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## **Saving Sportsman's Paradise: Louisiana's Options for Facing Future Spillway Openings**

Clay Parker

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# Saving Sportsman’s Paradise: Louisiana’s Options for Facing Future Spillway Openings

*Clay Parker\**

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## INTRODUCTION

The Bonnet Carré and Morganza spillways, designed almost 100 years ago to save Louisiana from Mississippi River floods, are as much a part of life in south Louisiana as crawfish boils, speckled trout, and Saturday nights in Death Valley. The spillways were also constructed with a secondary purpose in mind—to prevent the Mississippi River from changing course at the Old River Control Structure (“Old River”).<sup>1</sup> Unfortunately, recent increases in the duration and intensity of the Mississippi River flooding, combined with outdated designs in infrastructure, have outpaced the century-old spillways and threaten to destroy Sportsman’s Paradise.<sup>2</sup>

This Comment will primarily focus on the Bonnet Carré Spillway and its impacts on the brackish ecosystems of south Louisiana. The Morganza Spillway has only been opened twice in its history, whereas the Bonnet Carré has been opened 15 times with the average time between openings rapidly dropping.<sup>3</sup> The Bonnet Carré Spillway’s usage has more than

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1. *Mississippi River & Tributaries*, NEW ORLEANS DIST., U.S. ARMY CORPS ENG’RS, <https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Mississippi-River-Tributaries/> [<https://perma.cc/P3BX-ZQ93>] (last visited Oct. 22, 2021); see Jeff Masters, *America’s Achilles’ Heel: The Mississippi River’s Old River Flood Control Structure*, WEATHER UNDERGROUND (May 10, 2019, 6:03 AM), <https://www.wunderground.com/cat6/Americas-Achilles-Heel-Mississippi-Rivers-Old-River-Control-Structure> [<https://perma.cc/8CVL-EUFH>] (explaining the Old River Control Structure regulates the Mississippi River where it meets the Atchafalaya River).

2. See Anita Lee, *Dolphins, Sea Turtles, Oysters Dying Along Gulf Coast; Experts Point to Bonnet Carre Spillway*, THE ADVOCATE (Apr. 22, 2019, 1:23 PM) [hereinafter *Experts Point to Bonnet Carre Spillway*], [https://www.theadvocate.com/baton\\_rouge/news/article\\_6c33033c-652b-11e9-9831-434df6daf3f1.html](https://www.theadvocate.com/baton_rouge/news/article_6c33033c-652b-11e9-9831-434df6daf3f1.html); Anita Lee, *The Power to Open Bonnet Carré Spillway Rests 200 Miles from ‘Struggling’ Gulf Coast*, SUN HERALD (Aug. 14, 2019, 6:43 PM) [hereinafter *200 Miles*], <https://www.sunherald.com/news/local/counties/harrison-county/article231398673.html>.

3. See *Historic Operations of the Bonnet Carré Spillway*, NEW ORLEANS DIST., U.S. ARMY CORPS ENG’RS, <https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Bonnet-Carre-Spillway-Overview/Historic-Op>

tripled in the last 20 years compared to the previous 69 years.<sup>4</sup> Most significantly, in 2019 the Bonnet Carré opened twice in one year: once in February and again in May.<sup>5</sup> This unprecedented double opening led to saltwater creatures such as dolphins, sea turtles, and oysters dying en masse due to sudden, prolonged drops in salinity from the influx of fresh river water.<sup>6</sup>

The Bonnet Carré and Morganza spillways are vital for the continued existence of two major cities in south Louisiana—New Orleans and Baton Rouge.<sup>7</sup> The spillways protect the cities from flooding while simultaneously diverting the Mississippi River’s course away from these cities.<sup>8</sup> The Army Corps of Engineers (“Army Corps”) designed and built the spillways and continue to manage their operation to this day along with the entire Mississippi River protection system.<sup>9</sup> However, the Army Corps has failed to implement sufficient upstream mitigation measures.<sup>10</sup> The Army Corps’s failure has forced Louisiana flood control systems to manage unrestricted water flow from upriver states.<sup>11</sup> If left unchecked,

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eration-of-Bonnet-Carre/ [https://perma.cc/2PRM-WF5W] (last visited Oct. 11, 2021); *Morganza Floodway Overview*, NEW ORLEANS DIST., U.S. ARMY CORPS ENG’RS, https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Morganza-Floodway-Overview/ [https://perma.cc/DQ9D-HJF2] (last visited Oct. 11, 2021).

4. See *Historic Operations of the Bonnet Carré Spillway*, *supra* note 3.

5. *Id.*

6. *Experts Point to Bonnet Carre Spillway*, *supra* note 2.

7. See Campbell Robertson, *Louisiana Spillway Opened to Relieve Flooding*, N.Y. TIMES (May 14, 2011), https://www.nytimes.com/2011/05/15/us/15spillway.html [https://perma.cc/D4C6-JU5W].

8. See *Bonnet Carré Spillway Overview*, NEW ORLEANS DIST., U.S. ARMY CORPS ENG’RS, https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Bonnet-Carre-Spillway-Overview/ [https://perma.cc/4S48-87S3] (last visited Oct. 11, 2021); *Historic Operations of the Bonnet Carré Spillway*, *supra* note 3; *Morganza Floodway Overview*, *supra* note 3; see also Masters, *supra* note 1.

9. See *Mississippi River & Tributaries*, *supra* note 1.

10. In the context of this Comment, upstream mitigation means flood control projects such as dams, reservoirs, and spillways upstream of Louisiana. See *Drying of the American West, Part A: Reservoirs on the Colorado River*, EARTHLABS, https://serc.carleton.edu/eslabs/drought/6a.html [https://perma.cc/24H3-4V4X] (last visited Oct. 11, 2021) (focusing on the map at the top of the web page listing all dams and reservoirs in the Colorado Basin); cf. *Mississippi River & Tributaries*, *supra* note 1.

11. See *Mississippi River & Tributaries*, *supra* note 1; see also *Experts Point to Bonnet Carré Spillway*, *supra* note 2.

these unrestricted flows will eventually prove fatal to the state's saltwater ecosystems.<sup>12</sup>

This Comment will analyze the different policies and procedures governing Mississippi River flood control as well as the structure of the Mississippi River flood control system. This analysis will portray how the Army Corps has failed to correctly manage the Mississippi Basin and consequently allowed the present spillway crisis to unfold.

