Note

The Mississippi River Basin Compact: A New Governance Structure to Save the Mississippi River

*John Stack**

The Mississippi River is one of the most significant and yet one of the most imperiled water bodies in the United States. It faces a myriad of problems, from rampant pollution, widespread flooding, wildlife habitat loss, and considerable droughts. Indeed, this is a critical time for the Mississippi River. Fall of 2023 saw River levels drop to extreme lows, with commercial barges grounded and cities deploying emergency measures to protect their municipal water intakes from saltwater intrusion. Meanwhile, polluted Mississippi River water created a dead zone in the Gulf of Mexico spanning hundreds of square miles, just as it has every summer over the past few decades. Only months prior, record winter precipitation brought major flooding to cities along the upper part of the Mississippi.

As demands on the River increase as climate change worsens and the population of the United States grows, these stresses will compound. Droughts will become more consequential, and floods will become more devastating. Impairments to barge traffic will

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* J.D. Candidate 2024, University of Minnesota Law School. I would like to extend my deepest gratitude to all who helped me along the way with this Note. Thank you to Senator John Hoffman and Alexandra Campbell-Ferrari, Executive Director of The Center for Water Security and Cooperation for guidance and the work they continue to do for the Mississippi River. Thanks to Mark Davis, Haley Gentry, and the entire Tulane Institute on Water Resources and Policy, whose shoulders I am standing on making this Note. Thank you to my faculty advisor, Professor Richard W. Painter. Thank you to Dr. Matt Simcik for first setting me down this path. Thanks to the editors and staff of Minnesota Law Review Volumes 107 and 108 for their contributions and editorial work, notably Calvin Lee, Evan Dale, Ben Parker, Abigail Ward, Kat Vu, and Toph Beach. Finally, I would like to thank my family, Dan, Jami, Eric, and Katelyn, and my partner Taylor Chevalier for all of their love, support, and understanding. Any mistakes are my own. Copyright © 2024 by John Stack.

have growing impacts on the economy of the whole United States. Thus, the window of time the country has to put in place preventative measures is slipping and a solution must be implemented quickly.

This Note traces the issues facing the Mississippi back to a problem of governance. Existing state and federal initiatives have failed to make a marked dent in many of these problems by failing to work together in a consistent manner. States individually face a collective action problem, lacking the power or the will to effectuate solutions within their borders. The federal government under existing legislation has also been unable to regulate the Mississippi effectively and now has diminished authority to do so after Sackett v. EPA.

In the face of this interstitial power vacuum, this Note proposes a solution that passes legal muster: an interstate compact. Compacts between states are explicitly enshrined in the Constitution, favored by the Supreme Court, and have a track record of success when it comes to regulating water bodies. Specifically, the Great Lakes Water Compact and the Delaware River Basin Compact provide strong models for watershed governance that could well be scaled to the Mississippi River Basin. These compacts draw upon the legal authority of each sovereign signatory, harmonically regulating their respective waterbodies. This Note broadly outlines an interstate compact for the Mississippi River that combines the powers and interests of the states in the Mississippi River basin as well as the federal government, creating an interstate agency that has the legal authority necessary to effectuate proper and timely decisions. While not purporting to provide a silver bullet to the problems faced by the River, this Note argues that such an interstate compact is the best mechanism from which effective solutions can be borne to sustain this great American body of water for future generations.

INTRODUCTION

It is hard to overstate the importance of the Mississippi River to American life. If a drop of water falls in the continental United States, it has a forty-one percent chance of ending up in the Mississippi.[1] The Mississippi's drainage basin takes up thirty-one states, two Canadian provinces, seventy-nine Indian reservations, and is the third largest in the world.[2] It has been many things for many users over the centuries. A spiritual source of life and home for Indigenous Peoples.[3] A super-highway of naval commerce.[4] An irreplicable flyway for migrating birds.[5] An aquatic ecosystem supporting hundreds of species.[6] A water source for millions of people, sustaining the great cities that grew up on its banks: Minneapolis, St. Paul, St. Louis,

1. *The Mississippi Drainage Basin*, U.S. ARMY CORPS OF ENG'RS: NEW ORLEANS DIST., https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Mississippi-River-Tributaries/Mississippi-Drainage-Basin [https://perma.cc/462X-KHHU].

2. A river's drainage basin is the total area where water, if allowed to flow freely, will end up in that river. *See, e.g.*, *id.*

3. *See, e.g.*, *Bdote*, MINN. HIST. SOC'Y, https://www.mnhs.org/fortsnelling/learn/bdote [https://perma.cc/46HA-AKP3] (discussing the reverence the Dakota people have for the confluence of the Minnesota and Mississippi rivers as a place of birth).

4. *Commodities on the Mississippi River: 2019*, BUREAU OF TRANSP. STAT., https://www.bts.gov/modes/maritime-and-inland-waterways/commodities-mississippi-river-2019 [https://perma.cc/LZ5Z-DPBC] ("According to the U.S. Army Corps of Engineers (USACE), the Mississippi River carried more than 500 million short tons of imports, exports, and domestic freight in 2019.").

5. *Priority Birds*, AUDUBON DELTA, https://delta.audubon.org/birds/priority-birds [https://perma.cc/W2FJ-S8FN] ("More than 325 bird species make the round-trip each year along the Mississippi Flyway, from their breeding grounds in Canada and the northern United States to their wintering grounds along the Gulf of Mexico and in Central and South America."); Scott Siff & David Mears, *The Mississippi River Basin: A National Treasure, a National Challenge*, 12 TUL. ENV'T L.J. 293, 296 (1999) ("The Mississippi is a migration corridor for forty percent of the waterfowl and shorebirds in North America, and the habitat in which more than 118 species of fish and almost fifty species of mussels are found, including a number of endangered species.").

6. *Mississippi River Facts*, NAT'L PARK SERV. (last updated Feb. 10, 2022), https://www.nps.gov/miss/riverfacts.htm [https://perma.cc/7RAT-WT6H] (providing that the Mississippi River is home to at least 260 species of fish, 326 species of birds, 50 species of mammals, and 145 species of reptiles and amphibians).

Memphis, New Orleans, and over one hundred others.[7] Despite the indisputable importance of this River and its tributaries in the lives of millions of Americans—whether seen or unseen—the legal and policy regime governing over this body of water has failed it. Rampant pollution, intense flooding, devastating drought, and habitat loss abound.

There are multiple causes leading to this failure, but most all can be directed to balkanized management of the River.[8] To get a sense of the enormity of this problem, one must look no further than the 6,952 square mile, New Hampshire–sized dead zone in the Gulf of Mexico that forms in the Mississippi Delta annually in late summer,[9] the phenomenal loss of life and property damage from Hurricane Katrina,[10] or the droughts recently plaguing the River and impeding barge traffic.[11] What's more, the problems facing the Mississippi River will only increase in

7. *Id.* (estimating that as of 1982, eighteen million people relied on the Mississippi River for water supply, and more than fifty cities rely on it for municipal water); *see also* Siff & Mears, *supra* note 5, at 296 ("Twenty-seven percent of the population of the United States lives within [the Mississippi River] drainage area."); *What We Do*, MISSISSIPPI RIVER CITIES & TOWNS INITIATIVE, https://www.mrcti.org/about-us [https://perma.cc/2BT9-VNNR] ("There are 124 Mississippi River main stem cities and towns.").

8. Mark Davis, Director, Tul. Inst. on Water Res. L. & Pol'y, Multi-State Compacts and Regional Water Management, Paper Presented at America's Great Watershed Initiative 1 (Aug. 3, 2012), https://americaswatershed.org/wp-content/uploads/2014/09/AGWI-Davis_Paper.pdf [https://perma.cc/KD6P-5T3D] ("The result is a patchwork quilt of private and public legal rights and duties that almost guarantee conflict between states and the federal government. Nowhere is this truer than in the watershed of the Mississippi River where no fewer than 31 separate state legal regimes combine with a variety of federal laws and programs and tribal rights hold sway over the waters that become that great river.").

9. A river's delta is the point where the river meets another water body, often supporting unique ecosystems at the confluence of freshwater and saltwater. *See* Chiara Kalogjera-Sackellares, *Reviving the Mississippi River: Riparianism and Equitable Remedies*, 34 TUL. ENV'T L.J. 61, 78–80 (2021).

10. *Hurricane Katrina - August 2005*, NAT'L WEATHER SERV. (last updated Sept. 2022), https://www.weather.gov/mob/katrina [https://perma.cc/4582-YJN9] (estimating that Hurricane Katrina resulted in $108 billion in damage).

11. Debbie Elliot, *Saltwater Is Moving up the Mississippi River. Here's What's Being Done to Stop It*, NPR (Oct. 27, 2022), https://www.npr.org/2022/10/27/1131452623/saltwater-mississippi-river-drought-gulf-of-mexico [https://perma.cc/37PK-KMGU]; Keely Brewer et al., *Drought on Mississippi River Expected to Persist Through Winter*, ARK. ADVOC. (Nov. 13, 2023), https://arkansasadvocate.com/2023/11/13/drought-on-mississippi-river-expected-to-persist-through-winter [https://perma.cc/2KNR-YXV5].

intensity as climate change threatens the River's supply, while demand for water grows in tandem with the population of the United States.[12] Ominous threats of pumping Mississippi River water west abound, increasing as drought wreaks continued havoc on the American West.[13]

The legal regime currently governing the Mississippi River is both massive and discordant.[14] For example, individual states maintain water quality standards and regulate water pollution for the Mississippi and its tributaries within their borders.[15] However, the Federal Clean Water Act allows the Environmental Protection Agency (EPA) to regulate point-source pollution but leaves the regulation of ubiquitous nonpoint source pollution to state and local governments.[16] Attempts to bring cohesive management to the Mississippi River by uniting regulators and stakeholders from federal, state, and local governments have largely been unsuccessful.[17]

However, there is hope for a better governance mode that is steeped in the Constitution: an interstate water compact. Two successful models of this unique regulatory structure show possibilities for the Mississippi River Basin. In 2008, Congress passed the Great Lakes—St. Lawrence River Basin Water Resources Compact (Great Lakes Water Compact) for eight states

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12. *See infra* Part I.C.

13. *See* Brittney J. Miller, *Pumping Mississippi River Water West: Solution or Dream?*, ASSOCIATED PRESS (Feb. 2, 2023), https://apnews.com/article/science-arizona-state-government-california-disaster-planning-and-response-automated-insights-earnings-be28e7e022007c82cdee63ca2b9ed555 [https://perma.cc/3AWU-6X2R] (detailing efforts by western states to move water naturally destined for the Mississippi to parched western regions); *see also* Trevor Russell, *A Bad Idea That Won't Go Away: Diverting the River*, FRIENDS OF THE MISS. RIVER (Nov. 17, 2023), https://fmr.org/updates/water-legislative/bad-idea-wont-go-away-diverting-river [https://perma.cc/U85G-Q2G4].

14. *See* Sandra Zellmer, *A Tale of Two Imperiled Rivers: Reflections from a Post-Katrina World*, 59 FLA. L. REV. 599, 618 (2007) ("Supreme Court jurisprudence on water-related matters is replete with federalism rhetoric, but in fact, federal-state relations over water are anything but consistent.").

15. *See infra* Part I.B.

16. *See infra* Part I.A. "The term 'point source' means 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 . . . ." 33 U.S.C. § 1362(14).

17. *See* discussion *infra* Part I.B. (analyzing the lack of synchroneity that persists in the Mississippi River's governance today).

(Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, Pennsylvania, and New York) encompassing the Great Lakes and St. Lawrence River watershed.[18] The purpose of the Great Lakes Water Compact is to form a governance model for the Great Lakes with a focus on limiting out-of-basin water diversions to conserve lake levels.[19] The Delaware River Basin Compact similarly has shown marked gains for the Delaware River by promoting consistent governance for water quality and quantity among its four basin states—New York, New Jersey, Delaware, and Pennsylvania—and the federal government.[20] The Great Lakes and Delaware River interstate compacts stand in contrast to the more numerous interstate water compacts of the arid American West, where such compacts are mainly for dividing water for consumptive uses by basin states.[21] As such, the Great Lakes and Delaware River Basin compacts provide excellent models for a wide-ranging Mississippi River Basin Compact.

This Note traces the problems faced by the Mississippi River to a failure of consistency in governance and law. A solution to these issues is found in a constitutional interstate compact, where the Great Lakes Water Compact provides a procedural framework for undertaking a large water resource compact in the twenty-first century, and the Delaware River Basin Compact provides key substantive provisions translatable for the Mississippi River.

Watershed-level management of water bodies has long been seen as the most effective and nature-responsive means to govern water resources, as it accounts for the intimate connections between bodies of water and their tributaries (including groundwater) by regulating both holistically.[22] An interstate compact is

18. Great Lakes—St. Lawrence River Basin Water Resources Compact, Pub. L. No. 110-342, 122 Stat. 3739 (2008).

19. *See id.* at 3743. Out-of-basin diversions for the Great Lakes refer to uses of water naturally destined to end up in the Great Lakes, and either consuming that water or altering its path so that it no longer ends up in the Great Lakes. *See id.* at 3740–41.

20. Delaware River Basin Compact, Pub. L. No. 87-328, 75 Stat. 688 (1961).

21. *See infra* Part II. A consumptive use of water is one that removes water from its natural bed and does not return it. *See* 122 Stat. at 3740 (providing definitions).

22. *See* G. Tracy Mehan, III, *A Symphonic Approach to Water Management: The Quest for New Models of Watershed Governance*, 26 J. LAND USE & ENV'T L. 1, 13–16 (2010) (discussing the favorability of governing over a whole

the key to perfecting watershed management for the Mississippi River, as it would provide a forum for management over the entire watershed comprehensively using the sovereign powers of both state and federal governments. As Congress proclaimed when voting to approve the Delaware River Basin Compact: "In brief, there is one river, one basin, all water resources are functionally interrelated, and each one is dependent on the other. Therefore, one comprehensive plan and one coordinating and integrating agency are essential for efficient development and operation."[23] Should the Mississippi River Basin states adopt a watershed-level interstate compact, it would sustainably brace the River against the challenges that a warming planet and growing population pose through coordinated efforts to manage the waterbody.[24] To accomplish this, an interstate compact would need to enforce pollution standards, regulate the River as a recreational and commercial navigation source, consider flood mitigation, and limit or eliminate out-of-basin water diversions while equitably apportioning water usage among basin states.[25]

The idea of an interstate compact for the Mississippi is gaining traction. As one scholar notes, "Given its effect on the rest of the nation, it is likely that a compact is in the Mississippi's future."[26] In September of 2023, several mayors of cities along the Mississippi River gathered in Bemidji, Minnesota, for the annual meeting of the Mississippi River Cities and Towns Initiative.[27] At this meeting, Minnesota Senator John Hoffman and Alexandra Campbell-Ferrari, Executive Director of the Center for

watershed). Watershed management regulates a body of water by including all of the sources of that water. For the Mississippi, this includes not only the River itself, but also its tributaries, such as the Ohio River, the Red River, and the Missouri River. *See The Mississippi Drainage Basin*, *supra* note 1.

