Murky Apalachicola Basin Waters Call for Clearer Equitable Apportionment Standards

INTRODUCTION

As climate change increasingly impacts water availability, courts will need to adjudicate more water resource conflicts, and the U.S. Supreme Court will likely play a larger role in interpreting scientific data in equitable water apportionment cases.[1] Equitable apportionment is the legal remedy given when a state's misuse of water causes "serious" ecological injury in another state.[2] The Court has a long history of settling equitable apportionment disputes between states, which often arise in conjunction with droughts and have significant impacts on public health, the economy, and natural ecosystems.[3] While droughts occur naturally, climate change has accelerated the hydrological processes that cause droughts, leading to more extreme droughts and more equitable apportionment disputes.[4]

In 2013, following its third regional drought in just over a decade, Florida filed suit in the Supreme Court, seeking equitable apportionment of water from the Apalachicola-Chattahoochee Flint River Basin.[5] Florida claimed that Georgia's alleged overconsumption from the Basin severely harmed Florida's oyster fisheries and river wildlife.[6] The Court denied reapportionment because Florida had failed to produce "clear and convincing evidence" showing that Georgia's alleged overconsumption caused the collapse of the oyster fisheries and harm to wildlife.[7] However, the modern-day impacts of climate change on

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1. *See* Robin Craig, *In Dispute Over Groundwater, Court Tells Mississippi It's Equitable Apportionment or Nothing*, SCOTUSBLOG, (Nov. 23, 2021, 2:19 PM), https://www.scotusblog.com/2021/11/in-dispute-over-groundwater-court-tells-mississippi-its-equitable-apportionment-or-nothing/.
2. Colorado v. New Mexico (*Colorado I*), 459 U.S. 176, 187 n.13 (1982).
3. Lauren D. Bernadett, *Equitable Apportionment in the Supreme Court in Light of* Florida v. Georgia, J. ENV'T L. & LITIG. 511, 512–13 (2014); Burke W. Griggs, *Beyond Drought Water Rights in the Age of Permanent Depletion*, 62 U. KAN. L. REV. 1263, 1263 (2014).
4. Brad Plumer & Henry Fountain, *A Hotter Future is Certain, Climate Panel Warns. But How Hot Is Up to Us.*, N.Y. TIMES, Nov. 11, 2021, https://www.nytimes.com/2021/08/09/climate/climate-change-report-ipcc-un.html; Craig, *supra* note 1.
5. Florida v. Georgia, 141 S. Ct. 1175, 1179 (2021).
6. *Id*.
7. *Id*.

water availability suggest that the Court in *Florida v. Georgia* should have re-evaluated the forty-year-old water reapportionment standards.[8] The Court should have clarified ambiguous terms in the equitable reapportionment standards or, alternatively, gotten rid of the standards altogether.

I. BACKGROUND

A. Legal Background

In *Florida*, the Supreme Court reaffirmed the stringent ecological standards required for equitable reapportionment set out by both *Colorado v. New Mexico I* and *II*.[9] In *Colorado v. New Mexico* (*Colorado II*), Colorado brought suit against New Mexico, seeking equitable apportionment of an interstate river that was used fully by New Mexico.[10] The Court held that Colorado did not present sufficiently "clear and convincing" evidence that New Mexico had misused water or that there was subsequent ecological injury, so reapportionment of waters from the river was not warranted.[11] *Colorado v. New Mexico* (*Colorado I*) held that an aggrieved state must produce "clear and convincing evidence" of threatened or actual injury of "serious magnitude" caused by the defendant state's water misuse.[12] Additionally, the aggrieved state must show that the benefits of apportionment substantially outweigh the harm that might result.[13] *Colorado II* held that the "clear and convincing evidence" of water misuse and subsequent ecological harm must place the factfinder in an "abiding conviction" that the truth of its factual conventions are "highly probable."[14] Currently, a state may only win an equitable apportionment case if it can demonstrate water misuse by the defendant.[15] The equitable apportionment standard is difficult to meet because scientific uncertainty around water data often makes it hard to show clear and convincing evidence of ecological connection.[16]

B. Case Background

The Apalachicola-Chattahoochee Flint River Basin (the Basin) is made up of three rivers, including the Apalachicola River at issue in *Florida*.[17] The Apalachicola River flows south from Lake Seminole in Georgia through the

