnet Carré Spillway to divert some of the water and release pressure that would otherwise be placed on the levees.[149] The Bonnet Carré Spillway releases the freshwater floodwaters into Lake Pontchartrain and subsequently into the Gulf of Mexico.[150] In 2019, for the first time in the history of the Spillway, the Corps opened the Spillway twice in the same year.[151] As a consequence of the increased flooding, several harms ensued. First, the inundation of freshwater into estuaries caused ecological harm by disrupting the salinity of marine ecosystems.[152] This also caused economic harm, by decreasing marine species like shrimp and consequently the livelihood of shrimp fishermen.[153] Second, the floodwaters increased the quantity of nutrient-polluted water from upstream riparians flowing into the Gulf of Mexico, which led to a larger dead zone.[154] Third, the tourist industries of Louisiana and Mississippi were severely impacted by floods and the dead zone as people stayed away from the beaches in response.[155] While the upstream midwestern states may not contribute to the floods, they are contributing to the nutrient pollution issues responsible for harming the marine ecosystems and water quality downstream, and the effect of their actions has worsened each year due to flooding. Yet their poisoning of the river continues.

3. Fairly Traceable

Next, Louisiana and Mississippi would have to demonstrate that the injury to the Mississippi River and Gulf of Mexico is fairly traceable to

147. *See id.*

148. *See* Jeff Adelson, *Bonnet Carré Spillway Finally Closing Months After Historic 2nd Opening in Same Year*, NOLA.COM (July 22, 2019, 2:08 PM), https://www.nola.com/news/environment/article_f4d09914-ac8b-11e9-a00b-5bcc594363a3.html [https://perma.cc/G9BZ=RPUR?type=image].

149. *See id.*

150. *See id.*

151. *See id.*

152. *See id.*

153. *See* Johnson, *supra* note 101.

154. *See id.*

155. *See* Mike Lacy, *Tourism Officials: Hotel Revenue Losses Close to $4.1 Million*, WLOX (Aug. 28, 2019, 8:27 PM), https://www.wlox.com/2019/08/28/tourism-officials-hotel-revenue-losses-close-million/.

the midwestern states and their agricultural industries.[156] Again, Louisiana and Mississippi will likely prevail on this showing due to the scientific findings and creation of the Hypoxia Task Force discussed above.[157] For example, in *Florida*, even though the Court did not issue an equitable apportionment decree, it did exercise its original jurisdiction to hear the case because it was well established that Georgia's use of the ACF Basin waters caused decreased flow to Florida, thereby causing the state harm.[158] Here, the Hypoxia Task Force and its history of attempting to reduce hypoxia in the Gulf is evidence in and of itself of the causal link between upstream midwestern and downstream southern users of the Mississippi River.[159]

4. Remedy

The final and most challenging element to prove in an original jurisdiction case seeking an equitable remedy is the element of remedy.[160] That is, the complaining state often struggles to sufficiently demonstrate that, should the Court grant an equitable apportionment decree, the benefit to the complaining state(s) would outweigh the harm to the defendant state(s); this is where many of the equitable constraint defenses might come into play.[161]

When determining whether or not to grant an equitable apportionment remedy, the Court will look to whether or not the decree will redress the injury.[162] This is arguably why the majority of the cases seeking an equitable apportionment decree fail[163]—remember, the Supreme Court has only ever issued three equitable apportionment decrees. However, even if the remedy element is difficult to prove, the Court will not necessarily dismiss the case.[164] Indeed, in the Court's most recent equitable apportionment case, *Florida*, the Court refused to dismiss the case but instead remanded for further factual findings because it seemed like Florida could, upon further fact-finding, meet its burden of

156. *See* Maryland v. Louisiana, 451 U.S. 725, 735-36 (1981).
157. *See supra* Part III(F).
158. *See generally*, Florida v. Georgia, 138 S. Ct. 2502, 2512 (2018).
159. *See* Breitburg et al., *supra* note 13; *see also* Johnson, *supra* note 101.
160. *See Florida*, 138 S. Ct. at 2518.
161. *See*, *e.g.*, *id.* at 2517 (indeed this is part of what Florida will need to show on remand).
162. *See* Maryland v. Louisiana, 451 U.S. 725, 735-36 (1981).
163. *See*, *e.g.*, *Florida*, 138 S. Ct. at 2518
164. *See*, *e.g.*, *id.* at 2526-27.

showing that a cap on Georgia's consumption would redress Florida's injury.[165]

Here, however, the circumstances in *Florida* are sufficiently distinct from Louisiana and Mississippi's situation such that they may not run into the same redressability obstacles. In *Florida*, the Court did not yet have enough evidence to find that the decree would redress Florida's injury, though it may so find on remand.[166] While it may be difficult to ascertain the precise amount of increase in water flow that constitutes a substantial remedy for Florida, here, requiring midwestern states to reduce the nutrient pollution to the Mississippi River would undoubtedly reduce the harm downstream. To what degree and how to accomplish this reduction, however, is yet to be determined and is outside the scope of this Article. Nevertheless, Louisiana and Mississippi should be able to show that a decree would meet the appreciable-benefit requirement the Court looks to when deciding whether to issue an equitable apportionment decree.