The antiquated design of the spillways, combined with an upstream control system severely lacking in storage capacity, is slowly killing the salt marshes and fisheries of not only the Pontchartrain Basin but also the State of Mississippi.<sup>13</sup> While the Bonnet Carré is the only spillway currently causing such crises, increasing flood intensity indicates that the Morganza will almost certainly be contributing to the crisis soon. The spillways are undoubtedly crucial to Louisiana's economy and survival; they protect the state's two largest cities and Louisiana citizens' way of life.<sup>14</sup> Thus, the way the Army Corps views and manages flood control infrastructure must change. The Mississippi River's flood problem does not solely impact Louisiana but rather the entire United States ("U.S.").<sup>15</sup> Louisiana can no longer carry the burden of the entire Mississippi Basin's flood volume—it is devastating Sportsman's Paradise.<sup>16</sup>

A solution to saving Louisiana and alleviating this burden is for Congress to ensure the Army Corps expands upstream storage capacity. First, Congress must rein in the Army Corps's broad governance in this area; it can no longer be given such unrestrained authority over flood control projects.<sup>17</sup> Congress has hardly questioned the Army Corps's infallibility since Franklin Roosevelt's presidency, and that must change.<sup>18</sup> Congress should enact statutes and/or direct the Army Corps to promulgate new regulations requiring the burden of controlling the

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12. See *Mississippi River & Tributaries*, *supra* note 1; see also *Experts Point to Bonnet Carré Spillway*, *supra* note 2.

13. See *Experts Point to Bonnet Carré Spillway*, *supra* note 2.

14. See *Bonnet Carré Spillway Overview*, *supra* note 8; see also *Morganza Floodway Overview*, *supra* note 3; see also *Masters*, *supra* note 1.

15. See *Experts Point to Bonnet Carré Spillway*, *supra* note 2; see also *200 Miles*, *supra* note 2.

16. See *Experts Point to Bonnet Carré Spillway*, *supra* note 2; see also *200 Miles*, *supra* note 2.

17. See Oliver A. Houck, *Breaking the Golden Rule: Judicial Review of Federal Water Project Planning*, 65 RUTGERS L. REV. 1, 11–12 (2012) (noting the reliance upon a cost-benefit analysis and nothing else); see also *200 Miles*, *supra* note 2.

18. See Houck, *supra* note 17, at 11–12.

Mississippi River to be divided amongst *all* states within the Mississippi Basin.

Second, the states and interested citizens should be more inclined to sue the Army Corps for its inadequate maintenance of the spillways, as mishandling the spillways harms the natural resources owned by the state and enjoyed by its citizens.<sup>19</sup> Lawsuits, such as those recently brought by Louisiana and Mississippi,<sup>20</sup> will bring much-needed attention to the management of Mississippi River flood control and lead to judicial review of the Army Corps's actions. Further, these actions may ignite a reconsideration of Mississippi River flood control policy and spread the burden of flood control along the entire river, rather than concentrating the burden solely on the southern portion of the Mississippi Basin. Controlling the release of floodwaters farther upstream will ease the burden on spillways, but the Army Corps has not yet expressed a willingness to do so.<sup>21</sup> Accordingly, congressional intervention may well present the most viable means of saving Sportsman's Paradise.

Part I of this Comment will discuss the background of the Mississippi River flood control crisis to address why the system has become an issue. Further, Part I will explain spillways generally, their effect on the surrounding ecosystems, the Army Corps's role in flood control, and the Mississippi River flood control system as a whole.

Part II will analyze the applicable law to the problem at hand. Both the Army Corps and the interstate interests of the Mississippi River are governed by federal law. The Code of Federal Regulations and the U.S. Code will be explored in order to understand where the shortcomings in Mississippi River flood control lie. This Comment will also analyze the current oversight regime, which consists of both judicial and legislative entities.

Part III of this Comment will discuss several possible solutions to balance the interests of the Army Corps, Congress, and concerned citizens; spread the burden of flood control along the Mississippi River as much as possible while avoiding any federal mandates of questionable constitutionality; and ultimately save Sportsman's Paradise. Part III will also propose a solution of statutory reform directing the Army Corps to use upstream mitigation measures whenever possible to allow for case-by-case determinations, maintaining the leading role of the Army Corps's

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19. See *Experts Point to Bonnet Carré Spillway*, *supra* note 2.

20. See, e.g., *Harrison Cty. v. Miss. River Comm'n*, No. 19cv986, 2020 WL 3159185 (S.D. Miss. June 12, 2020).

21. See Houck, *supra* note 17, at 11–12 (discussing the willingness of Congress to blindly trust the Army Corps).

expertise while creating a more structured system for control of the Mississippi River.

## I. BACKGROUND

### A. *The Spillways: An Overview*

The Bonnet Carré and Morganza spillways were constructed after the Great Flood of 1927 to better control future flooding.<sup>22</sup> Following the immense devastation of lives and property along the Mississippi River, Congress acted to ensure that history would not repeat itself.<sup>23</sup> Thus, the spillways were constructed with the initial function to safely discharge a volume of water 29% greater than the Great Flood of 1927—which equates to 3,030,000 cubic feet per second at the Red River gauge—without endangering Louisiana cities to catastrophic flooding.<sup>24</sup>

The Bonnet Carré Spillway was built in an old crevasse just north of New Orleans and sits directly on the Mississippi River.<sup>25</sup> The Bonnet Carré structure consists of 350 20-foot-wide bays closed by creosote timbers and a floodway confined by guide levees emptying into Lake Pontchartrain.<sup>26</sup> The timbers are not completely waterproof and allow leakage during times of lesser flooding when the spillway is not in operation.<sup>27</sup> This leakage mimics natural flood patterns by injecting a small amount of freshwater into the Pontchartrain Basin.<sup>28</sup> During an opening, crews pull the timbers from the bays individually, allowing up to 250,000 cubic feet of river water per second—which equates to approximately three Olympic-size swimming pools per second—to flow into Lake Pontchartrain, Lake Borgne, and the Gulf of Mexico.<sup>29</sup>

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22. See *Mississippi River & Tributaries*, *supra* note 1.

23. See *id.*

24. See *id.* The Red River gauge measures Mississippi River flow where the Mississippi and Red Rivers meet, just north of the Morganza Spillway. *Id.* The Red River Landing gauge is located just outside the town of Angola. *Id.*

25. *Bonnet Carré Spillway Overview*, *supra* note 8. A crevasse is a breach in the bank of a river.

26. *Id.*

27. *Spillway Operational Effects*, NEW ORLEANS DIST., U.S. ARMY CORPS ENG'RS, <https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Bonnet-Carre-Spillway-Overview/Spillway-Operation-Information/> [<https://perma.cc/XE5Z-S39A>] (last visited Oct. 7, 2021).