8. Craig, *supra* note 1.
9. *Florida*, 141 S. Ct. at 1183.
10. Colorado v. New Mexico (*Colorado II*), 467 U.S. 310, 312 (1984).
11. *Id*.
12. Colorado v. New Mexico (*Colorado I*), 459 U.S. 176, 187 n.13 (1982).
13. *Id.*
14. *Colorado II*, 467 U.S at 316.
15. *Id*.
16. Robert W. Alder, *The Supreme Court and Ecosystems Environmental Science in Environmental Law*, 27 VT. L. REV. 249, 267–68 (2003).
17. Water Resources, *Apalachicola-Chattahoochee-Flint River Basin Focus Area Study*, U. S. GEOLOGICAL SURVEY (Feb. 28, 2019), https://www.usgs.gov/mission-areas/water-resources/science/apalachicola-chattahoochee-flint-river-basin-focus-area-study#overview; *Florida,* 141 S. Ct. at 1180.

Florida Panhandle.[18] The other two Basin rivers upstream of the Apalachicola River, the Chattahoochee River and the Flint River, run through the length of Georgia and empty into Lake Seminole.[19] Freshwater from the Apalachicola River supports oyster habitats and a wide variety of river wildlife in Florida.[20]

In 2012, the oyster population in the Apalachicola Bay in Florida collapsed following a three year drought, causing commercial oyster sales to decline by 43 percent.[21] This was Florida's third major drought since the turn of the century.[22] While Florida regularly experienced droughts prior to 2000, the number of severe droughts since the turn of the century has been unprecedented.[23] The Apalachicola Bay oyster fisheries still have not recovered from the 2012 collapse.[24] In 2020, the Florida Fish and Wildlife Conservation Commission shut down the Apalachicola Bay oyster fisheries for five years to allow the fisheries to recover from the devastation caused by the 2010-2012 drought.[25]

In *Florida*, Florida alleged that Georgia overconsumed water from the Apalachicola Basin and that overconsumption was a substantial factor in the collapse of Florida's oyster fisheries and wildlife network.[26] Georgia argued that the collapse of Florida's oyster fisheries was due to Florida's mismanagement of the fisheries in the years prior to the drought and that the harm to wildlife resulted notwithstanding Georgia's water consumption.[27]

In 2013, Florida sued Georgia in the Supreme Court, which has original jurisdiction over all interstate disputes.[28] The Court's powers over interstate equitable apportionment cases are derived from Article III, Section II of the United States Constitution.[29] The Court appointed a Special Master, an investigator who informs the Court's rulings, to make recommendations on the case.[30] The Special Master recommended dismissal of Florida's complaint

18. *Apalachicola River and Bay*, NW. FLA. WATER MGMT. DIST., https://www.nwfwater.com/Water-Resources/Surface-Water-Improvement-and-Management/Apalachicola-River-and-Bay (last visited Mar. 15, 2022).

19. Water Resources, *supra* note 17.

20. Florida v. Georgia, 141 S. Ct. 1175, 1179 (2021).

21. FLA. FISH & WILDLIFE CONSERVATION COMM'N, 2012-2013 FLORIDA GULF COAST OYSTER DISASTER REPORT 4, 33–34 (2013); Nat'l Integrated Drought Info. Sys., *Current U.S. Drought Monitor Conditions for Florida*, DROUGHT.GOV, https://www.drought.gov/states/florida (last visited Mar. 15, 2022); Debbie Elliott, *Florida Closes Iconic Apalachicola Oyster Fishery*, NPR, (Jul. 22, 2020, 5:03 AM), https://www.npr.org/2020/07/22/894074674/floridas-oyster-beds-devastated-by-years-of-drought-other-pressures.

22. Nat'l Integrated Drought Info. Sys., *supra* note 21 (finding other significant droughts in Florida occurred between 2000–01 and 2006–08).

23. *Id.*

24. Elliott, *supra* note 21.

25. *Id.*

26. Florida v. Georgia,141 S. Ct. 1175, 1179 (2021).

27. *Id*. at 1180.

28. *Id*. at 1179–80.; Kristen A. Linsley, *Original Intent Understanding the Supreme Court's Original Jurisdiction in Controversies Between States*, 18 J. APP. PRAC. & PROCESSES 21, 21 (2017).

29. *Florida*, 141 S. Ct. at 1180; U.S. CONST. art. III, § 2, cl. 1.