23. S. REP. NO. 87-854, at 17 (1961); *see also* Gerald J. Kauffman Jr., *The Delaware River Revival: Four Centuries of Historic Water Quality Change from Henry Hudson to Benjamin Franklin to JFK*, 77 PA. HIST. 432, 446 (2010).

24. *See infra* Part I.C (discussing climate change challenges to the Mississippi River).

25. *See infra* Part IV.

26. Caitrin Reilly, *When in Louisiana, Do as the French Do: The Case for Integrated River Basin Management in Louisiana*, 30 TUL. ENV'T L.J. 41, 80 (2016).

27. Keely Brewer, *Mississippi River Mayors Rally for a Compact to Protect the Waterway*, MINNPOST (Sept. 15, 2023), https://www.minnpost.com/other-nonprofit-media/2023/09/mississippi-river-mayors-rally-for-a-compact-to-protect-the-waterway [https://perma.cc/S6AE-2ADS].

Water Security & Cooperation, proposed an interstate compact for the Mississippi River.[28] In a unanimous vote, the mayors in attendance adopted a resolution to pursue such a compact.[29] This resolution prompts questions: What would such a compact look like? Which states would be members? Would the federal government be a party? How would disputes be adjudicated? Already, opinions on the purposes of such a compact are starting to form and diverge from one another.[30] While answers to these questions are difficult, other attempts at watershed-level governance using the Compact Clause of the United States Constitution provide a plethora of precedents (legal and political) to learn from.

This Note does not purport to provide a panacea to the problems facing the Mississippi River both now and in the future. Rather, this Note seeks to connect the woes of the River to inconsistencies in its management resulting from the numerous distinct water regulatory schemes that affect it, as well as ineffective enforcement mechanisms for downriver states to hold upper basin states accountable for pollution.[31] This Note argues that the watershed-level interstate compact would be an excellent base from which solutions to revitalize and sustain the

28. This proposal would be among the ten states along the Mississippi's main stem. *See* Emily Bright & Aleesa Kuznetsov, *'It Would Be the Biggest Compact Ever:' Proposal Looks to Protect Mississippi River*, MPR NEWS (Sept. 13, 2023), https://www.mprnews.org/episode/2023/09/13/it-would-be-the-biggest-compact-ever-proposal-looks-to-protect-mississippi-river [https://perma.cc/55MP-G7JX].

29. Brewer, *supra* note 27.

30. A New Orleans news outlet discusses the potential of a Mississippi River compact for water pollution control, while a St. Louis–based news source discusses the potential for water quantity control, in-line with the concerns of their respective regions. *Compare* Keely Brewer, *How to Manage the Mississippi River? A Coalition of Mayors Wants a New Approach*, NOLA (Sept. 18, 2023), https://www.nola.com/news/environment/mississippi-river-mayors-push-compact-to-protect-waterway/article_b14c0816-562a-11ee-855f-ff9c808d1c21.html [https://perma.cc/ZD2U-7XEJ] (discussing the potential of such a compact to clean up water pollution in the Mississippi), *with* Tony Messenger, *Mayors Propose Historic Compact to Protect the Mississippi River*, ST. LOUIS POST-DISPATCH (Sept. 22, 2023), https://www.stltoday.com/news/local/column/tony-messenger/messenger-mayors-propose-historic-compact-to-protect-the-mississippi-river/article_879eae8c-58ab-11ee-8f12-eba76a3987bc.html [https://perma.cc/CP47-RAQZ] (highlighting how a Mississippi River compact would allow St. Louis to protect its water supply and keep water levels high enough for barge traffic).

31. *See infra* Part I (discussing the pollution of the Mississippi River).

Mississippi River can be borne.[32] Such a compact must be enacted in a manner that provides consistency in adjudication to resolve disputes, brings accountability among basin states for responsible River stewardship, and provides reliability for future generations of River users.[33] Precedent for such a sea-change in governance in the twenty-first century is found in the Great Lakes Water Compact.[34]

The Note will proceed as thus. Part I discusses the problems faced by the Mississippi River and the actors responsible, as well as the future impacts of climate change and a growing population.[35] Part II introduces the interstate water compact model as a solution to the Mississippi River's regulatory problems and provides examples of such compacts from the arid western United States and the more humid eastern United States.[36] Part III discusses the legal basis of interstate water compacts, the Compact Clause of the United States Constitution, as well as the United States Supreme Court's treatment of these compacts.[37] Finally, Part IV of this Note advocates for the formation of a Mississippi River Basin interstate compact and raises considerations for such an undertaking so that it can be an effective tool in revitalizing the River for future generations.[38]

I. THE PLIGHT OF THE MISSISSIPPI AND ITS WATERSHED

The complexity of management in the Mississippi River Basin is the source of many of its problems. The Mississippi River's watershed is regulated by thirty-two unique governments in the United States.[39] Additionally, seventy-nine Indian tribes and

32. *See infra* Part IV (describing the proposed solution, an interstate water compact, for the Mississippi River Basin with the federal government as a party).

33. *See infra* Part IV (weighing the benefits and costs of such an undertaking).

34. *See generally* PETER ANNIN, THE GREAT LAKES WATER WARS (rev. ed. 2018) (describing the process for creating the Great Lakes Water Compact).

35. *See* discussion *infra* Part I.

36. *See* discussion *infra* Part II.

37. *See* discussion *infra* Part III.

38. *See* discussion *infra* Part IV.

39. A watershed basin is the total area that drains into a body of water. For the Mississippi basin, the governments this includes are the United States, Idaho, Montana, Wyoming, North Dakota, South Dakota, Nebraska, Colorado,

two Canadian provinces exercise sovereign power over the watershed.[40] Each governing entity in the watershed espouses its own uses of this water, controls pollution differently, and pursues goals that are often inconsistent with those of other sovereign stakeholders on the River.[41] States within the basin each

New Mexico, Texas, Oklahoma, Kansas, Minnesota, Iowa, Missouri, Arkansas, Louisiana, Wisconsin, Illinois, Mississippi, Alabama, Tennessee, Kentucky, Indiana, Ohio, New York, Pennsylvania, West Virginia, Virginia, North Carolina, South Carolina, and Georgia. *The Mississippi Drainage Basin*, *supra* note 1.

40. *Mississippi Watershed Map*, AMERICA'S WATERSHED INITIATIVE, https://americaswatershed.org/americas-watershed [https://perma.cc/CCA4-ZLPT] ("The Mississippi River Watershed is the fourth largest in the world, covering all or parts of 31 U.S. states and two Canadian provinces."). The Indian tribal lands include the following: Rocky Boy's, Fort Belknap, Fort Berthold, Crow, Standing Rock, Northern Cheyenne, Fort Peck, Leech Lake, Fond du Lac Upper Sioux, Lower Sioux, Prairie Island, Shakopee Mdewakanton Sioux, Mille Lacs, Cheyenne River, Oglala Sioux, Rosebud, Crow Creek, Lower Brule, Yankton Sioux, Lake Traverse, Flandreau Santee Sioux, Wind River, Ponca (Nebraska), Santee Sioux, Winnebago, Omaha, Sac & Fox (Kansas & Nebraska), Kickapoo (Kansas), Prairie Band Potawatomi, Sac & Fox (Mississippi), Absentee-Shawnee, Alabama-Quassarte, Apache, Caddo, Eastern Band of Cherokee, Cheyenne and Arapaho, Chickasaw, Choctaw Nation of Oklahoma, Citizen Potawatomi, Comanche, Delaware Nation, Delaware Tribe, Eastern Shawnee Tribe of Oklahoma, Fort Sill Apache, Iowa Tribe, Kaw, Kialagee, Kickapoo (Oklahoma), Kiowa (Oklahoma), Miami (Oklahoma), Modoc (Oklahoma), Muscogee, Osage, Otoe-Missouria, Ottawa (Oklahoma), Pawnee (Oklahoma), Peoria Tribe (Oklahoma), Ponca (Oklahoma), Quapaw Nation, Sac & Fox (Oklahoma), Seminole Nation (Oklahoma), Seneca-Cayuga, Shawnee, Thlopthlocco, Tonkawa (Oklahoma), United Keetoowah, Wichita and Affiliated Tribes, Wyandotte, Tunica-Biloxi, Chitimacha, Lac Courte Oreilles, St. Croix Chippewa, Lac du Flambeau, Ho-Chunk, Creek (Poarch), Cherokee Nation, Seneca Nation, Menominee, and Stockbridge Munsee. *Indian Lands of Federally Recognized Tribes*, BUREAU OF INDIAN AFFS. (June 2016), https://www.bia.gov/sites/default/files/dup/assets/bia/ots/webteam/pdf/idc1-028635.pdf [https://perma.cc/W9CK-SU4D] (providing map of tribal governments holding sovereign power over the Mississippi River Basin); *cf.* Indian Entities Recognized by and Eligible to Receive Services from the United States Bureau of Indian Affairs, 88 Fed. Reg. 2112, 2112–16 (Jan. 12, 2023) (listing all federally recognized native American tribes). The Canadian Provinces are Alberta and Saskatchewan. *See Interstate Waters*, MO. DEP'T OF NAT. RES., https://dnr.mo.gov/water/hows-water/state/surface/interstate [https://perma.cc/8UXE-D9WR].

41. *See* Paul T. Babie et al., *Federalism Fails Water: A Tale of Two Nations, Two States, and Two Rivers*, 35 J. ENV'T L. & LITIG. 1, 8–9 (2020) (showing that each state in the Mississippi watershed, and the U.S. federal government, regulates the waters within their own interests and power). For the purposes of this Note, discussion of Canada will be excluded as it is a de minimis geographic part of the Basin. This fits neatly with existing commentary on a potential Mississippi River Compact that focuses on U.S. states. *See, e.g.*, Bright &

have their own unique, intricate system of water law. Generally, the states west of the Mississippi River practice a system of prior appropriation,[42] which is premised on the concept of diverting water from its bed and putting it to a "beneficial use."[43] States abutting the Mississippi and to the east of it practice riparian rights, which is more similar to the tort theory that an owner of land abutting water must use it in a way that does not harm other users.[44]

For the Mississippi watershed, which encompasses thirty-one states, differences between states and between states and the federal government are all the more pronounced. This asynchronous governance was on full display during the 2005 catastrophe of Hurricane Katrina.[45] New Orleans's floodwalls and levees were built via a haphazard network of federal and local structures, made of varying heights and using mismatched materials that did not properly interface and crumbled under the Hurricane's sheer force.[46] While this infrastructure disaster had great consequences for life and property, it represents just a microcosm of the byzantine governance system ruling the Mississippi River which will inevitably lead to continued catastrophe for both the health of the River and its ecosystems, as well as the

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Kuznetsov, *supra* note 28 (describing a Mississippi River Basin compact as being between the thirty-one states in the River Basin). So too, unfortunately, Indian Tribes are not states or parties to the Constitution and may not be parties to an interstate compact. *See* Davis, *supra* note 8, at 4 (citing Arizona v. California, 373 U.S. 546, 597 (1963)) ("An Indian Reservation is not a State.").

42. These states include Idaho, Montana, Wyoming, North Dakota, South Dakota, Nebraska, Colorado, New Mexico, Texas, Oklahoma, Kansas, and Nebraska. *State Water Withdrawal Regulations*, NAT'L CONF. OF STATE LEGISLATURES (Feb. 20, 2013), https://web.archive.org/web/20160307122108/https://www.ncsl.org/research/environment-and-natural-resources/state-water-withdrawal-regulations.aspx [https://perma.cc/Q8JK-3VG9].

43. *See* REED D. BENSON ET AL., WATER RESOURCE MANAGEMENT: A CASEBOOK IN LAW AND PUBLIC POLICY 115–18 (8th ed. 2021) (describing the differences between Eastern and Western United States water law).

44. *See id.* ("As many Americans began moving west in the mid-19th century, they encountered a much drier region than the areas of the United States east of and bordering the Mississippi River. . . . Agriculture . . . required diversion of water from streams for use in irrigation, unlike the East and Midwest where rainfall was adequate for growing crops. . . . [C]laims of riparian rights failed . . . as courts favored an alternative approach to water allocation: prior appropriation.").

45. Zellmer, *supra* note 14, at 600–01.

46. *Id.* (finding a lack of coherent management vision to be the blame for this disaster).

human communities that it sustains.[47] Given this initial background, this Part discusses in Section A how policy and law have failed to keep the Mississippi River free of pollution, with enormous consequences to drinking water and the Gulf of Mexico. Section B discusses how River governance has failed to keep people and wildlife safe from floods, droughts, and habitat degradation. Section C discusses how these failures will compound in coming years and fail to keep this water resource sustainable for future generations.

A. FAILURE TO KEEP THE RIVER CLEAN

The Mississippi River is incredibly polluted.[48] This is most painfully evidenced by the dead zone created by the Mississippi where it outlets into the Gulf of Mexico.[49] The dead zone is buttressed with nutrients from farm fertilizers and manure runoff that mix with urban storm systems feeding into the River, where it fuels the growth of huge algal blooms in the Atlantic Ocean.[50] In the Ocean, these algal blooms perish, sink, and decompose in a process that robs the water of its oxygen, making it hypoxic.[51] Oxygenated water is essential for marine life, and without it, most everything living beneath the waves that is unable to flee the hypoxic zone dies of suffocation.[52]

While blame for the pollution in the Mississippi River abounds, the worst contributors to this problem are agricultural operations that allow fertilizers and other pollutants to run off

47. *See id.* at 600–02.

48. Blythe Bernhard, *Mississippi River Is Second-Most Polluted U.S. Waterway*, ST. LOUIS POST-DISPATCH (Mar. 22, 2012), https://www.stltoday.com/lifestyles/health-med-fit/health/mississippi-river-is-second-most-polluted-u-s-waterway/article_bce8579e-7449-11e1-9b27-001a4bcf6878.html [https://perma.cc/J2N3-CDGE] (describing the pollution in the Mississippi River).

49. *See* Zellmer, *supra* note 14, at 610 ("[T]he Gulf at the mouth of the Mississippi is a '"dead zone" of oxygen-starved water that is larger than the state of Delaware.'" (quoting Oliver Houck, *Can We Save New Orleans?*, 19 TUL. ENV'T L.J. 1, 42 (2006))).

50. *Happening Now: Dead Zone in the Gulf 2021*, NAT'L OCEANIC & ATMOSPHERIC ADMIN., https://oceantoday.noaa.gov/deadzonegulf-2021/welcome.html [https://perma.cc/72X8-JD2F].