5. Type of Equitable Remedy

While Louisiana and Mississippi would have a strong case to make for an equitable apportionment decree, the type of decree it would request is also important. In considering equitable remedies, the Court looks to the specific remedy requested. The issue Louisiana and Mississippi face now is not a diminished flow in the water but rather diminished water quality.[167] The nutrient-burdened water has created great ecological and economic harm to Louisiana and Mississippi.[168] Thus, rather than request that the Court issue a decree requiring the upstream states to ensure a percentage of the flow downstream, Louisiana should request a decree that midwestern states take measures to ensure that the quality of the water is sufficiently free of nitrogen and phosphorus so as not to cause the eutrophication problems Louisiana and Mississippi are currently facing. Again, the specifics of what an equitable decree based on water quality would look like is beyond the scope of this Article, but nevertheless is an important consideration for any state wishing to seek an equitable remedy to redress nutrient pollution in the Mississippi River.

165. *See id.* at 2527.
166. *See id.*
167. *See* Johnson, *supra* note 101.
168. *See id.* 9.

6. Ripeness

Louisiana and Mississippi will also need to demonstrate that their particular circumstances meet the ripeness requirement, that is, that their case is ripe for adjudication.[169] The history of harm to downstream riparians in Louisiana and the worsening situation economically and ecologically, as discussed above, lays the foundation for the Court to find that the situation between the parties is sufficiently ripe to warrant adjudication.[170] Louisiana and Mississippi can show that they pursued initiatives like the Hypoxia Task Force, which failed, and that the situation is worsening for their citizens[171] such that serious, timely action is imperative now. Scientific reports and news articles to this effect are abundant and frequently showcase the heightened desperation.[172] Additionally, Louisiana and Mississippi can cite to precedent where the Court accepted similar but far less extreme equitable apportionment cases in *Florida v. Georgia* and *New York v. New Jersey*, where states faced similar harms to their economies and ecosystems, including economic harm to oyster and fishing industries.[173]

In sum, the strengths of an original jurisdiction action by Louisiana and Mississippi for an equitable remedy include the riparian tradition; the extreme, unreasonable use and resulting harm to them; the history of attempted yet failed resolutions; and the degree to which the injury is affecting Louisiana and Mississippi in a more visible and dire manner than ever before on economic, ecological, and recreational levels. The weaknesses are that the Supreme Court has not issued an equitable apportionment decree for water *quality* before; has only ever issued three equitable apportionment decrees; and Louisiana and Mississippi run the risk of challenge to a requested equitable remedy due to laches, unclean hands, and remedy specificity concerns. Nevertheless, Louisiana and Mississippi have strong counterpoints to such defenses and a strong framework and old tradition of riparian law on their side, which should facilitate the Court's ability to oversee a resolution and issue an equitable remedy, in whatever form that may take.

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169. *See*, *e.g.*, *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017, 1028 (1983) (declining to apportion due to lack of ripeness in an equitable apportionment case about rights over interstate fish runs).

170. *See supra* Part III(A).

171. *See* Lux, *supra* note 7; *see also* Johnson, *supra* note 101; *see also* Briscoe, *supra* note 1.

172. *See id.* 791101

173. *See*, *e.g.*, *Florida* 138 S. Ct. at 2518-19; *see also New Jersey*, 283 U.S. at 345-46.

V. CONCLUSION

In the last twenty-three years, the Gulf of Mexico dead zone has only grown. Collaborative efforts to reduce eutrophication in the Gulf have failed; nutrient pollution in the Mississippi River is only increasing. This dead zone combined with annually worsening floods—floods that have forced the Army Corps of Engineers to open the Bonnet Carré Spillway twice in one year for the first time in eighty years—create devasting economic and ecological harms to both Louisiana and Mississippi. These states likely will not and cannot tolerate another summer like 2019. It is time for them to take action, and a promising, but as yet unexplored, avenue is to seek an equitable apportionment decree from the Supreme Court of the United States. The Supreme Court is not blind to the plight of the Mississippi River's downstream riparians and, recognizing all they have suffered, will most likely hear a case pursuing a decree for equitable apportionment of the Mississippi River—after all, they would not want these sovereign states asserting their interests via nonjudicial means. Many questions remain to be explored concerning the specifications of the remedy the Court would grant, how that remedy would function, and whether Louisiana and Mississippi can successfully overcome equitable defenses. The option to resolve this interstate water conflict through equitable remedy is now laid forth with a process and legal precedent for those wishing to redress this harm to consider. Regardless of which action is taken, "[e]ventually all things merge into one and a river runs through it"—the opportunity to change that flow must be seized now![174]

174. NORMAN MACLEAN, A RIVER RUNS THROUGH IT 104 (Univ. of Chi. Press, 2017) (1976).