28. *Id.*

29. See *id.*

The Morganza Spillway is located further north than Bonnet Carré at river mile 280 along the Mississippi River.<sup>30</sup> The Morganza protects the Baton Rouge levees and Old River.<sup>31</sup> It is a two-tiered structure. The first component is the main spillway gates which control the flow of water through the spillway.<sup>32</sup> The second tier is a floodway that guides water in and out of the control structure.<sup>33</sup> The Morganza has only been used twice in its history, first in 1973 and again in 2011.<sup>34</sup> At peak flow with all bays open, the Morganza is capable of funneling 600,000 cubic feet per second of river water down the spillway, into the Atchafalaya Floodway, and then finally into the Gulf of Mexico.<sup>35</sup> Unlike the Bonnet Carré, the Morganza Spillway flows through privately owned land that is rendered unusable during an opening once spillway waters inundate the area. When the Morganza opened in 2011, thousands of acres of pastureland and homes were entirely submerged and inaccessible for the duration of the spillway's opening.<sup>36</sup>

#### *B. What the Spillways Protect*

The main purpose of the spillways is relatively simple: to protect Baton Rouge and New Orleans from Mississippi River floods.<sup>37</sup> Both spillways operating together can remove 850,000 cubic feet per second of flow from the Mississippi River, greatly decreasing downstream levee pressure.<sup>38</sup> Decreasing pressure on levees lessens the chance of a catastrophic levee breach or overtopping during major flooding periods.<sup>39</sup> However, in 2019, Tropical Storm Barry threatened to overtop the New Orleans levees despite the Bonnet Carré being fully open at the time.<sup>40</sup> This nearly catastrophic event serves as evidence that the spillways alone are no longer a sufficient mechanism to control the Mississippi River.

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30. See *Morganza Floodway Overview*, *supra* note 3.

31. *Id.*

32. See *id.*

33. *Id.*

34. *Id.*

35. See *id.*

36. Robertson, *supra* note 7.

37. *Mississippi River & Tributaries*, *supra* note 1.

38. See *Morganza Floodway Overview*, *supra* note 3; see also *Spillway Operational Effects*, *supra* note 27.

39. Masters, *supra* note 1.

40. *Id.*

The spillways also protect Louisiana's Achilles heel: the Old River Control Structure.<sup>41</sup> Old River was created to prevent the Mississippi River from diverting course to the current Atchafalaya River channel where the rivers meet 45 miles northwest of Baton Rouge.<sup>42</sup> The Atchafalaya channel is shorter and steeper than the Mississippi—a more tempting and natural path to the Gulf of Mexico.<sup>43</sup> Old River consists of several structures that control the flow between the Mississippi and Atchafalaya rivers; currently, about 30% of Mississippi River flow is diverted by Old River.<sup>44</sup> This man-made obstacle stops the mighty Mississippi, but should Old River fail the results would prove absolutely catastrophic.<sup>45</sup> The Mississippi River would immediately shift west to the current Atchafalaya channel, and this change in course would likely be irreversible.<sup>46</sup> Baton Rouge and New Orleans would cease to be useful ports in the blink of an eye, and the repercussions would be felt worldwide.<sup>47</sup>

The two instances the Morganza Spillway was opened were to prevent this nightmare scenario.<sup>48</sup> The Army Corps was almost too late in the 1973 Morganza opening; while deliberations occurred over opening the Morganza Spillway, Old River was nearly destroyed by rapidly rising floodwaters.<sup>49</sup> The Morganza is used sparingly due to its impact on private lands, but this may change with increasing flood intensity, as evidenced by the more frequent Bonnet Carré openings.<sup>50</sup> Higher floods and longer flood durations caused by climate change will inevitably test the resolve of Old River more often in the future and will also require more openings by both spillways.

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41. Jeff Masters, *If the Old River Control Structure Fails: A Catastrophe with Global Impact*, WEATHER UNDERGROUND (May 14, 2019, 4:01 AM), <https://www.wunderground.com/cat6/If-Old-River-Control-Structure-Fails-Catastrophe-Global-Impact> [<https://perma.cc/QE6M-WGXD>].

42. Masters, *supra* note 1.

43. *Id.*

44. *Id.*

45. Masters, *supra* note 41.

46. *Id.*

47. *See id.*

48. *See Morganza Floodway Overview*, *supra* note 3; *see also* Masters, *supra* note 1.

49. *See id.*

50. *See Historic Operation of Bonnet Carré Spillway*, *supra* note 3.

*C. A History of the Operation of the Bonnet Carré and Morganza Spillways*

The Bonnet Carré Spillway was originally designed to be opened once every ten years.<sup>51</sup> Historically, the spillway operated an average of once every 7.5 years.<sup>52</sup> However, since 2000 the spillway has operated more frequently, averaging once every 2.9 years.<sup>53</sup> In fact, the last five years have seen five openings, two of which were in February and May of 2019.<sup>54</sup> The Army Corps stated that the positive effects of a Bonnet Carré opening include nutrient replenishment and increased productivity of local fisheries.<sup>55</sup> However, these possible benefits are based on the original design of a ten-year opening frequency.<sup>56</sup> The increasing frequency of spillway openings, particularly the double opening in 2019, undermines that assumption significantly.

The Morganza Spillway has far less operational data than the Bonnet Carré because it has only been opened twice in history,<sup>57</sup> due in part to the Morganza's location.<sup>58</sup> Thousands of acres of swamp and privately owned land lie in the path of the Morganza Floodway, and notices are sent to affected parties every year warning of the potential for an opening.<sup>59</sup> The Army Corps bases its decision to open the Morganza mainly on the flow of the Mississippi River on the east side of the control structure.<sup>60</sup> Careful consideration must also be afforded to the wildlife and private citizens' properties in the spillway's path.<sup>61</sup>

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51. See *Bonnet Carré Spillway Overview*, *supra* note 8.

52. See *Historic Operations of the Bonnet Carré Spillway*, *supra* note 3.

53. *Id.*

54. See *Spillway Operational Effects*, *supra* note 27.

55. See *id.*

56. See *Cultural, Environmental and Natural Values*, NEW ORLEANS DIST., U.S. ARMY CORPS ENG'RS, <https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Bonnet-Carre-Spillway-Overview/Cultural-Environmental-and-Natural-Values/> [<https://perma.cc/82SE-V9BN>] (last visited Oct. 9, 2021).

57. See *Morganza Floodway Overview*, *supra* note 3.

58. *Id.*

59. See *id.*

60. See NEW ORLEANS DIST., U.S. ARMY CORPS OF ENG'RS, MORGANZA FLOODWAY INTERIM WATER CONTROL MANUAL PROPOSED CLARIFICATIONS TO THE STANDING INSTRUCTIONS 1 (2014), <https://www.mvn.usace.army.mil/Portals/56/docs/MRT/MorganzaInterimWCMStandingInstructionsSimplifiedFINAL.pdf> [<https://perma.cc/5LLF-TGXM>].

