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When the River Dries up, the Compact Need Not Wither Away: Amending
Interstate Water Compacts to Ensure Long-Term Viability

HILARY T. JACOBS*

The nature of water is unlike most other natural resources: it flows. It moves between, around, and under states. Moreover, water is crucial for the survival of all life.¹ In order to address the sharing of this highly coveted and necessary resource, many states have entered into congressionally sanctioned interstate water compacts.² Yet despite these efforts, water conflicts persist.³ With global warming and a growing population,⁴ the United States is destined to face increased water shortages,⁵ and with that, increased interstate disputes over water.⁶

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1. See, e.g., Stephen E. Draper, *Introduction to Transboundary Water Sharing*, 133 J. WATER RES. PLAN. & MGMT. 377, 377 (2007) (noting that “[w]ater is central to survival of life itself, and without it plant and animal life would be impossible.”).

2. Karen M. Hansen, *The Evolution of Interstate Water Disputes into Regional Cooperative Management Regimes: Launching a New Model Compact for Interstate Water Issues*, E. WATER L. & POL’Y REP., 131, 132 (2006).

3. See Draper, *supra* note 1, at 377 (“Water sharing conflicts may emerge over the allocation of the shared waters, but now the conflict is between or among the various political jurisdictions that share the water resource. . . . Inevitably, this sharing of a common resource is a breeding ground for conflict.”). One example of a longstanding, current dispute over water, part of which is subject to several interstate compacts, involves the Colorado River. “The labyrinthine rules by which the seven Colorado states share the river’s water are rife with potential points of conflict.” Michael Wines, *Colorado River Drought Forces a Painful Reckoning for States*, N.Y. TIMES, Jan. 6, 2014, at A1.

4. Kristen Averyt et al., *Sectoral Contributions to Surface Water Stress in the Coterminous United States*, 8 ENVTL. RES. LETTERS 1, 2 (2013). “[T]here is significant uncertainty in how future water demands may evolve. This uncertainty stems from the impacts of economic factors, social behaviors, technological innovations, legal and policy drivers, demand hardening, and climate change.” *Id.* (citations omitted).

5. See, e.g., *id.* at 3–4 (concluding that 193 of 2,103 watersheds studied are stressed or “demands for freshwater resources outstrip natural supplies”). For a specific example of an area plagued with shortages see Wines, *supra* note 3, at A1 (describing current water shortages plaguing the Colorado River).

6. See, e.g., Carey L. Biron, *Water Conflicts Move up on U.S. Security Agenda*, INTER PRESS SERV., May 9, 2012, available at <http://www.ipsnews.net/2012/05/water-conflicts-move->

Experts have predicted that the frequency of droughts is likely to increase,⁷ which may be attributed to surface water quality deterioration,⁸ decreasing quantities of groundwater,⁹ and increased demands for water.¹⁰ Although recent research indicates that the majority of water shortages are anticipated in western states, eastern states are not immune.¹¹ Even states with historically bountiful amounts of water, like Maryland,¹² have begun to adopt contingency plans in light of possible future water shortages.¹³

Do existing compacts adequately prepare states for shortages by providing potential solutions and forums for negotiations, or will interstate water battles plague U.S. society for years to come? At the most basic level, interstate compacts are considered contracts.¹⁴ Accordingly, the contract doctrines of impracticability and frustration of purpose apply to compacts, threatening to undermine compacts' requirements when the going gets tough in the face of inevitable water shortages.¹⁵ This Comment will analyze the applicability of these doctrines to water compacts¹⁶ and then recommend several modifications to compacts to buffer against the undesirable outcome of dissolved compacts.¹⁷

up-on-us-security-agenda/ (noting that water issues are expected to become a national security concern).

7. See DAVID M. ANDERSON ET AL., GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES 44 (2009) ("Floods and droughts are likely to become more common and more intense as regional and seasonal precipitation patterns change, and rainfall becomes more concentrated into heavy events (with longer, hotter dry periods in between).").

8. *Id.* at 46.

9. *Id.* at 47.

10. *Id.*

11. See, e.g., Averyt et al., *supra* note 4, at 4 ("There are also indications of stress in the watersheds around the Great Lakes, along the Mississippi River, and sporadically along the Appalachian Mountains.").

12. Maryland is currently and historically has been fortunate to have plentiful water supplies. M. GORDON WOLMAN, ADVISORY COMM. ON THE MGMT. AND PROT. OF THE STATE'S WATER RES., FINAL REPORT ES-1, ES-5 (2004). "Although water resource indicators for Maryland suggest that there is an abundance of water to meet present and future needs, in recent years some communities have suffered serious water supply shortages." *Id.* The report estimates a 20.1% increase in population accompanied by a 16.5% increase in freshwater use from 2000 to 2030. *Id.* at ES-3.