51. *See id.* ("The nutrients fuel large algal blooms that then sink, decompose, and deplete the water of oxygen. This is hypoxia, when oxygen in the water is so low it can no longer sustain marine life in bottom or near bottom waters—literally, a dead zone.").

52. *See id.* ("[F]ish and shrimp leave the area and anything that can't escape like crabs, worms, and clams die.").

farmland into waters that flow into the Mississippi.[53] This pollutive agricultural runoff is the result of a major hole in the Federal Clean Water Act (CWA).[54] The CWA allows the EPA to regulate point source pollution hand-in-hand with the states, and it has arguably been quite effective at this regulation.[55] Point source pollution under the CWA is defined by the EPA to include "discrete conveyances" such as pipes or other clear outlets into water.[56] However, agricultural runoff is generally classified as nonpoint source pollution (being outside the definition of "point source"), which the EPA has not been able to regulate directly under the CWA, with regulation left largely to the states.[57] In fact, the CWA states that the term point source, "does not include agricultural stormwater discharges and return flows from irrigated agriculture."[58] The Mississippi River Basin is especially prone to agricultural polluters, as the River supports roughly "92% of the nation's agricultural exports."[59]

While there have been attempts to coordinate voluntary pollution standards and create inter-agency taskforces for the

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53. *See* Zellmer, *supra* note 14, at 610; Kalogjera-Sackellares, *supra* note 9, at 63 ("Each year, rain falls upon farms in the Midwest, washing nitrogen- and phosphorus-saturated soil directly into the Mississippi River.").

54. Kalogjera-Sackellares, *supra* note 9, at 65 (discussing how the CWA "fails to address pollution from nonpoint sources").

55. Alyssa Sieja, Note, *Can We Agree to Agree? Forming Interstate Agreements to Address Water Pollution*, 90 GEO. WASH. L. REV. 989, 998 (2022) ("Since the CWA was passed in 1972, control of point source pollution—e.g., water pollution from industrial and municipal sources—has seen great improvement while control of nonpoint source pollution has remained largely unaddressed.").

56. 40 C.F.R. § 122.2 (2024) ("[P]oint source means 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, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.").

57. *See id.* ("[Point source] does not include return flows from irrigated agriculture or agricultural storm water runoff."); *see also* Kalogjera-Sackellares, *supra* note 9, at 65.

58. 33 U.S.C. § 1362(14).

59. *Mississippi River Facts*, *supra* note 6; *see also* Haley Gentry, *Navigating the Legal Authorities of the Mississippi River: An Introduction to Key Players and Concepts*, TUL. INST. ON WATER RES. L. & POL'Y 1 (July 2023), https://www.tulanewater.org/_files/ugd/32079b_c5c5adaacc5549d4b809797c2223d77d.pdf [https://perma.cc/9NM9-4UTC].

Mississippi, they have largely been unsuccessful.[60] This is evidenced by the continued growth of the dead zone in the Gulf of Mexico.[61] These pollutants are made all the worse by the speed by which they can travel down the River through the unnaturally fast-flowing navigation channels and levees that the Army Corps of Engineers maintains on the Mississippi.[62]

The Mississippi's poor water quality is not only felt in the Gulf of Mexico. Over twenty million people rely on the Mississippi as an everyday domestic water source for drinking, bathing, washing, and cooking.[63] Cities relying on the River have to use expensive water purification plants to remove pollutants to make the water suitable for human consumption.[64] Even in Minnesota, the state that boasts the headwaters of the Mississippi

60. Stephanie K. Chase, Comment, *There Must Be Something in the Water: An Exploration of the Rhine and Mississippi Rivers' Governing Differences and an Argument for Change*, 29 WIS. INT'L L.J. 609, 635 (2011) ("Current efforts to promote interagency collaboration and coordination have failed to produce water quality improvements in the Mississippi River or in the Gulf of Mexico's dead zone."). Some of the failed attempts at limiting pollution in the Mississippi River Basin include a 1998 EPA initiative called the "Clean Water Action Plan and the Mississippi River Basin Initiative," which focused on enforcement actions in the River's watershed, and a 2009 United States Department of Agriculture (USDA) initiative called the "Mississippi River Basin Healthy Watersheds Initiative," which tried voluntary pollution standards for basin states paired with USDA monitoring—both have been unsuccessful in reducing the hypoxic zone in the Gulf of Mexico. *Id.* at 633–34. Historic efforts that have attempted to coordinate collective responses and introduce planning for the Mississippi River Watershed include the ambitious and purportedly comprehensive Water Resources Planning Act of 1965, which quickly fizzled due to a chronic lack of funding and reliance on congressional approval. Pub. L. No. 89-90, 79 Stat. 244 (1965) (codified as 42 U.S.C. §§ 1962a–1962d); *see, e.g.*, Robert W. Adler, *Addressing Barriers to Watershed Protection*, 25 ENV'T L. 973, 1009–13 (1995) (charting the origins and unfulfilled promises of the Act).

61. *See Happening Now: Dead Zone in the Gulf 2021*, *supra* note 50 ("[2021's] dead zone is larger than the average measured over the past five years.").

62. Zellmer, *supra* note 14, at 610 (discussing how pollutants reach the Gulf of Mexico).

63. *See, e.g.*, *Mississippi River Facts*, *supra* note 6; Isabel Englehart, *Mississippi River Nutrient Management: Options for Interstate Collaboration*, TUL. INST. ON WATER RES. L. & POL'Y 1 (May 18, 2023), https://www.tulanewater.org/_files/ugd/32079b_214a0e8245474f0b81955104cfe1f371.pdf [https://perma.cc/9KPZ-FXVL].

64. *See, e.g.*, NAT'L RSCH. COUNCIL, IMPROVING WATER QUALITY IN THE MISSISSIPPI RIVER BASIN AND THE NORTHERN GULF OF MEXICO, at vii (2012) ("For instance, in 1991 the City of Des Moines constructed a $4 million facility to remove excess nitrate levels from its drinking water supply.").

(and, intuitively, the least polluted waters), fish have been so contaminated that the state warns anglers to consume them in very sparse quantities.[65]

The pollution of the Mississippi River is not something that society must accept as a by-product of progress and development. Several alternatives—proven, natural solutions to water pollution—exist.[66] Consistent governance would remove the current "tragedy of the commons" barriers to implementing these solutions.[67] Indeed, interstate pollution of rivers is one of the more classic examples of a tragedy of the commons. Rivers and streams, by their very nature, whisk pollution far away from where it is initially placed. Garrett Hardin, in his famous 1968 essay *The Tragedy of the Commons*, used the example of a polluter dumping into a stream as a clear explanation for how polluters profit by socializing the burdens of their pollution.[68] In the Mississippi River Basin, this is shown by the example of the State of Minnesota. Despite sending 158 million pounds of nitrate down the Mississippi annually, Minnesota faces few to none of the negative consequences of the nitrogen-fueled dead zone growth in the Gulf of Mexico.[69]

On the other hand, downstream states such as Louisiana and Mississippi suffer the most consequences in terms of the

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65. *Fish Consumption Guidelines for Men, Boys Age 15 and Over, and Women Not Planning to Be Pregnant – Rivers*, MINN. DEP'T OF HEALTH (last updated Sept. 2020), https://www.health.state.mn.us/communities/environment/fish/docs/eating/genpoprivers.pdf [https://perma.cc/HQ6T-2P4K]. Note that for children under fifteen and pregnant women, the standards for fisheating are even more stringent. *Id.*

66. *See, e.g.*, Zellmer, *supra* note 14, at 618 (discussing wetland restoration as an environmentally friendly mode of pollution control).

67. *See* Marc J. Roberts, *River Basin Authorities: A National Solution to Water Pollution*, 83 HARV. L. REV. 1527, 1544 (1970) ("Given all these difficulties with decentralized decisionmaking, an efficient solution to the nation's pollution problem requires major changes in the institutional structure of water quality management.").

68. Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1245 (1968).

69. *Nitrogen*, MINN. POLLUTION CONTROL AGENCY, https://www.pca.state.mn.us/pollutants-and-contaminants/nitrogen [https://perma.cc/D7TZ-AK83]. To be fair to the State of Minnesota, many other states contributing to the hypoxic zone in the Gulf of Mexico do not monitor their contribution as stringently, and the state is involved in serious efforts to reduce its nutrient pollution. *Id.*

dead zone as well as contaminated drinking water, despite contributing "relatively little to its cause."[70]

As Hardin suggests in his 1968 essay, a way to escape the tragedy of the commons is mutual coercion, which is mutually agreed upon.[71] A governance structure, where states relinquish part of their sovereignty (as in an interstate compact) fits this description of mutually agreed upon regulation because it would involve a voluntary, mutual, binding agreement to hold one another accountable for their discharges.

B. FAILURE TO KEEP THE RIVER SAFE FOR PEOPLE AND WILDLIFE

Incredible amounts of pollution are not the only problem plaguing the Mississippi River. The Mississippi, and its largest tributary, the Missouri River, are "the most heavily altered river systems in the country."[72] More than eighty percent of the lower Mississippi River is trapped by levees, constructed largely by the United States Army Corps of Engineers (Corps).[73] The Corps institutionally began to regulate the Mississippi River in 1879 with the congressionally authorized "Mississippi River Commission," which still exists and serves as an advisor for the Corps in its projects along the Mississippi River.[74] The modern Corps finds its authority from various Flood Control Acts and Water Resources Development Acts passed by Congress since 1928, which grant wide discretion to alter the Mississippi in the name of flood prevention or navigation.[75] The Corps uses this authority to develop projects and conduct continued maintenance under a cost-benefit analysis that devalues fish, wildlife, and recreation considerations while placing a premium on navigation and

70. Englehart, *supra* note 63, at 2.

71. Hardin, *supra* note 68, at 1247.

72. Zellmer, *supra* note 14, at 604.

73. *Id.* at 606, 608.

74. Gentry, *supra* note 59, at 5 ("In 1879, recognizing a greater need for comprehensive water management, Congress established the Mississippi River Commission ('MRC') to oversee efforts to improve navigation, prevent floods, and promote commerce in the Mississippi River Valley. . . . MRC's jurisdiction has expanded over time and now extends across a broader region of the Mississippi River Valley.").

75. Zellmer, *supra* note 14, at 622.

commerce.[76] In light of this, it can be argued that the Corps treats the Mississippi River as little more than a water highway that requires intermittent maintenance. Of course, this is reductive to the wide range of Corps programs on the River, including environmental restoration and providing recreational opportunities.[77] But navigation and flood control remain primary Corps missions for the Mississippi.[78]

One of the ways that the Corps manages the River is by constructing levees.[79] Generally, permanent levees constructed on the River are a short-term solution to flood control, needing regular maintenance and creating greater downstream flood potential.[80] This is contrasted by wetland restoration which is a more effective and wildlife-friendly means of flood control.[81] Despite federal support for non-structural mechanisms such as wetland restoration, concrete levees remain the norm.[82] This shortsightedness was demonstrated most dramatically by the Mississippi's Great Flood of 1993, which caused major disruption to the Mississippi River Basin and damages to the tune of nearly $20

76. *See id.* at 624 ("The Corps is routinely given free rein to prioritize flood control and navigation while merely considering recreation and fish and wildlife needs.").

77. *See, e.g.*, *Civil Works*, U.S. ARMY CORPS OF ENG'RS: MISS. VALLEY DIV., https://www.mvd.usace.army.mil/Missions/Civil-Works [https://perma.cc/KR36-35GH] (describing the environmental and recreational missions and projects of the Mississippi Valley Corps).

78. *See* Zellmer, *supra* note 14, at 615 (highlighting the billions the Corps has spent since 1936 "on dams, reservoirs, levees, and other structures for flood control and related purposes"). Note also the greater emphasis on navigation and flood control on their website. *See generally Mission*, U.S. ARMY CORPS OF ENG'RS: MISS. VALLEY DIV., https://www.mvd.usace.army.mil/About/Mission [https://perma.cc/Y86U-PNNL] (describing directives of the Corps).

79. *See, e.g.*, Zellmer, *supra* note 14, at 607 (noting the Corps' reliance on levees).

80. *See id.* at 610.

81. *See generally Habitat Restoration Projects Offer Protection from Flooding*, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (Apr. 7, 2021), https://www.fisheries.noaa.gov/feature-story/habitat-restoration-projects-offer-protection-flooding [https://perma.cc/2KPW-MDZB] (highlighting the reasons behind transitioning from concrete levees to wetlands in a recent NOAA project and the benefits natural infrastructure provides).

82. *See* Zellmer, *supra* note 14, at 608–09 (noting how recommendations to the Corps to switch from levees to wetland restoration have been "largely ignored in practice").

billion.[83] The 1993 Flood left nearly 500,000 people with no drinkable water, washed away whole harvests' crops and topsoil, and created one of the worst algal blooms in the Gulf of Mexico to date.[84] State law has been no match in slowing this altering of the River, either, with the Supreme Court finding preemption in favor of federal (often Corps) policy when it finds interference with navigation, flood control, or hydropower capabilities.[85] This speaks to the high level of federal involvement (through the Corps) over the Mississippi.

However, in the Mississippi's non-navigable tributaries, states still have primary regulatory jurisdiction, to the exclusion of federal agencies under the Clean Water Act.[86] Still, states often do voluntarily not fill this regulatory vacuum. This is most painfully evidenced with wetlands, where major Mississippi River Basin states such as Indiana, Illinois, and Iowa have lost over eighty percent of their original wetlands.[87] While the Corps and EPA have recently administered the CWA to preserve wetlands,[88] the Supreme Court's decision in *Sackett v. EPA* leaves these newly-protected wetlands vulnerable to destruction by limiting federal jurisdiction for these CWA wetland protections.[89]

The less-effective concrete flood control levees replacing these wetlands on the Mississippi are compounded by the

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83. Siff & Mears, *supra* note 5, at 297 ("The [Great Flood of 1993] covered 15 million acres in nine states and forced the evacuation of 54,000 people. Total direct damages from the flooding are estimated at $15-20 billion." (footnotes omitted)).

84. *Id.*

85. Zellmer, *supra* note 14, at 617 ("The Supreme Court has not hesitated to find state law is preempted when it interferes with federal navigational powers, flood control, hydropower, or vessel safety.").

86. *See* Sackett v. EPA, 598 U.S. 651, 679–80 (2023) ("Regulation of land and water use lies at the core of traditional state authority. An overly broad interpretation of the CWA's reach would impinge on this authority." (citation omitted)).

87. Cooper Pyle, *Wetland Destruction in the United States*, PLANET FORWARD (Dec. 5, 2019), https://planetforward.org/story/wetland-destruction-united-states [https://perma.cc/S86V-ZTA8].

88. *See* Gentry, *supra* note 59, at 27–28 (highlighting the Corps' responsibilities to implement part of the CWA to mitigate the loss of wetlands).