61. See *id.*

*D. The Spillways' Role in the Mississippi River Flood Control System*

The Mississippi River is the world's third-largest river basin, draining 41% of the continental U.S.' land mass.<sup>62</sup> Major floods throughout the nineteenth and early twentieth centuries prompted Congress to pass the Flood Control Act of 1928 (the "Act") to protect cities and farms developing along the Mississippi River.<sup>63</sup> In response, the Army Corps created the Mississippi River flood control system, and it continues to operate today.<sup>64</sup>

The Mississippi River flood control system encompasses levees, floodways, flood control reservoirs, and channel improvements.<sup>65</sup> The purpose of flood control reservoirs is not only to provide water storage but also to provide a flood control mechanism by filling up and retaining floodwaters as river levels rise until there is a controlled release.<sup>66</sup> In accordance with the Army Corps's plan, there are only five storage reservoirs located in the entire Mississippi drainage basin: (1) Wappapello Lake in Arkansas; (2) Arkabutla Lake in Mississippi; (3) Sardis Lake in Mississippi; (4) Enid Lake in Mississippi; and (5) Grenada Lake in Mississippi.<sup>67</sup> By comparison, the much smaller Colorado River Basin contains 11 dams and storage reservoirs.<sup>68</sup>

The Bonnet Carré and Morganza spillways are two of the largest flood control projects along the Mississippi Basin.<sup>69</sup> Both spillways have remained largely unchanged since their construction, while major river flooding has worsened and become more frequent over time.<sup>70</sup> In theory, during a major flood the Morganza would be opened first, and the Bonnet Carré would be opened second.<sup>71</sup> This process would allow less water to

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62. *Mississippi Drainage Basin*, NEW ORLEANS DIST., U.S. ARMY CORPS ENGINEERS, <https://www.mvn.usace.army.mil/Missions/Mississippi-River-Flood-Control/Mississippi-River-Tributaries/Mississippi-Drainage-Basin/> [<https://perma.cc/G9LT-3XZ4>] (last visited Oct. 22, 2021).

63. *Id.*

64. *Id.*

65. *Mississippi River & Tributaries*, *supra* note 1.

66. *Reservoir*, BRITANNICA ENCYCLOPEDIA, <https://www.britannica.com/technology/reservoir> (last visited Oct. 22, 2021).

67. *See Mississippi River & Tributaries*, *supra* note 1.

68. *See Drying of the American West, Part A: Reservoirs on the Colorado River*, *supra* note 10 (listing all dams and reservoirs in the Colorado Basin).

69. *See Mississippi River & Tributaries*, *supra* note 1.

70. *See Historic Operations of the Bonnet Carré Spillway*, *supra* note 3 (noting the increasing frequency of openings).

71. *See Mississippi River & Tributaries*, *supra* note 1.

reach the Bonnet Carré and the brackish ecosystems into which it flows.<sup>72</sup> Instead, the Bonnet Carré is always opened before Morganza. Using Morganza as a last resort invariably results in more freshwater flow entering the brackish Ponchatrain Basin than if the Morganza Spillway had been operating in tandem with the Bonnet Carré.

*E. The Army Corps of Engineers' Role in Flood Control*

The Army Corps is the principal actor in Mississippi River flood control.<sup>73</sup> The Act ordered construction of both the Bonnet Carré and Morganza spillways under the direction of the Army Corps.<sup>74</sup> The Act has been updated periodically to provide the Army Corps with more funding and projects. Under the Act, the Army Corps has control over not only the Mississippi's main channel but also over the "watercourses connected with the Mississippi River."<sup>75</sup> This grants the Army Corps broad authority to build flood control projects along the entire Mississippi River as well as the watercourses connected to it, covering a very large geographic area.

The Army Corps primarily uses river flow rates to determine when to open the Bonnet Carré and Morganza spillways.<sup>76</sup> The Army Corps considers opening the Morganza when the Red River Landing Gauge measures a flow of 1.5 million cubic feet per second and rising.<sup>77</sup> The decision to open the Bonnet Carré is evaluated by observing flows at the Carrollton Gauge, which is located just outside of New Orleans.<sup>78</sup> Once opened, the spillways remain open until river flows fall below the threshold for opening.

The Army Corps must obtain approval from Congress for all new flood control projects, especially those along the Mississippi River. The Army Corps leans heavily on a cost-benefit ratio to convince Congress of a project's usefulness; in other words, if a cost-benefit ratio is greater than 1:1, Congress is likely to approve the project.<sup>79</sup> Congress tends to accept

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72. See *Mississippi River & Tributaries*, *supra* note 1; see also *Pontchartrain Basin Hydrocoast Maps*, PONTCHARTRAIN CONSERVANCY, <https://scienceforourcoast.org/pc-programs/coastal/coastal-projects/hydrocoast-maps/pontchartrain-basin/> [https://perma.cc/9KNL-4LXL] (last visited Oct. 10, 2021).

73. 33 U.S.C. § 702.

74. See *id.*

75. *Id.*

76. See *Morganza Floodway Overview*, *supra* note 3; see also *Historic Operations of the Bonnet Carré Spillway*, *supra* note 3.

77. *Morganza Floodway Overview*, *supra* note 3.

78. *Historic Operations of the Bonnet Carré Spillway*, *supra* note 3.

79. See Houck, *supra* note 17, at 11–12.

the Army Corps's recommendations without much inquiry and consequently provides the Army Corps broad deference on how to spend taxpayer dollars on flood control.<sup>80</sup>

*F. The Spillways' Effects on Saltwater Ecosystems*

During the design and construction of the Bonnet Carré Spillway, the Army Corps ensured the spillway as designed would mimic natural flooding and provide long term benefits to the Pontchartrain Basin.<sup>81</sup> This assumption, however, was based on the design frequency of operation every ten years.<sup>82</sup> Recently, this spillway has been operating much more frequently and for significantly longer periods, resulting in catastrophic damage to brackish ecosystems in the immediate area.<sup>83</sup>

In an unprecedented event, the Bonnet Carré was opened twice in 2019.<sup>84</sup> This caused salinity levels to plummet in the Pontchartrain Basin from March through the summer of 2019.<sup>85</sup> Historically, this expected salinity drop was not an issue because the spillway operated far less frequently and for shorter durations compared to the past two decades.<sup>86</sup> Eventually, news articles began to report saltwater animals such as bottlenose dolphins and oysters dying en masse.<sup>87</sup> As far away as the Mississippi Sound, saltwater fish were killed or seriously injured by the sudden and prolonged salinity drop.<sup>88</sup> The charter fishing industry all but disappeared, algae blooms destroyed entire ecosystems, and brown shrimp—the base of any saltwater ecosystem—disappeared.<sup>89</sup> The freshwater intrusion precipitated by the 2019 double opening of the Bonnet Carré was so far-reaching that the effects could be clearly seen from space.<sup>90</sup>

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80. *Id.* at 24.

81. *See Bonnet Carré Spillway Overview, supra* note 8.

82. *See id.*

83. *Spillway Operational Effects, supra* note 27.