30. *Florida*, 141 S. Ct. at 1179; *Special Master*, LEGAL INFO. INST., https://www.law.cornell.edu/wex/special_master (last visited Mar. 15, 2022).

without making definitive findings on Georgia's water usage because Florida had failed to meet the *Colorado* clear and convincing evidence standard that any water misuse caused the oyster collapse and the wildlife harm.[31] In 2018, the Supreme Court remanded the case, concluding that the clear and convincing evidence standard was too strict without the presence of definitive findings.[32] The Supreme Court instructed the Special Master to make definitive findings, including whether Florida could prove serious injury to oysters or wildlife caused by Georgia's overconsumption and the extent to which reapportionment of Georgia's water would increase river flow to Florida.[33] The Court heard arguments in 2021 following the completion of the Special Master's subsequent report.[34]

The Supreme Court unanimously held that Florida had not produced clear and convincing evidence that Georgia overconsumed water from the Apalachicola Basin.[35] Additionally, the Court held that overconsumption was not the cause of Florida's oyster fishery collapse and river wildlife harm.[36] The Court denied Florida's request for the Court to intervene and reapportion water allocations between Florida and Georgia.[37]

While the Court acknowledged that the precise cause of the oyster collapse and wildlife harm was still up for debate, the Court concluded that Florida's evidence merely showed that salinity and predation had led to the collapse of fisheries and harm to wildlife, not that Georgia's freshwater consumption from the Basin was the "highly probable" cause of the injuries.[38] Modeling Florida's ecology, experts indicated that reducing Georgia's freshwater consumption would only have increased oyster biomass by a nominal amount and would have failed to reduce salinity by the amount necessary to drive down oyster predation.[39] Additionally, the Court found Florida's mismanagement of fisheries likely magnified the harm to the oyster fisheries.[40] Furthermore, Florida's evidence showed that Florida had allowed an unprecedented level of oyster harvesting and had failed to re-shell oyster bars, a traditional oyster management practice, in the years leading up to the collapse.[41] Finally, Florida's ecology expert on river wildlife had provided no data showing the overall population of any river species had declined in recent years despite Florida's claims that Georgia's alleged overconsumption had dried out habitats.[42]

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31. *Florida*, 141 S. Ct. at 1179.
32. *Id*.
33. *Id*.
34. *Id.* at 1180.
35. *Id.* at 1183.
36. *Id.*
37. *Id.*
38. *Id.* at 1182.
39. *Id.* at 1181–82.
40. *Id.* at 1181.
41. *Id.*
42. *Id.* at 1183.

The Court reaffirmed that proving ecological connections in equitable apportionment cases requires a high standard of proof.[43] Additionally, the Court emphasized that its ability to reapportion waters between states should be used sparingly and only when there is clear and convincing evidence of fault on the part of another state.[44]

II. ANALYSIS

In the near future, water shortages and droughts will become more frequent and problematic in Florida and in the rest of the southern United States.[45] Research demonstrates that droughts are currently happening at a rate more frequent than historical averages in the southern and northeastern United States.[46] Additionally, climate model projections indicate that there will be a further increased frequency of extreme droughts in the future due to the significant warming shift in southern states between the late twentieth and twenty-first centuries.[47] These droughts have the potential to cause extremely negative ecological and economic impacts.[48] In *Florida*, the Florida panhandle oyster industry that collapsed following the 2010-2012 drought was the largest food-use aquaculture industry in Florida.[49] Florida suffered economically from the 43 percent decline in oyster sales following 2012 and especially after the closure of the fisheries in 2020, as oyster sales from the Bay made up 90 percent of Florida's oyster industry.[50] The drought also had a significant effect on employment, as the closure of Florida's fisheries in 2020 left approximately 140 producers and their employees out of work.[51] Overall, more recurrent and extreme droughts will make for equitable apportionment cases that are more frequent, more tenuous, and come with higher ecological and economic stakes.[52] This leads to the question as to whether the Supreme Court missed an opportunity to revise or eliminate the *Colorado* standard altogether in *Florida* in light of more rapid climate change.

The Court should have adopted a more consistent methodology for resolving equitable apportionment cases by clarifying ambiguous terms in the *Colorado* standards, as more demanding equitable apportionment cases will be

43. *Id.* at 1180.

44. *Id*. at 1182.

45. *See* Felicia Chiang et al., *Amplified Warming of Droughts in Southern United States in Observations and Model Simulations*, 4 SCI. ADVANCES 1, 1 (2018).