89. *See* 598 U.S. at 678 ("In sum, we hold that the CWA extends to only those wetlands that are 'as a practical matter indistinguishable from waters of the United States.'" (quoting Rapanos v. United States, 547 U.S. 715, 755 (2006))). For a further discussion of *Sackett* and its implications, see *infra* note 247 and accompanying text.

twenty-nine dams on the River,[90] turning once-rapids and waterfalls into an artificial "stairway of water."[91] The Mississippi's dams have prevented silt from flowing down the River.[92] Silt is essential for restoring coastal marshes relied on by a plethora of fish and bird species at the Mississippi's delta.[93] The effects of the Corps' River control systems have greatly damaged the Mississippi's wildlife ecosystems in other ways. For example, the transformation by the Corps of once-rapids into this series of stagnant pools of water, and the removal of an annual ebb and flow cycle required to recharge wetlands, has resulted in declines in fish numbers and fish species diversity and significantly reduced bird habitat within this crucial migratory flyway.[94] Corps flood control mechanisms have also encouraged human development in areas that were once in the River's floodplain, which has caused a reduction of two-thirds of the immediate watershed's wetlands.[95] Navigation on the River has also brought invasive plant and animal species that further threaten the ecological balance of these already precarious ecosystems.[96]

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90. *Mississippi River Facts*, *supra* note 6.

91. Zellmer, *supra* note 14, at 606 ("These structures replaced the Mississippi's rapids and falls with a highly regulated 'stairway of water' to allow greater commercial traffic.").

92. *See id.* at 610 (noting how sediment transported downstream has decreased from about 140 million tons to about four million tons in the post-dam era).

93. *See id.* (explaining how silt helps "replenish the coastal marshes of the Delta" and provides essential habitats for local "fish and bird species").

94. *See* Siff & Mears, *supra* note 5, at 298–99 ("Probably the largest systemic cause of problems in the Mississippi River is the series of control structures constructed and maintained by the Army Corps.").

95. *Id.* at 299 ("As a result [of manmade development], wetland areas in the states bordering the main stem of the River have declined by two-thirds from their original acreage . . . ."). This is especially significant considering the role that these wetlands play in filtering pollution. *Id.*

96. *See id.* at 301 (highlighting the systemwide threats facing the River, which include "the introduction of exotic (non-native) plant and animal species that alter or even overrun the natural ecological balance"); *see also* Charles A. Lyons, *Asian Carp, the Chicago Area Water System, and Aquatic Invasive Species Management in the Great Lakes*, 26 HASTINGS ENV'T L.J. 223, 223–29 (2020) (providing case studies documenting the severe problems caused by invasive species in the Mississippi River, fearing they may move into the Great Lakes).

Given the incredible economic significance of the river as a commercial navigation source,[97] stakeholders making up a Mississippi River Basin Compact will likely choose to keep this super-highway of water functioning similarly to how it does now,[98] but can emphasize management practices that are more sustainable for the people and wildlife relying on it.

C. CLIMATE CHANGE, DIVERSIONS, AND WATER WARS OF THE FUTURE

While heavy pollution, cycles of drought and flood, and destruction of natural habitats are ongoing, and in some instances irreversible, the specter of climate change and a growing population living within the Mississippi River Basin evoke much darker storm clouds on the horizon for the future of this water system.[99] Current climate change models predict that the United States will see more intense periods of rain, causing more destructive floods as well as more serious droughts.[100] Indeed, dry summers in 2022 and 2023 have led to record low water levels on the Mississippi, causing barges to become grounded and municipal water intakes to be put at risk.[101] Frighteningly, this caused seawater from the Gulf of Mexico to move upriver and threaten New Orleans's water intake, causing the city to seek drastic measures such as emergency dikes and desalinization

97. The shipping industry on the Mississippi is worth an estimated $12.6 billion. *Mississippi River: A Cultural Treasure*, AM. RIVERS, https://www.americanrivers.org/river/mississippi-river [https://perma.cc/KS8B-YWDU].

98. *See Commodities on the Mississippi River*, *supra* note 4 (detailing the significance of the Mississippi River as a channel for naval commerce).

99. *See* Thomas C. Brown et al., *Adaptation to Future Water Shortages in the United States Caused by Population Growth and Climate Change*, 7 EARTH'S FUTURE 219, 219–20 (2019) (discussing the water-related problems humanity will face in the coming years due to climate change).

100. *See, e.g.*, Noah D. Hall & Bret B. Stuntz, *Climate Change and Great Lakes Water Resources: Avoiding Future Conflicts with Conservation*, 31 HAMLINE L. REV. 639, 644 (2008) (discussing projected changes in weather patterns resulting from climate change).

101. *See, e.g.*, Elliot, *supra* note 11; Halle Parker, *The Mississippi River Is Again Experiencing Historically Low Levels Due to Drought*, NPR (Nov. 1, 2023), https://www.npr.org/2023/11/01/1209857323/the-mississippi-river-is-again-experiencing-historically-low-levels-due-to-droug [https://perma.cc/4PE2-L8HN]; Angela Fritz & Brandon Miller, *Before and After: See How the Mississippi River and Its Tributaries Have Dropped to Record Lows*, CNN (Oct. 22, 2022), https://www.cnn.com/2022/10/22/weather/mississippi-river-low-level-drought-climate [https://perma.cc/QB29-PX62].

units.[102] Climate change, threatening to raise sea levels, will make the Gulf's ability to move upriver even easier in coming years.[103] Also, significant tributaries to the Mississippi River already lie within the water-needy West, where demands upon water destined for the Mississippi increase most dramatically.[104] As the American West gets drier and its population increases, there will be more demand upon tributaries of the Mississippi, which will lead to lower flows and more devastating droughts on the Mississippi's main stem, and less water to combat seawater threatening to move upriver.[105]

Fights over water in the western United States are common.[106] Water wars impact the Mississippi both now and likely increasingly so in the future. As an example, the State of Missouri recently lost a lawsuit it had filed against the United States Department of the Interior for authorizing flows out of the Missouri River Basin.[107] Missouri claimed that these diversions would negatively impact the navigability of the Missouri

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102. *See, e.g.*, Elliot, *supra* note 11. Seawater moves upriver when there isn't enough water coming out of the Mississippi to keep the sea that is always pushing against it at bay. *Id.*

103. *E.g.*, *id.*

104. *See generally* Kevin Krajick, *The 100th Meridian, Where the Great Plains Begin, May Be Shifting*, COLUM. CLIMATE SCH.: STATE OF THE PLANET (Apr. 11, 2018), https://news.climate.columbia.edu/2018/04/11/the-100th-meridian-where-the-great-plains-used-to-begin-now-moving-east [https://perma.cc/Y85Y-NTE5] (describing how the line between the Western plains and the humid east is moving eastward due to climate change which may expand "the arid climate of the western plains into what we think of as the Midwest"). The prospect that this marker may be moving closer to the immediate basin of the Mississippi River is alarming and shows the urgency of a compact solution. *See id.* (noting the significant implications of this eastward shift for farming and other pursuits).

105. *See* John H. Davidson, *Adapting to Climate Change: Transbasin Water Diversions and an Example from the Missouri River Valley*, 11 VT. J. ENV'T L. 757, 763–64 (2009) (forecasting the water-poor future of the Mississippi's largest tributary).

106. *See generally* MARC REISNER, CADILLAC DESERT (1986) (exploring how the arid western United States created settlement opportunities at the cost of its water resources and laid the groundwork for decades of litigation over scarcity).

107. Missouri *ex rel.* Bailey v. U.S. Dep't of Interior, Bureau of Reclamation, 73 F.4th 570, 574 (8th Cir. 2023). The Missouri River is a major tributary of the Mississippi River, flowing from Montana to Missouri.

River.[108] Indeed, it was a similar fear of future diversions and the outlook of the increase in water demand that proved to be a central motivator for states adopting the Great Lakes Compact.[109]

While historically the Mississippi River has dealt with problems surrounding an *abundance* of water (i.e., flooding) that may not *only* be the case moving forward, as drought events like those in 2022 and 2023 become more commonplace.[110] Indeed, climate change is predicted to intensify water scarcity, which will put even greater stress on water resources, including the Mississippi, which is already beginning to feel the effects.[111] Yet this probably will not alleviate flooding concerns because climate change will also cause greater storm events in the coming years. This, paired with the levee and dam system on the Mississippi,[112] may cause more severe flooding than has yet been seen on the River.[113] Indeed, heavy snowfall in 2023 led to the highest floodwaters seen in *decades* on the Mississippi River.[114] Scientists warn that more extreme variability like this, such as booming from record floods to record droughts as happened in 2023, will be common for the River in the coming years due to climate

108. Brief of Appellant at 6, *Missouri ex rel. Bailey*, 73 F.4th at 570 (No. 21-3408) ("[T]his Project seriously affects the flood control and navigation purposes of the Missouri River Mainstem Reservoir System . . . .").

109. *See, e.g.*, Courtney M. Hammer, Note, *Standing Under the Great Lakes Compact: A Broad-Based Argument Infused with Public Trust Principles for Those with Diversion Aversion*, 2018 MICH. ST. L. REV. 251, 272–73 (detailing the motivations and underlying purposes of the Great Lakes Compact).

110. *See, e.g.*, Zellmer, *supra* note 14, at 607 (noting the "extreme" flooding that used to occur prior to the 1950s).

111. *See, e.g.*, Jerome C. Muys, Jr. & George William Sherk, *The Dogmas of the Quiet Past: Potential Climate Change Impacts on Interstate Compact Water Allocation*, 34 VA. ENV'T L.J. 297, 300 (2016).

112. *See supra* Part I.B.

113. *See* Isabella O'Malley, *Scientists Confirm Global Floods and Droughts Worsened by Climate*, PBS (Mar. 13, 2023), https://www.pbs.org/newshour/science/scientists-confirm-global-floods-and-droughts-worsened-by-climate-change [https://perma.cc/L6Y3-GF4E].

114. William Brangham & Courtney Norris, *Transcript: Communities Along Mississippi River Struggle with Highest Floodwaters Seen in Decades*, PBS (May 2, 2023), https://www.pbs.org/newshour/show/communities-along-mississippi-river-struggle-with-highest-floodwaters-seen-in-decades [https://perma.cc/J7A7-VL7P].

change.[115] If that were not enough, climate change threatens more severe hurricanes, with destructiveness that could rival Hurricane Katrina in the lower Mississippi River basin.[116]

The problems facing the Mississippi River are severe. Rampant pollution threatens cities, wildlife, and the ocean that relies on the River.[117] Poor management of the River has led to disastrous consequences for habitat and property damage.[118] However, the worst may be yet to come.[119] This puts the Mississippi River on a clock: stakeholders and regulators of the Mississippi River and its tributaries have limited time to institute plans for protecting this great American river before human demands outpace its ability to provide, with severe consequences.

II. INTERSTATE WATER GOVERNANCE MODELS AND THE CONSTITUTION

Interstate water compacts often grow out of water resource scarcity, such as in the arid West. The first and foremost example of such an interstate compact comes from "America's Nile," the Colorado River.[120] The Colorado River is likely the most litigated-over body of water in the United States.[121] Despite an interstate compact passed in 1922, conflicts between states and individuals over the limited water of the Colorado remain.[122] The Colorado River, discussed in Section A below, demonstrates

115. *See id.* ("[T]he challenge that we face is that . . . climate changes [bring] greater variability in weather patterns.").

116. *See* Angela Colbert, *A Force of Nature: Hurricanes in a Changing Climate*, NASA (June 1, 2022), https://climate.nasa.gov/news/3184/a-force-of-nature-hurricanes-in-a-changing-climate [https://perma.cc/6G8H-TMV7] (discussing how climate change will result in more severe hurricanes due to rising sea levels and higher winds).

117. *See supra* Part I.A.

118. *See supra* Part I.B.

119. *See supra* Part I.C.

120. Jonathan Waterman, *The American Nile*, NAT'L GEOGRAPHIC, https://www.nationalgeographic.com/americannile [https://perma.cc/VF6N-FBJG]; *see* Nathan C. Johnson, Comment, *Protecting Our Water Compacts: The Looming Threat of Unilateral Congressional Interaction*, 2010 WIS. L. REV. 875, 896–98 (detailing the successes and the challenges of the Colorado River Compact).

121. Drew Kann et al., *The Southwest's Most Important River Is Drying Up*, CNN (Aug. 21, 2021), https://www.cnn.com/interactive/2021/08/us/colorado-river-water-shortage [https://perma.cc/77BL-22Z5].

122. *See id.*

many of the pitfalls that result from an interstate compact that is too inflexible and lacks prescience.

In contrast, there are notable interstate water compacts in the humid East, arising more recently than western water compacts. The Great Lakes Water Compact—the most recent interstate water compact—and the Delaware River Basin Compact are more successful and apt analogies for a Mississippi River Basin compact.[123] These two compacts will be discussed in Sections B and C, respectively. For constitutionally acceptable compacts to pass such as these, they must be agreed upon by each state legislature involved, and then passed by Congress, a tall order.[124]

A. THE COLORADO RIVER COMPACT

The first and perhaps most notorious interstate compact in the United States is the Colorado River Compact. The Colorado River Compact was signed by the Colorado River basin states of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming in 1922 under the direction of President Herbert Hoover.[125] The Colorado River Compact was designed to allocate this crucial artery of water among the Colorado Basin states, allowing for the financing and construction of the Hoover Dam with this newfound legal predictability of water ownership.[126] The Colorado Compact is divided between upper-basin and lower-basin states at Lee's Ferry, Arizona, where the lower basin is slaked first in times of drought, placing substantial risk on the upper-basin states.[127]

The major flaw in the Colorado River Compact, which has kept appropriations of the Colorado River in the courts, is that it was allocated in a time of water abundance and based on

123. *See* Great Lakes—St. Lawrence River Basin Water Resources Compact, Pub. L. No. 110–342, 122 Stat. 3739 (2008); Delaware River Basin Compact, Pub. L. No. 87–328, 75 Stat. 688 (1961).

124. U.S. CONST. art. I, § 10, cl. 3.

125. Johnson, *supra* note 120, at 880 & n.34.

126. *Id.* at 880–81.