84. *See id.*

85. *See Pontchartrain Basin Hydrocast Maps, supra* note 72. Specifically, note the time period spans between the first drop in salinity starting in March 2019 until “normal” salinity is restored. *Id.*

86. *See id.*; *see also Historic Operations of the Bonnet Carré Spillway, supra* note 3. Notice for each year the spillway opens the corresponding drop in salinity in the Pontchartrain Basin hydrocast maps. *Id.*

87. *See Experts Point to Bonnet Carre Spillway, supra* note 2.

88. *See id.*

89. *200 Miles, supra* note 2.

90. *See Eric Jeansonne, Why Mississippi Sound Salinity Levels Are Low and How Opening Morganza Spillway Can Lower Freshwater Intrusion, WLOX*

The Bonnet Carré's double opening was so detrimental to the Louisiana and Mississippi saltwater economies that a lawsuit was filed by Mississippi counties and later joined by Louisiana: *Harrison County, Mississippi v. Mississippi River Commission*.<sup>91</sup> In *Harrison County*, the plaintiffs alleged that the Army Corps failed to complete several studies, including an Environmental Impact Study ("EIS"), before the 2019 double opening of the spillway.<sup>92</sup> The plaintiffs argued that the Army Corps failed to properly control the 2019 Mississippi River flood and caused unnecessary damage to the local saltwater ecosystem because of their failure to complete an EIS before opening the Bonnet Carré on two separate occasions.<sup>93</sup> *Harrison County* is currently pending in the U.S. District Court for the Southern District of Mississippi.<sup>94</sup> The plaintiffs are seeking an injunction forcing the Army Corps to perform an EIS on the Bonnet Carré Spillway in hopes that the EIS will change future operations and promote more frequent usage of the Morganza Spillway.<sup>95</sup>

## II. ANALYSIS

This flood control crisis is a two-fold problem. First, the law fails to provide adequate checks and balances over the Army Corps's decision-making processes. Second, there are shortcomings within the current oversight regime governing Mississippi River flood control.

### *A. Flood Control Statutes and Regulations*

#### *1. United States Code and the Code of Federal Regulations*

Title 33 of the U.S. Code governs navigable waters and provides that federal improvements to all rivers, harbors, and other waterways are under the exclusive jurisdiction of the Chief Engineer of the Army.<sup>96</sup> The

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(June 2, 2019, 11:58 PM), <https://www.wlox.com/2019/06/03/why-mississippi-sound-salinity-levels-are-low-how-opening-morganza-spillway-can-lower-fresh-water-intrusion/>.

91. See *Harrison Cnty. v. Miss. River Comm'n*, No. 19cv986, 2020 WL 3159185 (S.D. Miss. June 12, 2020).

92. *Id.* at \*1. An EIS is a full report made by the Army Corps of Engineers of every environmental impact caused by a given project along with any mitigation measures.

93. *Id.*

94. See *id.*

95. See *id.*

96. 33 U.S.C. § 540.

authority to plan for the Mississippi River is vested in the Mississippi River Commission.<sup>97</sup> 33 U.S.C. § 647 states that the duties of the Mississippi River Commission are the following: deepen the channel, protect the banks, prevent floods, promote commerce, and submit to the Secretary of the Army reports of these plans.<sup>98</sup> Therefore, under this statute the Mississippi River Commission may technically be its own entity, but it reports primarily to the Army Corps.<sup>99</sup>

33 U.S.C. § 702a provides for the enactment of the 1927 Mississippi River Project. The statute directs the Mississippi River Commission to determine the best method for securing flood relief, in addition to levees.<sup>100</sup> The works conducted under this statute must also “fully and amply protect the adjacent lands.”<sup>101</sup> This statute establishes the continuing responsibilities of the Commission, as the Mississippi River Flood Control project continues to this day.

The Code of Federal Regulations contains very little else pertaining to Mississippi River flood control.<sup>102</sup> The lack of specific requirements leaves the Army Corps and Mississippi River Commission with substantial discretion in fulfilling their statutory mandates. A lack of express law indicates a lack of constraints on the actions of the person or entity bound by that law. Most of the flood control regulations within the Code of Federal Regulations apply to cost sharing and maintenance or to areas other than the Mississippi Basin.<sup>103</sup> An entire chapter covers specific flood control projects throughout the country, yet none of the chapters or regulations address Mississippi River Basin flood control.<sup>104</sup>

## *2. Potential Statutory Issues Within the Army Corps's Authority*

The first potential issue within the U.S. Code is the extensive authority and latitude granted to the Army Corps. The Army Corps and Mississippi River Commission control the entire Mississippi River project, and this level of control does not leave much room for oversight. While the Army Corps boasts the expertise of numerous engineers and scientists, its

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97. *Id.* § 647.

98. *Id.*

99. *See id.*

100. 33 U.S.C. § 702a.

101. *Id.*

102. *See generally* 33 C.F.R. ch. 2 (2021) (noting in particular the flood control statutes tailored to specific watersheds or areas).

103. *See generally id.*

104. *See id.*

fallibility is evidenced by the 2019 double opening.<sup>105</sup> Congress, acting on taxpayers' behalf by footing the flood control bill, needs to become more involved in the Army Corps's actions regarding the Mississippi River. The Mississippi River and its management impact not only the states that border it but also the entire world through the substantial amount of commerce transported along the river.

The broad language of 33 U.S.C. § 702a allows for a great deal of statutory interpretation. The Mississippi River Commission is instructed to implement the best way to prevent flooding and protect adjacent lands.<sup>106</sup> Modern civil engineering is meant to balance cost effectiveness with sustainability.<sup>107</sup> Sustainability is defined by the American Society of Civil Engineers (ASCE) as “maintain[ing] and improv[ing] [the] quality of life indefinitely, without degrading the quantity, quality, or availability of natural, economic, and social resources.”<sup>108</sup> By this definition, the best flood control plan for the Mississippi River would involve sustainability factors. The current plan for Mississippi River flood control lacks this requisite sustainability factor because increasing flood severity cannot be alleviated without collection action from upstream states. Further, this approach is not sustainable because flooding is projected to increase in intensity in future years, and the current Mississippi River flood control system is already being pushed past its design parameters.<sup>109</sup> This is evidenced by the increasing frequency of Bonnet Carré openings, which have consistently been more often than the ten-year design period.<sup>110</sup> Congress should clarify this section of the U.S. Code to include the ASCE design principles of sustainability in every new Army Corps project. These principles will act as a constraint that effectively requires the Army Corps to investigate all possible options for new projects, such as upstream storage in states that may not feel the brunt of Mississippi River flooding, but ultimately makes the Mississippi River flood control system more sustainable as a whole.

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105. See *Harrison Cnty. v. Miss. River Comm'n*, No. 19cv986, 2020 WL 3159185 (S.D. Miss. June 12, 2020).

106. See 33 U.S.C. § 702a.

107. See *Code of Ethics*, AM. SOC. CIV. ENG'RS, <https://www.asce.org/career-growth/ethics/code-of-ethics> [<https://perma.cc/7QXG-8P9C>] (demonstrating that all civil engineers are bound by the canons).