46. *Id*. at 1–6.

47. *Id*.

48. Robert Botta et al., *Evaluating the Regional Economic Contributions of US Aquaculture Case Study of Florida's Shellfish Aquaculture Industry*, 2 AQUACULTURE ECONS. & MGMT. 1, 1 (2021).

49. *Id*. at 7.

50. FLA. FISH & WILDLIFE CONSERVATION COMM'N, *supra* note 21.

51. Elliott, *supra* note 21; *see also Online Resource Guide for Florida Shellfish Agriculture*, UNIV. OF FLA., https://shellfish.ifas.ufl.edu/industry/ (last visited Mar. 15, 2022).

52. *See* Craig, *supra* note 1.

in front of the Supreme Court in coming years.[53] Clearer standards would not have changed the outcome in *Florida*, as the evidence was overwhelmingly against Florida.[54] However, more consistent standards would provide better guidance in tenuous cases and allow for a more streamlined judicial process, conserving time and resources that would have otherwise been spent litigating confusing standards.[55] Additionally, more uniform standards would help eliminate inconsistencies arising from individual Justices attempting to interpret environmental science.[56] In the absence of clear standards, Justices have historically relied, to varying degrees, on extrinsic sources of environmental science in making environmental decisions, leading to inconsistencies in environmental adjudication.[57]

The Court should make standards easier to apply by clarifying the open-ended terms of "clear and convincing evidence" and "highly probable."[58] For example, "clear and convincing evidence" could require showing state actions that lead to water misuse.[59] In *Colorado* II, Justice O'Connor suggested that showing a state failed to undertake financially and physically feasible conservation efforts would indicate water misuse.[60] However, the Court did not incorporate this water misuse test into the equitable apportionment standard.[61] The Court missed an opportunity in both *Colorado* II and *Florida* to formally clarify what "clear and convincing" evidence means by indicating that failure to undertake conservation efforts signifies clear evidence of water misuse. Furthermore, "highly probable" could formally entail eliminating significant alternative explanations for water decrease through ecological modeling, just as Florida attempted to prove in *Florida*.[62] The "highly probable" standard should reflect the need for aggrieved states to submit modeling indicating that increasing water flow from the defendant state would ameliorate the ecological harms suffered by the aggrieved state. Judicial efficiency and consistency require clarification of equitable apportionment standards.[63] The Court should have attempted to clarify ambiguous terms through the adoption of a more analytical framework to make application of the *Colorado* standards more consistent.

There is, admittedly, a general underlying uncertainty in environmental law because many of the environmental developments giving rise to case law either

53. *Id.*; *see* Alder, *supra* note 16, at 251.

54. *See* Florida v. Georgia, 141 S. Ct. 1175, 1183 (2021).

55. *See* Stefan Voigt, *Determinants of Judicial Efficiency A Survey*, 42 EUR. J. L. & ECONS. 183, 183 (2016).

56. Alder, *supra* note 16, at 369.

57. *Id.* at 368–69 (also finding that Supreme Court Justices Rehnquist, Scalia, and O'Connor all took different approaches in relying on extrinsic sources of environmental science).

58. *Id*. at 369.

59. *See* Colorado v. New Mexico (*Colorado II*), 467 U.S 310, 320 (1984).

60. *See id*.

61. *Id*.

62. Florida v. Georgia, 141 S. Ct. 1175, 1181–82 (2021).

63. Voigt, *supra* note 55.

precede research or must be inferred from indirect scientific proof.[64] This uncertainty limits the practicality of clarifying environmental and ecological standards.[65] Nonetheless, while acknowledging this underlying uncertainty, the Supreme Court in *Hudson County Water Co. v. McCarter* concluded that it is still legitimate for the law to standardize the relationship between excess water use and the protection of aquatic ecosystems.[66] In *Hudson County Water Co*., the Court held that state police power can limit property rights for the purpose of protecting public waters in response to a New Jersey law prohibiting the exportation of freshwater to any other state.[67] While other issues of law may lend themselves better to more definitive standards of analysis, the impact of Supreme Court environmental jurisprudence on public health and habitats emphasizes the need for consistent standards for proving ecological connections.[68] Even though scientific uncertainty presents difficulty in clarifying environmental standards, the Court should try to better articulate equitable apportionment standards in light of the impact on judicial consistency, public health, and habitats.