127. *Id.* at 881–82. The upper basin consists of part/all of the states of Colorado, Utah, Wyoming, New Mexico, and Arizona. The lower basin consists of part/all of California, Arizona, Nevada, Utah, and New Mexico. Robert W. Adler, *Revisiting the Colorado River Compact: Time for a Change?*, 28 J. LAND RES. & ENV'T L. 19, 26 n.43 (2008).

incomplete data.[128] The flow of the Colorado is incredibly variable, and drought has put such a strain on the River that the water apportionments in the Compact have proven to be fantasy.[129] To make this tangible, the Colorado River no longer reaches the Pacific Ocean, as it did for hundreds of years before the Colorado River Compact.[130] While this reflects the fact that the Colorado Compact apportionments are not grounded in reality (leaving no excess), many in the drought-starved West still see this Compact as somewhat of a success and that any freshwater allowed to flow into the ocean is mere waste.[131]

The flaws in the Colorado River Compact are further reflected in *Arizona v. California*.[132] This case involved eleven years of litigation to resolve ambiguities in the Colorado River Compact as they related to the apportionment of water in the lower basin states.[133] The Supreme Court further complicated the Colorado River Compact by resolving the apportionment of water upon the federal legislation enabling the Hoover Dam *instead of the Compact itself*, confusing water rights on the Colorado.[134] The Court held that the Project Act showed congressional intent to give the Secretary of the Interior the ultimate power in apportioning Colorado River water on the main stem of

128. Adler, *supra* note 127, at 30 ("[T]he compact commissioners relied on significantly higher estimates of water than would have been apparent based on a longer-term record and a broader base of scientific information.").

129. *See id.* at 30–31 (discussing how upper basin states may never be able to use their complete compact apportionments due to reductions in the Colorado River's flow).

130. *See* Johnson, *supra* note 120, at 882.

131. Telephone Interview with Haley Gentry, William B. Wiener Jr. Found. Rsch. Fellow & Mark Davis, Former Dir., Tulane Inst. on Water Res. L. & Pol'y (Jan. 9, 2023).

132. 373 U.S. 546 (1963).

133. *Id.* at 546; Jason A. Robison & Lawrence J. MacDonnell, Arizona v. California *& the Colorado River Compact: Fifty Years Ago, Fifty Years Ahead*, 4 ARIZ. J. ENV'T L. & POL'Y 130, 137 (2014) ("Simply put, over its roughly eleven-year course, *Arizona v. California* was largely driven by contested interpretations of the Compact's framing provisions . . . .").

134. Robison & MacDonnell, *supra* note 133, at 158 (suggesting that water apportionment on the Colorado River would be clearer if the *Arizona* Court adopted Justice Douglas's dissent, that "the Compact is the mainspring from which all rights flow" (quoting *Arizona*, 373 U.S. at 638 (Douglas, J., dissenting)); *see also* Boulder Canyon Project Act, 43 U.S.C. § 617.

the River.[135] The Supreme Court's holding in *Arizona* undermined the Compact and represented its weaknesses in both holding itself to fixed apportionments not based in scientific realities and failing to delineate means of dispute resolution allowing for future flexibility.[136]

Litigation for Colorado River water still abounds. The Supreme Court recently decided a case from the Navajo Nation, arguing (among other things) that the Colorado River Compact and the Court's holding in *Arizona v. California* does not properly apportion tribal water rights.[137] Proper compacts should limit or even eliminate disputes within their subject matter, as in essence, a compact is a contract, and a contract is measured by its ability to predict and govern future behavior.[138] The Colorado River Compact does a bad job at this.

Since the Colorado River Compact was signed in 1922, there have been multiple, more successful interstate water compacts that place a greater premium on flexibility, conflict adjudication, and continued governance.

B. THE GREAT LAKES WATER COMPACT

The Great Lakes are a massive water resource that constitutes one-fifth of the world's accessible freshwater supply.[139] The legal and political regime governing the Great Lakes matches this, and tends to "overwhelm attorneys and policymakers."[140] When the Great Lakes Water Compact was passed in 2008, it was not done in a legal and policy vacuum; rather, it was built off state laws, federal common law, interstate and international treaties, and nonbinding agreements which are briefly overviewed below.[141]

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135. *See Arizona*, 373 U.S. at 579 ("[T]he Secretary would then . . . apportion water among the States and to allocate the water among users within each State.").

136. *See generally* Robison & MacDonnell, *supra* note 133, at 143–58 (describing how the Supreme Court's decision in *Arizona v. California*, while purporting not to alter the Colorado River Compact, essentially did just that).

137. *See* Arizona v. Navajo Nation, 143 S. Ct. 1804, 1812 (2023) (describing the Navajo Nation's attempts to assert treaty rights to Colorado River water).

138. Telephone Interview with Haley Gentry & Mark Davis, *supra* note 131.

139. Hammer, *supra* note 109, at 258.

140. Noah D. Hall & Benjamin C. Houston, *Law and Governance of the Great Lakes*, 63 DEPAUL L. REV. 723, 723 (2014).

141. Hammer, *supra* note 109, at 265.

The first major development in Great Lakes governance came with the Boundary Waters Treaty of 1909.[142] The Boundary Waters Treaty was signed by the United States and Canada and restricted water diversions from the Great Lakes that would affect the "natural flow or level" of a lake on the opposite side of the boundary.[143] However, it did not include either groundwater or Lake Michigan explicitly in the Treaty, the latter of which allowed for the City of Chicago to reverse the flow of the Chicago River and begin draining Lake Michigan into the Mississippi River's watershed.[144] Chicago's river, reversed so that city waste and sewage would flow down the Mississippi instead of the city's water intakes in Lake Michigan as it had previously, lowered Great Lakes water levels by five to six inches.[145] Recognizing that the Treaty did nothing to prevent this, the eight Great Lakes governors and two Canadian premiers[146] signed a nonbinding agreement called the Great Lakes Charter of 1985.[147] This agreement, while including the entire Great Lakes watershed, including groundwater, failed to live up to its weighty goals of minimizing out-of-basin diversions due to a lack of enforcement mechanism.[148]

The next development came via the Water Resources Development Act of 1986 (WRDA).[149] The WRDA explicitly required unanimous consent of all eight Great Lakes governors to divert any water from the Great Lakes, and as an Act of Congress, was binding.[150] However, the WRDA did not stand the test of time, due to the inflexible nature of the diversion ban, which lacked standards for diversions to the Great Lakes, as well as the

142. *Id.*

143. *Id.*

144. *Id.* at 266–67. When other Great Lakes states sued Illinois for the Chicago River diversion under the Boundary Waters Treaty, the Supreme Court sided with the states and ordered a phased reduction of Chicago's diversion. *Id.*

145. *Id.*; *see also* Gregory D. Smithers, *Reversing a River: How Chicago Flushed Its Human Waste Downstream*, WE'RE HIST. (Feb. 18, 2020), https://werehistory.org/reversing-a-river-how-chicago-flushed-its-human-waste-downstream [https://perma.cc/H5WS-KR86].

146. The Canadian provincial equivalent of governors.

147. Hammer, *supra* note 109, at 267.

148. *Id.*

149. *Id.* at 268.

150. *Id.*

relative ease with which a future Congress could change it.[151] The Great Lakes required something more permanent.

The WRDA was supplemented with the Great Lakes Charter Annex of 2001 (Annex), among the eight Great Lakes governors and two Great Lakes premiers.[152] The Annex amended the Great Lakes Charter of 1985 and allowed for standards for water withdrawals from the Great Lakes, including requiring the return of the amount of water withdrawn, improving conservation measures, and requiring new or increased withdrawals to improve water quality.[153] Also, the Annex served as a bridge to the Great Lakes Water Compact by requiring each Great Lakes state and province to come to a formal legislatively mandated agreement within three years of its passing.[154] The Great Lakes Compact was agreed to by the eight Great Lakes states on December 13, 2005, which led to the long process of each state passing legislation ratifying the Compact, and Congress ultimately adopting it on October 3, 2008.[155] This was no easy task, as it took seven years from the time of the Annex to the passing of the Great Lakes Water Compact by Congress to build a compromise among all of the relevant stakeholders.[156]

The Great Lakes Water Compact, finally enacted, begins by recognizing that "[t]he Waters of the Basin are precious public natural resources shared and held in trust by the States."[157] It explicitly seeks "[t]o facilitate consistent approaches to Water management across the Basin while retaining State management authority over Water management decisions within the Basin."[158] The main goal of the Great Lakes Water Compact, found both in the language of the Compact itself, as well as in the efforts leading to its passage, is eliminating new diversions

151. *Id.*; *see also* ANNIN, *supra* note 34, at 194 (discussing how Congress's ability to amend the WRDA affected cooperation among the Great Lakes states).

152. Hammer, *supra* note 109, at 269.

153. *Id.*

154. *Id.*

155. *Id.* at 270.

156. *Id.* (noting date of congressional adoption); Melissa Kwaterski Scanlan et al., *Realizing the Promise of the Great Lakes Compact: A Policy Analysis for State Implementation*, 8 VT. J. ENV'T L. 39, 56–59 (2006) (describing the 2001 Annex).

157. Great Lakes—St. Lawrence River Basin Water Resources Compact, Pub. L. No. 110-342, § 1.3(1)(a), 122 Stat. 3739, 3742 (2008).

158. *Id.* § 1.3(2)(d), 122 Stat. at 3743.

from the Great Lakes Basin (except for very limited circumstances).[159] New diversions must also pass the unanimous acceptance of another key principle of the Great Lakes Water Compact: the Compact Council.[160] The Compact Council is made up of the eight Great Lakes governors, or their assignees.[161] The Council has wide-ranging authorities, with the ability to conduct research, report on water use, and even conduct investigations and enforce the terms of the Compact.[162] The Council is not the sole body able to challenge a breach of its terms; rather, any "aggrieved person" may bring enforcement action to the Compact Council, then to the courts if unsatisfied with the Council's ruling, against a person who breached the Great Lakes Water Compact.[163] This is a significant power exercised by what is, in essence, an interstate agency, and represents a departure from the previous attempts at protecting the Great Lakes without an enforcement mechanism.

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159. *Id.* § 4.9(3), 122 Stat. at 3753–54 ("A Proposal to transfer Water to a Community within a Straddling County that would be considered a Diversion under this Compact shall be excepted from the prohibition against Diversions, provided that it satisfies all of the following conditions: a. The Water shall be used solely for the Public Water Supply Purposes of the Community within a Straddling County that is without adequate supplies of potable water; b. The Proposal meets the Exception Standard, maximizing the portion of water returned to the Source Watershed as Basin Water and minimizing the surface water or groundwater from outside the Basin; c. The Proposal shall be subject to management and regulation by the Originating Party, regardless of its size; d. There is no reasonable water supply alternative within the basin in which the community is located, including conservation of existing water supplies; e. Caution shall be used in determining whether or not the Proposal meets the conditions for this Exception. This Exception should not be authorized unless it can be shown that it will not endanger the integrity of the Basin Ecosystem; f. The Proposal undergoes Regional Review; and, g. The Proposal is approved by the Council. Council approval shall be given unless one or more Council Members vote to disapprove. A Proposal must satisfy all of the conditions listed above. Further, substantive consideration will also be given to whether or not the Proposal can provide sufficient scientifically based evidence that the existing water supply is derived from groundwater that is hydrologically interconnected to Waters of the Basin.").

160. *Id.* § 4.9(3)(g), 122 Stat. at 3754.

161. *Id.* § 2.2, 122 Stat. at 3744.

162. Great Lakes—St. Lawrence River Basin Water Resources Compact, §§ 2.1–3.3, 122 Stat. at 3744–46.

163. Hall & Houston, *supra* note 140, at 748; Great Lakes—St. Lawrence River Basin Water Resources Compact, § 7.3, 122 Stat. at 3761.

While the Great Lakes Water Compact broadly requires water quality to be controlled in the event of a new or increased diversion of Great Lakes water from its source, water quality provisions are largely lacking from the Great Lakes Water Compact, which has been a major criticism of it.[164] Water quality provisions for the Great Lakes, not included in the Great Lakes Water Compact, are covered under weaker documents.[165] To understand the background behind this, one must begin again with the Boundary Waters Treaty of 1909, which created a six-member board, half by the Canadian Government and half by the United States, called the International Joint Commission.[166] The International Joint Commission, which can act in a binding manner only under a motion from both Canada and the United States, would necessitate two-thirds of the Senate's approval from the United States.[167] This high bar has led to the Commission never executing these powers.[168] However, the Commission has been more successful in issuing non-binding reports and investigations as to water pollutants in the Great Lakes.[169]

Efforts by the International Joint Commission led to the Great Lakes Water Quality Agreement of 1972.[170] The Great Lakes Water Quality Agreement has evolved over the years, most recently being updated in 2012, with the overarching goal of maintaining and restoring the health of the Great Lakes from pollutants.[171] However, despite these efforts and helpful guidelines promulgated for regulators and stakeholders, the Great Lakes Water Quality Agreement has no enforcement capability.[172] While the Great Lakes Compact deserves praise for its foresight, its toothlessness against pollution remains a fair criticism, one that the drafters of a prospective Mississippi River Compact (where water pollution is a much larger problem) would do well to heed.

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164. *See* Scanlan et al., *supra* note 156, at 40 (describing the Great Lakes Water Compact as a compromise document).

165. Hall & Houston, *supra* note 140, at 731.

166. *Id.* at 730–33 (describing the composition and environmental authorities of the International Joint Commission).

167. *Id.* at 731.

168. *Id.*

169. *Id.*

170. *Id.* at 732–33.

171. *Id.* at 733–34.

172. *Id.* at 734–35.

C. THE DELAWARE RIVER BASIN COMPACT

The Delaware River Basin Compact between New York, New Jersey, Delaware, Pennsylvania, and the United States is generally seen as a wildly successful method of transboundary water management for a resource that is hotly contested and prone to significant pollutants.[173] The Delaware River Basin, despite containing only 0.4 percent of the nation's watershed, serves as a water source for nearly fifteen million people, including half of New York City.[174] It also boasts the largest freshwater port in the world.[175] The Delaware River Basin Compact was signed into law in 1961, but like the Great Lakes Water Compact, it was the result of a long string of problems facing the water body and numerous less effective attempts at transboundary governance.[176]

The Delaware River Basin Compact is unique. Notably, the Compact took an extra step to add the federal government as a party to the agreement, recognizing that without the support of federal agencies the Compact could not be a truly comprehensive and potent means of watershed management.[177] Congress noted upon signing the Compact that "[t]he establishment of a single agency to coordinate federal interests in the Delaware River Basin is as much importance as the joining together of the four states and the resultant coordination of the various state

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173. Cindy Gorze Roper, The Delaware River Basin Compact: A Case Study in Successful Transboundary Water Resource Management 4 (2022) (Ph.D. dissertation, Clemson University) (on file with *Minnesota Law Review*) (describing this compact as extraordinarily successful).

174. Carol R. Collier, *Regional Planning for the Delaware River*, *in* REGIONAL PLANNING FOR A SUSTAINABLE AMERICA 236, 237–38 (2011); EDELLA SCHLAGER & WILLIAM BLOMQUIST, EMBRACING WATERSHED POLITICS 165 (2008).

175. Roper, *supra* note 173, at 69.

176. *Id.* at 70 fig.1 (displaying numerous agreements and compacts that failed to gain full basin support). One of these, INCODEL, was a water pollution control plan that involved voluntary cooperation standards, could not be enforceable against other states, and failed miserably. *Id.* at 72–74. Some parallels between INCODEL and current voluntary programs within the Mississippi River Basin are informative.