108. *Sustainability*, AM. SOC. CIV. ENG'RS, <https://www.asce.org/communities/institutes-and-technical-groups/sustainability> [<https://perma.cc/RW73-TRB6>] (last visited Oct. 22, 2021).

109. See *Bonnet Carré Spillway Overview*, *supra* note 8 (showing the ten-year design frequency).

110. See *Historic Operations of the Bonnet Carré Spillway*, *supra* note 3.

The lack of statutory and regulatory authority pertaining to Mississippi River flood control is telling in and of itself. Although a few relevant provisions do currently exist, these provisions are unclear and do not actually address the Mississippi River flood control problem.<sup>111</sup> Some authorities address specific flood control projects but do not include the Mississippi River.<sup>112</sup> Further, over the last three years, appropriations bills have not specifically addressed the Mississippi River and Tributaries project, which is the overarching Army Corps project that addresses Mississippi River flood control.<sup>113</sup> Great authority is granted to the Army Corps and Mississippi River Commission by Congress to the extent that the Army Corp spends billions of dollars each year on various projects. However, that money is rarely spent on improving flood control along the Mississippi River.<sup>114</sup> Unfortunately, the Army Corps's broad authority in this area is nearly absolute, as will be discussed further in Part II. Although Congress technically has the final say on paper, it has afforded great deference to the Army Corps in its control of the Mississippi River.<sup>115</sup> It is past time for Congress to be more involved in Mississippi River flood control, and the future of Sportsman's Paradise depends on it.

## *B. Oversight*

### *1. Current Oversight Regime of the Army Corps of Engineers*

Congress is the principal overseer of the Army Corps. Congress formed the Army Corps when it created the Army and thus holds the

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111. See generally 33 C.F.R. ch. 2 (2021).

112. See *id.*

113. See Additional Supplemental Appropriations for Disaster Relief Act, 2019, Pub. L. No. 116-20, 133 Stat. 871; see also America's Water Infrastructure Act of 2018, Pub. L. No. 115-270, 132 Stat. 3765; Consolidated Appropriations Act, 2018, Pub. L. No. 115-141, 132 Stat. 348; see also Bipartisan Budget Act of 2018, Pub. L. No. 115-123, 132 Stat. 64; see also Consolidated Appropriations Act, 2017, Pub. L. No. 115-31, 131 Stat. 135.

114. See, e.g., Additional Supplemental Appropriations for Disaster Relief Act, 2019, Pub. L. No. 116-20, 133 Stat. 871; see also also America's Water Infrastructure Act of 2018, Pub. L. No. 115-270, 132 Stat. 3765; Consolidated Appropriations Act, 2018, Pub. L. No. 115-141, 132 Stat. 348; see also Bipartisan Budget Act of 2018, Pub. L. No. 115-123, 132 Stat. 64; see also Consolidated Appropriations Act of 2017, Pub. L. No. 115-31, 131 Stat. 135.

115. Houck, *supra* note 17, at 24.

authority over its maintenance.<sup>116</sup> Congress also possesses the power of the purse, namely the Army Corps's spending powers.<sup>117</sup> Congress thus has the authority to regulate the Army Corps and its actions. However, Congress has retreated from this authority as it relates to general flood control due to a perceived lack of knowledge, specifically when considering Mississippi River flood control. The most significant evidence of Congress's inaction in this area is the lack of statutes and regulations governing Mississippi River flood control, resulting in the Army Corps's great latitude in decisions concerning the management of the Mississippi River Basin.<sup>118</sup>

The judicial branch has also served as a historic overseer of the Army Corps. The Supreme Court, in fact, has allowed entities to obtain damages from the federal government due to the mismanagement of floodways by the Army Corps.<sup>119</sup> In *Arkansas Game & Fish Commission v. United States*, the Court ruled that temporary flooding could amount to a "taking" by the federal government and awarded compensation for damages.<sup>120</sup> Under the reasoning of *Arkansas Game & Fish*, seasonal flooding may rise to the level of a "taking" and thereby allow for damages when: (1) time, (2) foreseeability, (3) severity of action, and (4) any other relevant factors, weighed together, constitute a "taking" by the federal government of state and private property.<sup>121</sup>

In *Harrison County*, Mississippi and Louisiana sued the Army Corps over its handling of the 2019 Bonnet Carré double opening.<sup>122</sup> The plaintiffs alleged a failure by the Mississippi River Commission and the Army Corps to conduct a full EIS and sought an injunction forcing the Army Corps to perform the study.<sup>123</sup> Whether or not this suit is ultimately successful, the same plaintiffs and interested citizens could likely sue for damages under the reasoning of *Arkansas Game & Fish*.

Here, Louisiana and Mississippi would need to allege specific facts to prove the double opening of the Bonnet Carré constituted a "taking." If the states can prove a taking, the states may be entitled to damages. These

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116. See *The Beginnings to 1815*, U.S. ARMY CORPS ENG'RS, <https://www.usace.army.mil/About/History/Brief-History-of-the-Corps/Beginnings/> [<https://perma.cc/JU4J-DFTG>] (last visited Oct. 7, 2021).

117. See U.S. CONST. art. I, § 8.

118. See 33 C.F.R. ch. 2 (2021); see also 33 U.S.C. §§ 641–653a, 701–709c.

119. See *Ark. Game & Fish Comm'n v. United States*, 586 U.S. 23 (2012).

120. *Id.* at 513.

121. *Id.* at 522–23.

122. See *Harrison Cnty. v. Miss. River Comm'n*, No. 19cv986, 2020 WL 3159185, at \*1 (S.D. Miss. June 12, 2020).

123. *Id.*

facts will be analyzed using the *Arkansas Game & Fish* reasoning in the next section to illustrate the problems inherent in the use of damages as a remedy for missteps by the Army Corps.

## 2. Shortcomings in the Current Oversight Regime

Arguing for damages stemming from the destruction of saltwater ecosystems by a spillway would be fairly straightforward from a Louisiana perspective. Under Louisiana Civil Code article 3413, the state owns the wild animals, birds, fish, and shellfish.<sup>124</sup> The Army Corps's failure to manage the spillway appropriately during the 2019 double opening led to decreased salinity levels and resulted in the deaths of large amounts of fish and shellfish.<sup>125</sup> Using the reasoning in *Arkansas Game & Fish*, the analysis would proceed as follows: (1) the Army Corps flooded saltwater ecosystems from February through the summer; (2) this flooding was foreseeable because opening the spillway floods the Pontchartrain Basin with river water; and (3) the results of the Army Corps's actions were severe and led to significant harms. Due to the loss of fish and shellfish caused by the Army Corps's actions, the two million citizens working in the seafood industry lost a substantial amount of income, and the state lost tax revenue because these citizens could not bring in profits from the \$185 billion seafood industry.<sup>126</sup> Therefore, the state and its citizens should be entitled to damages under the takings clause as in *Arkansas Game & Fish*.<sup>127</sup>

Court-awarded damages alone do not address the root of the problem, however. The root of the problem in Mississippi River flood control is the lack of upstream participation. Forcing the federal government to pay damages to injured parties will only reduce money available for improvement projects upriver from Louisiana and thus defeats the purpose of compelling the Army Corps to revamp Mississippi River flood control.