Clarifying the equitable apportionment standard is not the only available direction for the Court. Alternatively, the Supreme Court could have gone a step further and done away with the *Colorado* standard altogether in consideration of more rapid climate change. The Court could have declared that equitable apportionment could be granted even if the defendant state had not misused water; it could just be enough for the complaining state to have suffered a severe water shortage. As droughts increase, states will more frequently experience water shortages, often not from the misuse of water by other states.[69] Eliminating the equitable apportionment standard would allow the Court to reapportion interstate water resources without demonstration of state water overconsumption if doing so would aid in ecological recovery.[70] The Court may be unwilling to get rid of the stringent *Colorado* standard, as the Court in *Florida* emphasized its reluctance to use its Article III Section II powers of equitable apportionment in original jurisdiction cases.[71] However, the Constitution does not explicitly limit the Court's equitable apportionment powers.[72] Additionally, prior rulings from the Court state that the equitable apportionment rules are not bound by existing legal rights of the water source being apportioned because such legal

64. Alder, *supra* note 16, at 267–68.

65. *Id.* at 270.

66. Alder, *supra* note 16, at 270; Hudson County Water Co. v. McCarter, 209 U.S. 349, 356–57 (1908).

67. Alder, *supra* note 16, at 269–70; *Hudson County*, 209 U.S. at 356–57.

68. Alder, *supra* note 16, at 268–69.

69. *See also* C.A. Craig, S. Feng, S. Gilbertz, *Water Crisis, Drought, and Climate Change in the Southeast United States*, LAND USE POLICY, (2019) (over 60 percent of variance in demand for water was explained by temperature and precipitation).

70. *Id.*; Botta et al., *supra* note 48; *see* Florida v. Georgia, 141 S. Ct. 1175, 1179 (2021).

71. *Florida*, 141 S. Ct. at 1180; U.S. CONST. art. III, § 2, cl. 1.

72. U.S. CONST. art. III, § 2, cl. 1.

rights must give way in some circumstances to broader considerations.[73] For example, in *Wisconsin v. Illinois*, an equitable apportionment case concerning the distribution of Lake Michigan waters, the Court set aside a federal permit delineating water usage in the interest of navigational ease.[74] Therefore, judicial precedent indicates that the Supreme Court has support to do away with the *Colorado* standard because it is not bound by current existing legal rights to water.[75] Increasing pressure from climate change could be the catalyst for allowing reapportionment absent water misuse.

Ultimately, clarifying reapportionment standards would be preferable to doing away with the equitable apportionment standard altogether. As emphasized in *Florida*, there was lack of evidence indicating that reapportionment of water from the Apalachicola River would have aided in the recovery of Florida's freshwater habitats.[76] Perhaps, as climate change worsens, reapportionment when there is no evidence of water misuse could aid recovering habitats. The lack of evidence in *Florida*, though, indicates that automatic reapportionment of water in the instance of ecological collapse isn't necessarily the solution.[77] Pressing policy concerns for consistent rulings and judicial efficiency, however, indicate that clearer reapportionment standards would be useful as climate change worsens.[78]

CONCLUSION

The Court's holding in *Florida* reaffirmed the stringent *Colorado* standard for evaluating ecological connections in interstate equitable apportionment cases and illustrated the Court's narrow approach to interpreting ecological data in the face of more rapid climate change. Since data indicates that droughts will become more frequent and severe in the southern United States, this raises the question as to whether the Court should have revised or eliminated altogether the equitable apportionment standards reaffirmed in *Florida*. While eliminating equitable apportionment standards would allow the Court to reapportion water resources between states without evidence of overconsumption, *Florida* exemplifies that this would not necessarily rectify ecological harms suffered from water shortages. Ultimately, the Court should have considered clarifying equitable

73. Idaho *ex rel*. Evans v. Oregon & Washington, 462 U.S. 1017, 1025 (1983); Jamison E. Colburn, *Rethinking the Supreme Court's Interstate Waters Jurisprudence*, 33 GEO. ENV'T. L. REV. 233, 246 (2021).

74. *See* Wisconsin v. Illinois, 278 U.S. 367, 416–21 (1929).

75. *See id*.

76. *Florida*, 141 S. Ct. at 1179.

77. *See id.*

78. *See* Alder, *supra* note 16, at 368–69.

apportionment standards in the interests of judicial efficiency and production of consistent rulings in equitable apportionment cases.

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