177. *Id.* at 76–77; Delaware River Basin Compact, Pub. L. No. 87-328, § 1.3, 75 Stat. 688, 691 (1961) (delineating the United States' rights as a member of the Compact); *see also* Collier, *supra* note 174, at 239 ("Each state and the federal government have relinquished a portion of their sovereign authority to come together and manage water resources on a watershed basis.").

activities."[178] Under the Kennedy administration, the federal government agreed to this provision, so long as the President could suspend, delete, or modify any portion of the plan that applied to the federal government if deemed to be against the "national interest."[179]

The body charged with enforcing the Delaware River Basin Compact is the Delaware River Basin Commission, an immensely powerful regional agency that can act with the authority of both state and federal law.[180] The Commission is made up of the four Delaware basin governors and an appointee for the President of the United States, currently the Commander of the U.S. Army Corps of Engineers North Atlantic Division.[181] The main duties of the Delaware River Basin Commission are dividing Delaware River water based on equitable apportionment principles, planning and executing plans for water quality initiatives, providing flood control, regulating hydroelectric power, controlling watershed health, and providing for and protecting recreation.[182]

To carry out these duties, the Delaware River Basin Commission enjoys significant and equitable funding from each basin state and the federal government and has broad authority to bring enforcement actions, build projects, obtain land through eminent domain, and produce reports on watershed research.[183] It has authority over "[a]ll substantial new diversions, wastewater releases, floodplain encroachments, and streambed modifications."[184] It created a groundwater protection scheme where state law did not allow it in Pennsylvania.[185] The

178. Kauffman, *supra* note 23, at 446 (quoting S. REP. NO. 87-854, at 17 (1961)).

179. Roper, *supra* note 173, at 76–77.

180. *Id.* at 87–88; Delaware River Basin Compact, § 2, 75 Stat. at 691–92.

181. Roper, *supra* note 173, at 89.

182. *Id.* at 88–94; Delaware River Basin Compact, 75 Stat. at 688 ("To create a regional agency by intergovernmental compact for the planning, conservation, utilization, development, management, and control of the water and related natural resources of the Delaware River Basin, for the improvement of navigation, reduction of flood damage, regulation of water quality, control of pollution, development of water supply, hydroelectric energy, fish and wildlife habitat, and public recreational facilities, and other purposes, and defining the functions, powers, and duties of such agency.").

183. Roper, *supra* note 173, at 89, 99.

184. SCHLAGER & BLOMQUIST, *supra* note 174, at 174.

185. *Id.* at 175.

Delaware River Basin Compact's success is best measured by the fact that there has been no litigation between the signatory parties over the Delaware Basin water resources since the signing of the Compact.[186] It has been tested time and again during periods of water scarcity, but by using a drought operating program apportioning water during times of need, the Commission has reduced uncertainty and conflict.[187]

The Delaware Basin Commission was also tasked with cleaning up a dead river that had zero oxygen levels during the summer, and where Navy pilots could smell the stink of it a mile overhead.[188] The Commission implemented a pollution discharge elimination system, years before the EPA even existed, that was more stringent than EPA standards.[189] Because of efforts by the Commission, oxygen levels are now high enough that fish that are highly sensitive to water quality have been able to return to the Delaware River, supporting an intricate ecosystem loved by anglers, birdwatchers, paddlers, and people who generally enjoy their olfactory senses unbothered.[190]

Fourteen other interstate water compacts already exist on tributaries of the Mississippi River.[191] These compacts apportion water, create conservation mechanisms, control flooding, limit water pollution, allow for water navigation, and everything in between.[192] When considering a multi-state compact for the Mississippi River Basin, it is helpful to learn from these numerous

186. *E.g.*, *id.* at 173 (describing commission's use of emergency framework that has avoided need for litigation).

187. Collier, *supra* note 174, at 240.

188. Kauffman, *supra* note 23, at 432–33.

189. *Id.*

190. *Id.*; *see also River Trips*, KITTATINNY, https://kittatinny.com/river-trips [https://perma.cc/FN2C-M8TJ] (advertising a plethora of paddling and camping adventures along the Delaware River).

191. Davis, *supra* note 8, at 10 n.21 ("These include the Yellowstone River Compact, the Belle Fourche River Compact, the Upper Niobrara River Compact, the South Platte River Compact, the Republican River Compact, the Big Blue River Compact, the Arkansas River Compact of 1949, the Arkansas River Compact of 1965, the Arkansas River Basin Compact of 1970, the Ohio River Valley Sanitation Compact, the Canadian River Compact, the Red River Compact, the Bi-State Metropolitan Development District Compact (between Missouri and Illinois), and the Tennessee River Water Pollution Control Compact.").

192. *See generally* Noah D. Hall, *Interstate Water Compacts and Climate Change Adaptation*, 5 ENV'T & ENERGY L. & POL'Y J. 237, 265–320 (2010) (providing an overview of types of interstate water compacts).

past examples and understand that transboundary governance for watersheds is not unprecedented in the United States.

III. INTERSTATE WATER COMPACTS IN THE COURTS

The judiciary has treated interstate compacts in a variety of ways. Properly drafted interstate compacts do not often encounter the judicial branch. This is because using the Compact Clause of the United States Constitution as a system for watershed governance has been advocated for *by the Supreme Court itself* as a means to avoid litigation.[193] However, the Court has ignored some interstate water compacts in past decisions, choosing instead to continue with statutory or federal common law grounds.[194] Being wary of these pitfalls and understanding the Court's precedent in this area is key for drafting an effective interstate water compact. Section A of this Part discusses the compact clause in a general sense, whereas Section B discusses their treatment in the courts. Section C concludes with a unique constitutional concern in federal-interstate compacts.

A. THE COMPACT CLAUSE GENERALLY

The Compact Clause of the United States Constitution holds, "No State shall, without the Consent of Congress, . . . enter into any Agreement or Compact with another State, or with a foreign Power . . . ."[195] This Clause has never been enforced against the states.[196] While scholars debate the merits of a weak Compact Clause, the current precedent strongly implies that the Clause remains non-justiciable.[197] However, the Supreme

193. *See* Christine M. Giuliano, *Allocating Water Rights, Causing Litigation, and Ignoring Conservation:* Montana v. Wyoming, 1 JOULE: DUQ. ENERGY & ENV'T L.J 1, 1 (2013); Felix Frankfurter & James M. Landis, *The Compact Clause of the Constitution—A Study in Interstate Adjustments*, 34 YALE L.J. 685, 696 (1925).

194. *E.g.*, Arizona v. California, 373 U.S. 546 (1963) (ignoring an interstate compact on the Colorado River in favor of federal statute).

195. U.S. CONST. art. 1, § 10, cl. 3.

196. Roderick M. Hills, *Keeping the Compact Clause Irrelevant*, 44 HARV. J.L. & PUB. POL'Y 29, 35 (2021) ("In sum, the Court has never, ever enforced the Compact Clause.").

197. *Id.* at 29–30. *Contra* Jill Elaine Hasday, *Interstate Compacts in a Democratic Society: The Problem of Permanency*, 49 FLA. L. REV. 1, 40 (1997) ("Courts, compacting states, and scholars should draw on the rich jurisprudence about the scope and nature of federal power to determine, more precisely and

Court's laissez-faire policy towards interstate compacts cuts both ways: it will not enforce an interstate compact's terms against a state when Congress has not assented to that compact.[198] While interstate compacts will not usually fall on constitutional grounds, there are other ways in which courts may meddle with interstate compacts beyond ruling them unconstitutional.

B. JUDICIAL TREATMENT OF COMPACTS

The idea of using the interstate compact to govern regional disputes over natural resources was first popularized by legendary future Supreme Court Justice Felix Frankfurter.[199] Frankfurter wrote in 1924, "[t]he geographic unit of a river or lake basin is its drainage area. The legal unit must correspond to the geographic or engineering unit. Control will frequently have to be interstate; *compact* is apt to be its most effective form."[200] Soon after writing this, interstate water compacts boomed with little question as to their constitutional agreeability.[201]

The United States Supreme Court holds original jurisdiction over disputes between two or more states.[202] Despite the first interstate water allocation case arising in the twentieth century, such cases have made up the second-largest percentage of the Supreme Court's interstate conflicts cases and often take years to resolve.[203] Because of this deliberation, the Supreme Court actually favors interstate compacts and will often enforce them in interstate disputes.[204] The Supreme Court will even enforce a congressionally ratified interstate compact against a ratifying

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more reasonably, which types of agreements may 'encroach upon or interfere with the just supremacy of the United States.'" (quoting U.S. Steel Corp. v. Multistate Tax Comm'n, 434 U.S. 452, 471 (1978))).

198. Robert D. Cheren, *Environmental Controversies "Between Two or More States,"* 31 PACE ENV'T L. REV. 105, 119 (2014).

199. *See* Frankfurter & Landis, *supra* note 193, at 702 (explaining the utility of water compacts).

200. *Id.* (emphasis added).

201. *See Chart of Interstate Compacts*, BALLOTPEDIA, https://ballotpedia.org/Chart_of_interstate_compacts [https://perma.cc/LL4H-LSQV] (showing that the vast majority of congressionally ratified interstate compacts in the United States arose after 1924).

202. U.S. CONST. art. 3, § 2, cl. 1–2.

203. Cheren, *supra* note 198, at 125.

204. *See id.* at 125–30 (discussing several apportionment cases and the Court's encouragement of compacts).

state if that state's highest court declares its content against the state's constitution.[205] This is a significant power, showing the strength of a compact that passes the constitutional requirements.

Despite the esteem with which the United States Supreme Court purportedly holds interstate water compacts, courts have subverted them in favor of congressional action or federal common law on interstate water issues.[206] In the leading case on the issue, *Tobin v. United States*, the D.C. Circuit Court of Appeals held that Congress may not unilaterally revoke consent for an interstate compact based on a congressional intent argument.[207] Because the D.C. Circuit based its case on a statutory, rather than constitutional, holding, *Tobin* may not pass future tests.[208] Too, *Tobin* provides no real shield to protecting interstate compacts from congressional action, as interstate compacts do not prevent Congress from passing legislation that can directly impact the terms of an interstate compact.[209] Despite some favorable precedent, the threat of future congressional action remains a barrier to truly future-predictive compacts and urges federal involvement in the drafting process.

In *Arizona v. California*, the Supreme Court rested its monumental decision appropriating Colorado River water for the desert southwest not on the Colorado River Compact, but rather on the language of the congressional act authorizing the Hoover Dam, with consequences extending years later.[210] Any effective interstate compact, thus, must consider the possibility of subsequent congressional action on its terms, or Supreme Court subversion. A strong interstate water compact should provide a strong dispute resolution mechanism to reduce litigation that could potentially reach the Supreme Court.[211]

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205. Hasday, *supra* note 197, at 3.

206. *See supra* note 194 and accompanying text.

207. 306 F.2d 270, 273 (D.C. Cir. 1962) ("The compact clause of the Constitution does not specifically confer such power [to unilaterally alter, appeal, amend consent to interstate compacts] upon Congress."); Johnson, *supra* note 120, at 890–92.

208. Johnson, *supra* note 120, at 890–92.

209. *Id.* at 895.

210. *See supra* Part II.0 (discussing *Arizona v. California* and its ramifications).

211. Raymond Dake, Note, *Great Compromise: Overcoming Impasse in Interstate Water Compacts Through the Use of Alternative Dispute Resolution*, 77

Congressional action is not the only way that the Judiciary has undercut interstate compacts. Rather, differing judicial interpretations of interstate compacts can mangle the founding document beyond recognition. In *Kansas v. Colorado*, the Supreme Court ruled on a damages determination for a long-running dispute over the Arkansas River Compact between the two signatory states.[212] While the Court correctly found that Colorado breached the Arkansas River Compact, it allowed Colorado to pay for this breach in monetary damages instead of forcing an injunction to maintain water flows, contrary to the purpose of the Compact.[213] As has been said, interstate compacts at base level are contracts, and contracts that fail to be precise in their terms can be pushed around in the courts.[214] A contract that can be tweaked in this manner loses much of its certainty, certainty being a reason for entering into a contract in the first place.

In *Montana v. Wyoming*, the United States Supreme Court, sitting in its original jurisdiction, interpreted the sixty-year-old Yellowstone River Compact within its original purpose and to the letter of its language.[215] Even in *Wyoming*, the Court could have easily interpreted the Yellowstone River Compact in a different way, as suggested by the dissenting opinion.[216] By forcing its own interpretations of these compacts, the Supreme Court supplants its view of interstate compacts for those of the state drafters and undermines the value of predictability at the heart of contracts generally. These erratic results may occur because

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UMKC L. REV. 789, 809–10 (2009) (advocating for alternative dispute resolution provisions in interstate water compacts to avoid costly litigation).

212. Kansas v. Colorado, 533 U.S. 1, 7–9 (2001) (addressing Kansas's and Colorado's objections to a Special Master's damages determinations for litigation that began in 1985).

213. H. David Gold, In Brief, *Supreme Court Struggles with Damage Assessment in Water Dispute as Interstate Compact Breaks Down*, 29 ECOLOGY L.Q. 427, 427, 430 (2002) ("By allowing to Colorado [sic] 'purchase' compliance, the Court allows Colorado to shirk its duty to maintain usable flows for water users in Kansas." (footnote omitted)).

214. Telephone Interview with Haley Gentry & Mark Davis, *supra* note 131.

215. Giuliano, *supra* note 193, at 5–6, 11–13 (discussing the Supreme Court's original jurisdiction over interstate water disputes, describing the Yellowstone River Compact, and acknowledging that the Court interpreted the Compact as a law).

216. *Id.* at 19–20 (analyzing Justice Scalia's interpretation of "beneficial use"); *see* Montana v. Wyoming, 563 U.S. 368, 389–91 (2011) (Scalia, J., dissenting) (criticizing the majority's interpretation of the Compact and offering an alternative meaning for "beneficial use").

original jurisdiction interstate compact cases can take over a decade for the Supreme Court to resolve, resulting in a Court with a different makeup, and perhaps ideology, issuing the final rulings on these drawn-out battles.[217]

Regardless of whether this accurately explains *why* the Court may subvert interstate compacts, it more importantly signals the necessity for interstate compacts to have clear and definitive methods of dispute resolution that may avoid court altogether. Agencies created to enforce the terms of interstate compacts are subject to judicial review in federal courts, where they are susceptible to differing interpretations of their compacts, which can restrain their abilities to carry out their duties amid judicial uncertainty.[218] Adding the federal government as a signatory party to a compact can help avoid tensions between states and the federal government by keeping all stakeholders on the same page.[219] However, making the federal government a signatory rather than a mere ratifying party brings its own legal challenges.