The underlying problem with the lack of congressional oversight of the Army Corps is a one-sided coin. Congress is unwilling to balance and check the Army Corps's recommendations. A Rutgers Law Review article summarizes the issue:

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124. LA. CIV. CODE art. 3413 (2021).

125. See *Experts Point to Bonnet Carre Spillway*, *supra* note 2; see also *200 Miles*, *supra* note 2.

126. Kevin Savoie, *Coastal Fishing Equals Jobs*, LA. FISHERIES: CHENIER ECOLOGY (Jan. 2009), <https://www.seagrantsfish.lsu.edu/resources/chenier/2009/01-09.htm> [<https://perma.cc/6Q2S-JCRZ>] (focusing on the combined sales and combined jobs of both commercial and recreational fishing).

127. See *Ark. Game & Fish Comm'n v. United States*, 568 U.S. 23, 27 (2012).

If the cost-benefit ratio was said to be positive, that closed the question. It did for the Congress, and for everyone else. For its part, Congress could be “dazzlingly uninquisitive” and deferential so long as the ratio was said to be positive. “The Corps says this is a worthwhile project,” said the head of a local Chamber of Commerce of the Yazoo Pump project in Mississippi (described privately by a Corps lobbyist as “an economic dud with huge environmental consequences”), “[w]hat else is there to say?”<sup>128</sup>

This lack of congressional interest has allowed the Mississippi River flood control system to become dangerously outdated. Congress appears to perceive the Army Corps as an infallible entity.<sup>129</sup> Considering the Army Corps has a history of massive cost overruns and unsuccessful projects, this congressional trust is severely misplaced.<sup>130</sup> Congress may not possess the expertise of the many engineers and scientists in the Army Corps, but Congress should impose a new methodology for the Army Corps to follow rather than its one-sided equation for flood control projects.

Congress’s lack of action on Mississippi River flood control, evidenced by the silence in the U.S. Code and Code of Federal Regulations, depicts an insufficient approach that has allowed the Army Corps to mismanage a key artery of interstate commerce: the Mississippi River. The Mississippi River flood control plan has become outdated and outclassed by increasing flood severity. Congress first enacted the Mississippi River and Tributaries Project in 1928.<sup>131</sup> Seemingly, the philosophy of flood control hasn’t changed, namely controlling nearly the entire flow of the Mississippi River from Louisiana. However, development along the Mississippi River and weather patterns have not remained stagnant since 1928.

More development along the river causes more water to enter it, as increasing development allows for less land area to absorb the water. More water coming into the river combined with more intense storms results in higher flows entering the Mississippi River. Higher flows should thus be contained upstream and released in a controlled manner to assist downstream areas in flood control, but currently Congress has no way to ensure that happens. As recently as 2019, the outdated and outclassed nature of this system was exposed. A tropical storm, typically a non-event in Louisiana, threatened to overtop New Orleans levees.<sup>132</sup> This situation

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128. Houck, *supra* note 17, at 24.

129. *Id.* at 11–12.

130. *Id.* at 20–21.

131. *Mississippi Drainage Basin*, *supra* note 62.

132. Masters, *supra* note 41.

was created by the combination of extremely high floodwaters in the Mississippi and strong southerly wind from the storm, despite the Bonnet Carré Spillway operating at the time.<sup>133</sup> Thankfully, the levees did not overtop, much to the relief of concerned weather forecasters and citizens, but the vulnerability of an outdated system with little upstream storage capacity was severely exposed.<sup>134</sup>

### III. SOLUTION

#### *A. Stricter Statutory and Regulatory Frameworks*

Current statutes and regulations do not provide meaningful direction for the Army Corps with respect to Mississippi River flood control projects.<sup>135</sup> This allows the Army Corps to do what it has always done: open the spillways to save Louisiana whenever the river rises. This tactic may have worked when the spillways were designed, but due to increasing floods, the spillways are being opened so often that they are severely harming the brackish ecosystems into which they flow.<sup>136</sup> Opening the Bonnet Carré now creates a slew of problems with lasting damage due to increasing instances of opening, specifically massive kills of saltwater marine life.<sup>137</sup>

The long-term benefits of increased productivity detailed on the Army Corps's website no longer apply because the design that created those long-term benefits has been surpassed by changes in the river.<sup>138</sup> Rebuilding or upgrading the spillways is also not feasible. The spillways would need to be put out of service for the duration of the rebuild, and the ever-increasing volume of water would still inundate the same areas—but at a much higher rate. The Army Corps has proven that it is not willing to spread the flood control burden amongst Mississippi River states, as only five storage reservoirs currently exist in the entire Mississippi River Basin.<sup>139</sup>

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133. *Id.*

134. *Id.*

135. *See generally* 33 C.F.R. ch. 2 (2021); *see also* 33 U.S.C. §§ 641–653a, 701–709c.

136. *See Spillway Operational Effects, supra* note 27; *cf. Experts Point to Bonnet Carré Spillway, supra* note 2 (noting the effects in 2019 when the spillway was opened twice).

137. *See 200 Miles, supra* note 2.

138. *Spillway Operational Effects, supra* note 27.

139. *Mississippi River & Tributaries, supra* note 1.

Since the Army Corps clearly does not view Mississippi River flood control as a burden that should be shared by all interested states, Congress must act as the Army Corps's overseer. This can take the form of new statutes enacted by Congress and/or new regulations issued by the Army Corps pursuant to that authority.

Part 208 of the Code of Federal Regulations contains flood control regulations but does not mention the Mississippi River and Tributaries Project.<sup>140</sup> A section should be added to this portion of the Code of Federal Regulations mandating that efforts be employed to create more upstream storage capacity along the Mississippi River to the "maximum extent practicable."<sup>141</sup> This language already appears in Louisiana's coastal restoration statutes to use the best possible barriers to prevent further erosion, which allows for determinations regarding what the best erosion control will be but expresses a strong preference for a specific method.<sup>142</sup> Such a provision can also be readily adopted for flood control and will likely relieve some of the burden on downstream spillways. The same amount of water would come downriver as before, but this time in a controlled manner such that spillway openings would either be unnecessary or less impactful.