C. A UNIQUE CONSTITUTIONAL ISSUE REGARDING FEDERAL-INTERSTATE COMPACTS

Some interstate water compacts have the federal government as a signatory.[220] The Delaware River Basin Compact was the first to take this step in including the United States as a party.[221] The federal government was hesitant to sign the federal statute adding the United States to the Delaware River Basin Compact; the Department of Justice and Department of the Interior secretaries warned of constitutional issues posed by subsuming United States sovereign interest to a form of government

217. Per Article III of the Constitution, the Supreme Court *must* be the court that hears the first instance of litigation between two or more states, which is termed "original Jurisdiction." *See* U.S. CONST. art. III, § 2, cl. 2; 28 U.S.C. § 1251(a).

218. Daniel E. Andersen, Note, *Straddling the Federal-State Divide: Federal Court Review of Interstate Agency Actions*, 101 IOWA L. REV. 1601, 1620, 1622–25 (2016). However, these interstate agencies generally have less oversight from the courts than most federal agencies, not having to abide by the Administrative Procedure Act or most other federal agency laws. *Id.* at 1622–24, 1630–32.

219. *See supra* Part II.C (discussing the Delaware River Basin Compact's inclusion of the federal government as a party).

220. *See* SCHLAGER & BLOMQUIST, *supra* note 174, at 172.

221. *Id.*

that was neither federal nor state.[222] As they likely argued then, this brings about a potential problem with the Executive Vesting Clause of the U.S. Constitution.[223] The Delaware River Basin Compact avoided these issues by allowing for unilateral presidential veto of any plan or action requiring federal authority.[224] Given the bent of the Supreme Court favoring formalistic conceptions of constitutional duties and aversion to agency design creativity,[225] such a provision is probably necessary for the inclusion of a federal party in a Mississippi River Basin compact.

While jurisprudence surrounding interstate water compacts in the United States is varied, general favor by the Supreme Court bolsters approaching multi-state water problems in this manner. However, past judicial usurpation of interstate compacts favors adjudicatory systems that keep these compacts out of the courts as much as possible.

IV. AN INTERSTATE COMPACT FOR THE MISSISSIPPI RIVER BASIN

The Mississippi River Basin is desperately in need of a better system of governance.[226] While the challenge of creating a compact between as many states as encompasses the Mississippi River Basin has never been tackled before, the current situation demands such bold action. Such an undertaking must take place before the ravages of climate change and demand pressures from expanding economies and a growing population prevent the

222. Roper, *supra* note 173, at 76–77, 140.

223. U.S. CONST. art. II, § 1, cl. 1 ("The executive Power shall be vested in a President of the United States of America.").

224. *See* SCHLAGER & BLOMQUIST, *supra* note 174, at 172 ("To allay such fears, two provisions were added to the compact. First, the federal government was committed only to those items that the federal representative voted to support. Second, the president was given the authority to suspend or delete any provision within the comprehensive plan out of considerations of the national interest.").

225. *See, e.g.*, West Virginia v. EPA, 142 S. Ct. 2587, 2607–16 (2022) (preventing discretionary action by the executive branch where not explicitly given authority by Congress despite statutory basis); Seila L. LLC v. CFPB, 140 S. Ct. 2183, 2202–04 (2020) (rejecting the agency design of the CFPB for insulating the Director's decision-making too much from the President's removal power).

226. *See supra* Part I.

acceptance of a rational solution.[227] Section A discusses the pressing situation. Section B outlines the process for how such a compact could be created, and Section C paints broad strokes that should be included in a Mississippi River Basin Compact.

A. THE NEED FOR A COHESIVE, WATERSHED-SCALE GOVERNMENT BODY

The problems plaguing the Mississippi River are real.[228] The pains of climate change are already being felt.[229] Science informs us that a water body cannot be effectively managed—for water quantity or quality—unless it is done on a basin-wide scale, including hydrologically connected groundwater.[230] Shockingly, there is no federal law covering groundwater.[231] As one research report notes, "The sheer number of governmental authorities and legislative programs affecting the Mississippi River render

227. *See* ANNIN, *supra* note 34, at 8–20 (describing the urgency behind the passing of the Great Lakes Water Compact); *see also* Collier, *supra* note 174, at 239 ("Experience has shown time and again that it is very important to have a plan in place before an extreme event occurs. In the midst of an emergency is not the time to work out a complex response.").

228. *See supra* Part I.

229. Delaney Dryfoos, *Climate Report Indicates Dire Future for Mississippi River Basin, Which Is Already Feeling Impacts*, INVESTIGATE MIDWEST (Nov. 30, 2023), https://investigatemidwest.org/2023/11/30/climate-report-indicates-dire-future-for-mississippi-river-basin-which-is-already-feeling-impacts [https://perma.cc/U6SN-638S] (highlighting some of the impacts of climate change on the Mississippi River Basin).

230. Mehan, *supra* note 22, at 14 (quoting NACWA Strategic Watershed Task Force, *Recommendations for a Viable and Vital 21st Century Clean Water Policy*, NAT'L ASS'N OF CLEAN WATER AGENCIES (Oct. 18, 2007), https://www.nacwa.org/docs/default-source/news-publications/White-Papers/2007-10-18swtfrvv.pdf?sfvrsn=2 [https://perma.cc/VC9V-GVRB]) (describing the watershed approach as "taking into consideration both ground and surface water flows"); Gentry, *supra* note 59, at 23 ("Unsurprisingly, the main stem of the Mississippi River is seen by most people, and the law, as a surface stream. In fact, it is more than that; it is connected to a series of aquifers—or groundwater reservoirs—that are part of its system of tributaries and distributaries."); Englehart, *supra* note 63, at 2 ("Because the sources of pollution extend throughout the watershed, it is practical to address the problem with a watershed approach."); *see also* J.W. POWELL, REPORT ON THE LANDS OF THE ARID REGION OF THE UNITED STATES 6–9, 22, 25–45 (2d ed. 1879) (describing a class of "irrigable lands" analogous to watersheds, and advocating for the United States government to draw political boundaries—called "irrigation districts" or "pasturage districts"—along watersheds).

231. Gentry, *supra* note 59, at 24.

efficient and consistent management nearly impossible."[232] Experts have upheld managing water resources at a watershed level as the most effective tool to "coordinate development and management of diverse water and water-related resources to maximize economic and social welfare without compromising environmental sustainability."[233] This escapes the tragedy of the commons dilemma, which is key to so many environmental problems, especially rivers.[234] In this context of a river system, states that are located upriver often do not directly feel the effects of their own pollution—they can simply float their waste downstream. For the Mississippi River, a full-basin approach would need to involve all thirty-one states encompassing the Basin, as well as the federal government.[235] However, the difficulty of bringing together thirty-one states, across party lines, stark geographical divides, and varied interests may prove to be insurmountable.

An effective compact could be formed by the ten states that encompass the Mississippi River directly—Minnesota, Iowa, Wisconsin, Illinois, Missouri, Kentucky, Tennessee, Arkansas, Mississippi, and Louisiana. Current policymakers advocating for an interstate compact on the Mississippi believe that such a ten-party compact is a goal, and it could be a steppingstone to a whole-basin compact later on.[236] However, by limiting a compact to merely the ten direct-basin states, much is lost. As one study notes, "the interstate nature of the problem's sources and impacts encourages an interstate solution."[237] To be a truly interstate solution, all of the states encompassing the Mississippi River Basin would need to be included. Otherwise, western states could simply drain the tributaries of the Mississippi, so long as they did not do so within the ten direct-basin states. Similarly, polluters that would be regulated by a compact with fewer

232. *Id.* at 35.

233. David A. Strifling, *Integrated Water Resources Management and Effective Intergovernmental Cooperation on Watershed Issues*, 70 MERCER L. REV. 399, 399 (2019).

234. *See* Gregory M. Stein, *Environmental Justice and the Tragedy of the Commons*, 13 CALIF. L. REV. ONLINE 10, 12 (describing how environmental catastrophes can become outsized over time due to the "tragedy of the commons").

235. *The Mississippi Drainage Basin*, *supra* note 1.

236. Telephone Interview with John Hoffman, Minn. State Sen. & Alexandra Campbell-Ferrari, Exec. Dir., Ctr. for Water Sec. & Coop. (Dec. 22, 2023).

237. Englehart, *supra* note 63, at 16.

parties could simply skirt pollution rules adopted by the ten direct-basin states by polluting out-of-state tributaries. Considering the vast land area drained by the Mississippi River, it would be a much weaker compact. However, the compact may need to be limited to ten states at the outset as a first step, later encouraging the other twenty-one states to join.

The interstate compact model is best situated to fill the gaps between federal and state jurisdiction and provide cohesive maintenance to the Mississippi River Basin.[238] The problem is one of governance: states cannot regulate the Mississippi River beyond their territorial jurisdiction, and federal agencies are constrained to their subject matter (such as flood control, water quality, or endangered species) and lack "clear policy guidance from a central source at the federal level, which hinders comprehensive management."[239] Interstate water compacts, on the contrary, are multipurpose, effective, and adaptable.[240] These compacts, in their base form, apportion water to save states from costly litigation.[241]

However, they can do a good many other things. Interstate water compacts can fill the gaps in water quality control that the Clean Water Act has left open.[242] They can provide a flood control

238. Jeffrey P. Featherstone, *Existing Interstate Compacts: The Law and the Lessons*, 4 TOL. J. GREAT LAKES' L., SCI. & POL'Y 271, 271 (2001) ("Such organizations provide an alternative to traditional federalism for addressing problems that transcend political boundaries and functional responsibilities. They also provide an administrative means for addressing problems requiring ongoing collaboration and dispute resolution."); *see also* Frankfurter & Landis, *supra* note 199, at 702 (discussing how issues like flood control and provision of an adequate water supply are too complex for litigation or a single state to address, and that compacts are likely the most effective form of interstate control).

239. Featherstone, *supra* note 238, at 271–72.

240. *Id.* at 274.

241. *See id.* ("Incentives for interstate coordination through an interstate compact are straightforward because the alternative is usually costly litigation."); *cf.* Robison & MacDonnell, *supra* note 133, at 134–43 (discussing the apportionment scheme of the Colorado River Compact, but also how the Compact played a central role in the eleven-year *Arizona v. California* litigation).

242. *See* Roper, *supra* note 173, at 113–14 (highlighting how the Delaware River Basin Commission approved a final rule prohibiting high-volume hydraulic fracking, whereas the oil and gas industry benefits from exemptions under the CWA).

mechanism.[243] They can better protect wetlands.[244] They can be adaptive to climate change by providing speedy and just means of apportioning water equitably in times of scarcity.[245]

The gaps in federal legislation have become starker post-*Sackett v. EPA*, where the Supreme Court seriously limited the abilities of federal agencies to regulate wetland destruction under the CWA.[246] Now, for a body of water to be under CWA's protections, the federal government must show "a continuous surface connection to bodies that are 'waters of the United States' in their own right, so that there is no clear demarcation between 'waters' and wetlands."[247] In essence, this means that the EPA and the Corps have significantly less authority to regulate the wetlands and other non-navigable water sources in the Mississippi River watershed. Further, if the opinion asserted in Justice Thomas's concurrence—that the *Sackett* decision is a constitutional, rather than statutory, holding—is to carry weight in the future, Congress will not be able to regulate these waters even under *future* statutes.[248]

The consequences of this recent decision are yet to be seen, but likely will have profound impacts on the abilities of the federal government to prevent wetland destruction and pollution for water hydrologically connected (below the surface) to the Mississippi and its tributaries. This creates a situation where waters in the Mississippi River watershed are regulated even less cohesively than before, without the regulatory "floor" that the

243. *Id.*

244. Erik G. Davis, Note, *Interstate Compacts That Are for the Birds: A Proposal for Reconciling Federal Wetlands Protection with State Water Rights Through Federal-Interstate Compacts*, 10 BYU J. PUB. L. 325, 359 (1996) (identifying federal-interstate compacts as offering dynamic methods for protecting wetlands and reallocating associated costs).

245. Hall, *supra* note 192, at 288–93 (lauding the Delaware River Basin Compact and the Great Lakes—St. Lawrence River Basin Water Resources Compact for providing tools and governance structures that help states and water users adapt to climate change).

246. Sackett v. EPA, 598 U.S. 651, 673–83 (2023) (limiting the bodies of water covered by the CWA and rejecting the EPA's "significant nexus" rule).

247. *Id.* at 678 (quoting Rapanos v. United States, 547 U.S. 715, 742 (2006)).

248. *Id.* at 698 (Thomas, J., concurring) ("This understanding of the term 'navigable waters'—*i.e.*, as shorthand for waters subject to Congress' authority . . . persisted up to the enactment of the CWA.").

CWA provided for wetland destruction.[249] As one study notes, "[t]he expected loss of protection of wetlands and streams within the Mississippi River's watershed [because of *Sackett*] will undeniably impact water quality and drainage."[250]

The CWA alone is likely not enough to regulate interstate pollution effectively regardless of the *Sackett* decision. For example, the EPA has been working with the states of the Chesapeake Bay watershed to set pollution control standards for nonpoint sources—exactly the category of pollution beleaguering the Mississippi.[251] Despite nearly a decade of efforts by the federal government and others, the pollution reduction goals set are not being met.[252]

The *Sackett* decision and failure in the Chesapeake Bay painfully exposes the weaknesses of a congressional solution. Moreover, agencies are beholden to the whims of the President, and the administration of a federal agency under one President may be opposite to that under the next President. Indeed, this was colorfully shown by the policy of the Obama vs. Trump vs. Biden EPAs.[253] This variability removes much of the certainty required for sustainable governance as the world moves into tumultuous times. The impotence and impermanence of federal agency action regarding the Mississippi River create fertile ground where an interstate compact may be sown.

Tribal involvement in the compact will be critical for it to actually be effective. "Fifteen federally acknowledged tribes

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249. Clean Water Act, 33 U.S.C § 1344(h)(1)(A) ("To issue permits which . . . apply, and assure compliance with, any applicable requirements of this section, including, *but not limited to*, the guidelines established under subsection (b)(1) of this section, and sections 1317 and 1343 of this title . . . ." (emphasis added)).

250. Gentry, *supra* note 59, at 38.

251. *See Overview*, CHESAPEAKESTAT, https://www.chesapeakestat.com/overview [https://perma.cc/2NVP-VYAR] (delineating the history of efforts to clean up the Chesapeake Bay, including establishment of the Chesapeake Bay Total Maximum Daily Load, which accounts for nonpoint sources of pollution).

252. *2025 Watershed Implementation Plans (WIPs)*, CHESAPEAKEPROGRESS, https://www.chesapeakeprogress.com/clean-water/watershed-implementation-plans [https://perma.cc/J62J-NG58] ("At the Fall 2022 Executive Council meeting, it was acknowledged that the 2025 Watershed Implementation Plans (WIPs) outcome will not be met on time and the indicators for this outcome support the determination that it is off course.").