The Army Corps has unfettered autonomy under the current management system for the Mississippi Basin, so it is unlikely to voluntarily relinquish this latitude. Thus, Congress must act. Congress can either add requirements directly to the U.S. Code or direct the Army Corps to update its regulations. Reformation of the Code of Federal Regulations could create lasting and meaningful change. There are statutes and regulations in existence designated for specific watersheds and projects, so it is certainly not unprecedented to bestow the Army Corps with congressional guidance on flood control. Amendments to the Code of Federal Regulations would also allow the Army Corps to craft regulations that work well within their administrative procedure instead of cumbersome statutory mandates that may or may not fit within the its current administration. Further, amendments to the Code of Federal Regulations would allow Congress to provide the Army Corps with the desired result of a proposed regulation and leave the specific language of the regulation up to the Army Corps. This will likely be easier to pass in our age of congressional gridlock than a specific statutory mandate.

Congress can, at the most, mandate that each state drained by the Mississippi River ensures that it does not increase the amount of flow

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140. See 33 C.F.R. pt. 208 (2021).

141. See *infra* Part III.A and note 142.

142. LA. ADMIN. CODE tit. 43, pt. 1, § 709 (2021).

entering the river. This type of mandate would put an end to increasing flood waters. However, this solution would likely be incredibly expensive or even impossible to implement due to issues of acquiring property, constructing structures, and disrupting the economic progress along the river and adjoining communities. The issue of acquiring necessary property alone would be unpalatable, as states would have to purchase large areas of land from riparian owners who may not be willing to sell. A far more feasible approach is statutory reform which would continue to give the Army Corps deference in managing flood protection while providing the rest of the federal government specific, easily reviewed guidelines.

Congress should direct the Army Corps to create regulations with the effect of requiring the Army Corps to increase upstream storage capacity “to the maximum extent practicable”<sup>143</sup> to control downstream flooding. “[T]o the maximum extent practicable”<sup>144</sup> would require a case-by-case determination based on the geography of possible project areas, ability of the local area to facilitate a storage reservoir, funding, and any other pertinent factors. This option would control downstream flooding at the source (upstream flow increases) and would not entirely burden Congress with specific statutory language or completely tie the hands of the Army Corps. Such a solution would avoid massive federal mandates with questionable constitutionality and allow water projects to move forward with the Army Corps’s expertise at the helm. Amending regulations also provides Congress and the courts some ability to review the Army Corps with statutes and regulations specifically addressed to the Mississippi Basin and include specific determination factors.

*B. Stricter Congressional Oversight of the Army Corps That Mandates Spreading the Burden of Flood Control*

The Army Corps must adhere to Congress in obtaining funding for its projects.<sup>145</sup> The Army Corps must attend committee meetings to demonstrate the viability of its projects and answer questions from Congress during the budgetary process. Committee meetings with the Army Corps in attendance are Congress’s chance to ensure the Army Corps is spreading the burden of Mississippi River flood control while avoiding the controversy and debate of enacting new statutes.

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143. See discussion *supra* Part III.A.

144. See discussion *supra* Part III.A.

145. See U.S. CONST. art. I, § 8.

Congress must alter its mindset about the Army Corps for an oversight-only regime to work and instead must think of itself as qualified to question the Army Corps's decisions. Congress may not hold the technical expertise of the Army Corps, but a body as diverse as Congress is more than capable of asking more substantive questions rather than only cost-benefit ratios. Congress is spending the taxpayers' money, in massive amounts, on flood control. Therefore, it should take an active role to ensure that the flood control burden is being adequately shared along the Mississippi River. Representatives and senators should ask questions of the Army Corps in committee meetings to ensure that the Army Corps evaluates all possible alternatives for flood control. This will result in oversight of the Army Corps without having to pass statutes creating federal mandates which could subsequently be challenged in court.

Ultimately, this would not prove as effective as statutory and/or regulatory reform because congressional hearings would be the only check on the actions of the Army Corps pertaining to Mississippi River flood control. Further, Congress is unlikely to change its long-held perception on their own inability to question the Army Corps's wisdom.<sup>146</sup> Statutory and regulatory reform would allow judicial oversight as well as congressional oversight.

### *C. Judicial Review of Army Corps's Projects and Actions*

The Court in *Arkansas Game & Fish* held without question that courts can award damages in some cases for flooding when the flooding constitutes a "taking."<sup>147</sup> However, monetary damages are meant as a remedial measure for already existing property damages. These damages cannot act as a cure-all for future flooding caused by Army Corps's mismanagement because damages paid to injured parties will not prevent further flooding disasters from occurring. Alternatively, if Congress enacts new legislation mandating the spreading of Mississippi River flood control among interested states, courts can interpret these statutes and enforce them against the Army Corps—preventing future flooding disasters from occurring.

Statutes and regulations should be carefully constructed to allow judges latitude in determining if the Army Corps and Mississippi River Commission performed their jobs in spreading the burden of flood control amongst interested states in the Mississippi River Basin. Judges need to be able to make fact-specific inquiries into the actions of the Army Corps.

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146. See Houck, *supra* note 17, at 11–12.

147. See *Ark. Game & Fish Comm'n v. United States*, 568 U.S. 23, 40 (2012).

More oversight is beneficial for federal agencies. The language of “to the maximum extent practicable”<sup>148</sup> can be augmented with various factors governing the feasibility and sustainability of flood control projects to create a balance that is concretely defined and easy to work with.

#### CONCLUSION

While the spillways’ existence is necessary, continued operation without additional aid from upstream states will cause irreversible damage to the economy Louisiana has built around its saltwater ecosystems; the damages of the 2019 double opening may very well be only a taste of the damages to come.<sup>149</sup> In Louisiana alone, \$185 billion and over two million jobs are at stake.<sup>150</sup> Without action, predicted increases in flood and storm severity due to climate change will only exacerbate the problems of Louisiana’s saltwater ecosystems.<sup>151</sup> Congress must rein in the Army Corps, either by congressional directives for agency action or by congressional bills mandating the spreading of flood control across the whole Mississippi Basin “to the maximum extent practicable”<sup>152</sup> by prioritizing increases in upstream storage capacity.

Should these changes be made, the burden of Mississippi River flood control will be spread amongst all interested parties, not just concentrated in the state furthest downstream. The end goal of Mississippi River flood control should be to: (1) spread the burden of flood control as best as possible among the states along the Mississippi, thus reducing the flow to Louisiana and (2) slow the opening frequency of spillways, specifically the Bonnet Carré, down to the historical average that helped saltwater ecosystems rather than destroyed them. If the solutions detailed within this Comment are implemented, river flows into Louisiana will be reduced, and Sportsman’s Paradise can ultimately be saved from inevitable destruction.

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148. See discussion *supra* Part III.A.

149. See *Experts Point to Bonnet Carre Spillway*, *supra* note 2; see also *200 Miles*, *supra* note 2.

150. Savoie, *supra* note 126.

151. See *Experts Point to Bonnet Carre Spillway*, *supra* note 2.; see also *200 Miles*, *supra* note 2.

152. See discussion *supra* Part III.A.