253. *See, e.g.*, West Virginia v. EPA, 142 S. Ct. 2587, 2602–05 (2022) (discussing the proposal and subsequent repeal of a fossil fuel reduction plan that shifted with the changes in administration).

reside within a fifty-mile radius of the Mississippi River."[254] In addition, there are sixty-four other federally recognized tribes with land within the Mississippi River Basin.[255] These tribes have various legal claims to water destined for the Mississippi River and may manage land and water resources in manners that can support or conflict with a compact.[256] Unfortunately for a truly comprehensive compact, Native American tribes may not be parties to a compact.[257] Regardless, Native voices and tribal interests must remain in any meaningful compact, or else it will face impotence.[258] Here, a Mississippi River Basin Compact can borrow from the Great Lakes Water Compact,[259] mandating tribal consultation when taking action pursuant to it, as well as explicitly not asserting usurpation over tribal water rights.[260] Should tribal interests be excluded, Mississippi water wars will be battled out in the courts, as happened in *Navajo Nation*.[261]

However, adopting such a compact is easier said than done, especially considering the number of states that would need to agree to this. Thankfully, there are prior models that can inform this undertaking.

B. PROCESS: THE GREAT LAKES WATER COMPACT MODEL

The Great Lakes Water Compact is the most recent interstate water compact.[262] In a time of polarization and political gridlock, a task such as an interstate compact involving over half

254. Gentry, *supra* note 59, at 12.

255. *See supra* note 40 and accompanying text.

256. Gentry, *supra* note 59, at 12–13 (acknowledging tribal governments' permitting authority and potential claims to water through reserved rights).

257. Arizona v. California, 373 U.S. 546, 597 (1963) (describing that an Indian reservation is not a state for purposes of interstate water allocation).

258. Telephone Interview with Haley Gentry & Mark Davis, *supra* note 131.

259. Great Lakes—St. Lawrence River Basin Water Resources Compact, Pub. L. No. 110-342, § 5.1, 122 Stat. 3739, 3759–60 (2008).

260. *Id.* § 8.1(3), 122 Stat. at 3762 ("Nothing in this Compact is intended to abrogate or derogate from treaty rights or rights held by any Tribe recognized by the federal government of the United States based upon its status as a Tribe recognized by the federal government of the United States.").

261. *See* Arizona v. Navajo Nation, 143 S. Ct. 1804, 1811–12 (2023) (explaining that the Navajo Nation sued the United States based on the view that an 1868 treaty created a duty for the federal government to affirmatively secure water for the Tribe).

262. *See* Hall & Stuntz, *supra* note 100, at 669–76 (describing the Great Lakes Water Compact and its governance model).

of the United States, transcending the political and East-West divide, may seem impossible. Yet, the Great Lakes Water Compact was able to cut through this gridlock to help protect and govern the world's largest freshwater body, just a decade and a half ago.[263] In doing so, the Great Lakes Water Compact set a model example of how to effectuate an interstate compact over a large and contested body of water in the twenty-first century—building on existing organizations of stakeholders. The Great Lakes Water Compact did not come into existence in a governance vacuum. Rather, numerous agreements between states already existed, beginning over a hundred years before the Great Lakes Compact was passed.[264] These existing relationships and governance documents invariably created a solid foundation that allowed the creation of an interstate compact.[265] The current effort to form a Mississippi River Compact is already doing just this, building on existing political organizations such as the Mississippi River Cities and Towns Initiative with an eye toward the process that the Great Lakes Water Compact went through.[266]

As discussed, fourteen other interstate water compacts already exist on tributaries of the Mississippi River.[267] These present prime coalitions and arrangements of states that can be added to lead to the creation of an interstate compact. Past federal initiatives at cohesive Mississippi River Governance can inform this discussion as well, such as the 1998 EPA initiative called the "Clean Water Action Plan and the Mississippi River Basin Initiative," which focused on enforcement actions in the River's watershed, and the 2009 USDA initiative called the "Mississippi River Basin Healthy Watersheds Initiative."[268] A similar voluntary EPA program formed in 1997 deals specifically with the dead zone in the Gulf of Mexico and recently earned further

263. *See* ANNIN, *supra* note 34, at 20 ("The Compact became law in 2008.").

264. Treaty Relating to Boundary Waters Between the United States and Canada, Gr. Brit.-U.S., Jan. 11, 1909, 36 Stat. 2448 (delineating borders and addressing topics such as diversions, pollution, and apportionment).

265. *See generally* ANNIN, *supra* note 34 (describing the stages of the Great Lakes Water Compact from a historical perspective).

266. Telephone Interview with John Hoffman & Alexandra Campbell-Ferrari, *supra* note 236.

267. Davis, *supra* note 8, at 10.

268. *See supra* note 60 and accompanying text.

federal funds to reduce the nutrient load in the Mississippi causing it.[269]

The states of Minnesota, Wisconsin, Iowa, Illinois, and Missouri have been engaged in collective management of the Upper Mississippi River via the Upper Mississippi River Basin Association, blessed by the federal Upper Mississippi River Management Act of 1986 that allows for cooperation with the Corps.[270] Congressional funds have been allocated for a similar Lower Mississippi River Basin Association, although it has not been formed yet.[271] This is not to be confused with the Lower Mississippi River Conservation Committee, where six lower-basin states seek cooperative management and outreach to deal with nutrient reductions and habitat restoration.[272] The less-formal Mississippi Interstate Cooperative Resource Association takes a wider-basin approach, where twenty-eight states and federal agencies work together in a voluntary function to improve the inter-jurisdictional fishery and reduce aquatic invasive species.[273]

A compact for the Mississippi has even been attempted before; Louisiana passed a statute officially "signing" such a compact to "reduce and then eliminate [Mississippi R]iver pollution" and applied to a full basin.[274] Unfortunately, this went unsigned by any other basin state and has no force. The most promising arrangement currently is, of course, the Mississippi River Cities and Towns Initiative.[275] Recognizing the drought and flooding issues facing the river, these stakeholders are more intimately connected to the River than others and can be key agitators for an interstate compact.[276] Tangible fears such as this are key to

269. Gentry, *supra* note 59, at 8–9.

270. *Id.* at 7–8.

271. *Id.* at 8.

272. Englehart, *supra* note 63, at 4.

273. Gentry, *supra* note 59, at 9; *About*, MISS. INTERSTATE COOP. RES. ASS'N, http://micrarivers.org/about [https://perma.cc/54RU-XN4K].

274. LA. STAT. ANN. § 30:2091 (2023).

275. *See* Brewer, *supra* note 27.

276. *See id.* (noting that mayors of cities and towns along the Mississippi are "highly motivated by recent disasters and . . . climate impacts" to form a Mississippi River Compact).

mobilizing stakeholders to action in creating compacts.[277] Indeed, it was a proposed scheme to ship Great Lakes water to the global East that provided much impetus for the Great Lakes Water Compact.[278]

Like the Great Lakes Water Compact, a Mississippi River Basin Compact would not be operating in a legal and policy vacuum when it comes to transboundary governance. If these existing intergovernmental bodies are effectively mobilized, like they were leading to the creation of the Great Lakes Water Compact, the process could be much quicker and more focused.

C. SUBSTANCE: THE DELAWARE RIVER BASIN COMPACT MODEL

While the Great Lakes Water Compact provides a stellar example of the process of effectuating an interstate compact in the twenty-first century, better support as to the substance of a Mississippi River Basin Compact is found in the Delaware River Basin Compact for three main reasons—the first lies in the (obvious) hydrologic differences between rivers and (massive) lakes.[279] Second, the Delaware River Basin Compact properly installs its governing body with the ability to control for and improve water quality, unlike the Great Lakes Water Compact's Compact Council.[280] Third, the Delaware River Basin Compact effectively integrates the federal government as a signatory

277. Telephone Interview with John Hoffman & Alexandra Campbell-Ferrari, *supra* note 236; *accord* Telephone Interview with Haley Gentry & Mark Davis, *supra* note 131.

278. Telephone Interview with Haley Gentry & Mark Davis, *supra* note 131; *see also* ANNIN, *supra* note 34, at 203–20 (discussing the scheme and the resulting galvanizing of state and provincial actors to move toward a more comprehensive management system).

279. For example, rivers struggle with the unique difficulty of upriver water users not facing the consequences of their pollution to the detriment of downriver water users.

280. Roper, *supra* note 173, at 87–95 (describing the composition, duties, and powers of the Delaware Basin River Commission); Delaware River Basin Compact, Pub. L. No. 87-328, § 5.1, 75 Stat. 688, 696 (1961) ("The commission may undertake investigations and surveys, and acquire, construct, operate and maintain projects and facilities to control potential pollution and abate or dilute existing pollution of the water resources of the basin. It may invoke as complainant the power and jurisdiction of water pollution abatement agencies of the signatory parties.").

party to its compact.[281] This third point is especially critical for a Mississippi River Basin Compact to include as, like the Delaware River, the Mississippi River is regulated extensively by the federal government—from the Corps to the National Park Service, the Department of Agriculture, and the EPA.[282] Indeed, the federal interest in the Mississippi River goes so deep, that control of commerce on the River was a major reason for Thomas Jefferson purchasing the territory of Louisiana from France.[283] Like the Delaware River Basin Compact, a Mississippi River Basin Compact needs a strong governing agency, complete with clear operating procedures, funding, powers, and public accountability.[284] As Carol R. Collier, former Executive Director of the Delaware River Basin Commission, notes:

> Management of water systems is fraught with changing circumstances and is in fact a messy business. No one agency can effectively manage the resource, especially if a river or aquifer crosses multiple political boundaries. River basin commissions provide the mechanism to bring the parties to the table to work through the problem so that management and implementation plans that serve the needs of all jurisdictions and populations, as well as ecological values, can be developed and implemented.[285]

This role of the Delaware River Basin Commission—as a regulator and as a *regulator of regulators*—is precisely the style of agency that a Mississippi River Basin Compact should create. An interstate compact would not remove these other agencies exercising control over the Mississippi River Basin, rather it would be a tool through which they could establish shared goals and work towards them in a complimentary manner.[286]

While the exact details of the Mississippi River Basin Compact are intentionally not the focus of the Note, these principles from the Delaware River Basin Compact, of it being a forum to

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281. Jerome C. Muys et al., *Utton Transboundary Resources Center Model Interstate Water Compact*, 47 NAT. RES. J. 17, 54 (2007) ("[A]ny plan for an interstate river basin should not be considered comprehensive without encompassing federal water planning as an integral part of the effort." (emphasis omitted) (quoting Featherstone, *supra* note 238, at 274)).

282. *See* discussion *supra* Part I.

283. Telephone Interview with Haley Gentry & Mark Davis, *supra* note 131.

284. *See* Ludwik A. Teclaff, *The River Basin Concept and Global Climate Change*, 8 PACE ENV'T L. REV. 355, 388 (1991) (advocating for expanding the powers of basin commissions as a means of watershed governance).

285. Collier, *supra* note 174, at 243.

286. *See supra* Part I (discussing the legal authorities of the Mississippi River).

implement cohesive plans that are binding, find force of law, and discourage conflict are crucial to consider for this measure of interstate governance to supplant the current regime in any meaningful sense.

The details of the Mississippi River Basin Compact will necessarily be subject to political compromise, interest group lobbying, and all of the usual tricks used to promote legislation in this polarized age; but the key principles discussed in this Note must be adhered to if the Compact will meet the challenges posed.[287] So too, lobbying is not necessarily a bad thing, as stakeholder interests must be incorporated into the Compact, or else it will fail.[288] An example where stakeholder interests were not engaged is the Apalachicola/Chattahoochee/Flint Compact between Georgian, Alabama, Florida, and the federal government, which was allowed to expire while the signatory parties engaged in litigation.[289]

The Delaware River Basin Compact built a commission that is uniquely powerful, exercising the power of both federal and state actors, without being truly beholden to them nor to interests outside of the signatory parties.[290] Courts have adjudicated disputes with the Delaware River Basin Commission per the terms of the Compact, which generally favors the Commission.[291] This is especially important for preventing litigation between basin states. For the Mississippi, "people count on the river to be big enough for everyone, but increasingly it's not," which will inevitably lead to litigation between states over Mississippi River

287. *See, e.g.*, John V. Casey, Note, *Irrigating Industry: Is the Great Lakes Compact Being Drowned for Industrial Gain?*, 2020 U. ILL. L. REV. 307, 333–35 (describing how a "loophole" in the Great Lakes Water Compact allows for a manufacturing plant to divert seven million gallons of water a day out of the Great Lakes Basin).

288. Telephone Interview with Haley Gentry & Mark Davis, *supra* note 131 (discussing the necessity of active state support in successful compacts by having stakeholder interests represented adequately).

289. Davis, *supra* note 8, at 9–10.

290. Rhett B. Larson, *Interstitial Federalism*, 62 UCLA L. REV. 908, 937 (2015) (describing the Delaware River Basin Commission as a "uniquely powerful entity" that has typically gotten substantial deference from courts). *But see* SCHLAGER & BLOMQUIST, *supra* note 174, at 173–74 (illustrating how the Delaware River Basin Commission works *together* with state and federal actors so that these actors can account for their respective interests).

291. Larson, *supra* note 290, at 940.

water.[292] This would be a drawn-out disaster, causing years of litigation that may go nowhere.[293] The Supreme Court's remedy—apportioning Mississippi River water—is a solution that few want, thrusting basin states into near endless litigation.[294] The Mississippi River Basin Compact, properly drafted, would have a commission that could act with the force of law to prevent such litigation, to apportion the water in a more cooperative and proactive way. Such power, and such deference, are needed for a regional agency that can govern the Mississippi River Basin more reliably and consistently, filling the policy gaps that the federal government and state governments have been unwilling or unable to tackle.

CONCLUSION

The challenges faced by the Mississippi River are extensive. Global climate change and population pressures threaten to worsen those challenges.[295] Effective regulation of the Mississippi River, despite a slew of federal and state laws, has been ineffective.[296] Under the Constitution, the best means for filling the gap between federal and state regulation for transboundary resources is the interstate compact.[297] Thus, to effectively solve the challenges faced by the Mississippi River, each state making up the Mississippi River Basin, as well as the federal government must sign such a compact.[298] To do so, these sovereigns can follow the process of the Great Lakes Water Compact in engaging existing interstate and federal political entities.[299] The Mississippi River Basin Compact, at a minimum, must produce a powerful and effective intergovernmental agency much like the Delaware River Basin Commission, or else be relegated to an impotent advisory role in a space where effective, efficient, and timely solutions are necessary.[300]

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292. Telephone Interview with Haley Gentry & Mark Davis, *supra* note 131.
293. *Id.*
294. *Id.*
295. *See* discussion *supra* Part I.
296. *See* discussion *supra* Part I.
297. *See* discussion *supra* Part III.
298. *See* discussion *supra* Part IV.
299. *See* discussion *supra* Part IV.
300. *See* discussion *supra* Part IV.