13. See, e.g., M. GORDON WOLMAN, ADVISORY COMM. ON THE MGMT. AND PROT. OF THE STATE'S WATER RES., WATER FOR MARYLAND'S FUTURE: WHAT WE MUST DO TODAY (2008) (describing several recommendations for conserving state water resources).

14. *Texas v. New Mexico (Texas II)*, 482 U.S. 124, 128 (1987) ("[A] compact when approved by Congress becomes a law of the United States, but a Compact is, after all, a contract. It remains a legal document that must be construed and applied in accordance with its terms." (citations and internal quotation marks omitted)).

15. See *infra* Parts II.A–B.

16. See *infra* Part II.

17. See *infra* Part II.D.

I. BACKGROUND

Before addressing interstate compacts, it is important to understand some basic principles of water law in the United States. In the United States, states generally follow one of two systems of water law: riparianism or prior appropriation.¹⁸ Since control over natural resources is traditionally a power exclusively reserved for states, water law in the United States varies widely by state, with the doctrines of riparianism and prior appropriation providing background principles.¹⁹ While states may statutorily address their water resources however they wish, this principle is not limitless: If a state treats its water as an article of commerce, then under the dormant Commerce Clause doctrine, it cannot limit the exportation of its water resources to an extent that would burden interstate commerce.²⁰

Nevertheless, interstate compacts, which are essentially congressionally sanctioned contracts that allocate interstate water resources between states, can insulate restrictive state laws from dormant Commerce Clause scrutiny.²¹ This means that by concluding an interstate compact, states often can exercise more control over their water resources than they would be able to without a compact due to Commerce Clause restrictions.²² Therefore, preserving interstate water compacts often is in states'—and especially downstream states'—best interests.²³ Despite the benefits of preserving compacts, states may panic and attempt to dissolve their compacts when facing severe water shortages based on the mistaken belief that doing so will allow them more water.²⁴ One method of accomplishing such dissolution is through the contract defenses of impracticability and frustration of purpose.²⁵

A. *Two Dominant Systems of Water Law*

The power to control one's own resources has long been considered a traditional power of states in their capacity as sovereign entities.²⁶ Accord-

18. See *infra* Part I.A.

19. See *infra* notes 27–29 and accompanying text.

20. See *infra* Part I.B.

21. See *infra* Part I.C.

22. See *infra* Part I.B.2.

23. See *infra* Part I.B.2.

24. Cf. Vince Devlin, *Many Fear Flathead Reservation Water Compact Will Cripple Farms*, MISSOULIAN, Nov. 21, 2012, http://missoulian.com/news/state-and-regional/many-fear-flathead-reservation-water-compact-will-cripple-farms/article_32a56988-3446-11e2-87cc-001a4bcf887a.html (explaining farmers' fears that their state's water compact will reduce water availability to farmers, thereby making future farming unlikely due to water shortage).

25. See *infra* Part I.D.

26. See *Martin v. Waddell*, 41 U.S. 367, 410 (1842) (“For when the [American Revolution] took place, the people of each state became themselves sovereign; and in that character hold the

ingly, the law governing water as a natural resource varies widely by state.²⁷ State laws, however, are typically grounded in one of two historic water law doctrines: the doctrine of riparian rights or of prior appropriation.²⁸ Eastern states, including Maryland,²⁹ tend to follow the doctrine of riparian rights, whereas western states such as New Mexico and Wyoming follow the doctrine of prior appropriation, and several states utilize a hybrid approach.³⁰ The geographic distinction in water law doctrine derives from historic differences in land ownership.³¹ Under the riparian doctrine, land ownership determines water rights;³² because the West was settled on lands originally owned by the federal government, claimants were unable to assert their rights over the adjoining waters.³³ Accordingly, in states formerly

absolute right to all their navigable waters, and the soils under them, for their own common use, subject only to the rights since surrendered by the constitution to the general government.”); *see also* United States v. Alaska, 521 U.S. 1, 5 (1997) (“Ownership of submerged lands—which carries with it the power to control navigation, fishing, and other public uses of water—is an essential attribute of sovereignty.”).

27. Jonathan R. Schutz, U.S. Water Rights Law: A Model for Sustainable Water Governance and Allocation? 1 (Dec. 2, 2008) (unpublished conference report), *available at* http://www.groundwater-conference.uci.edu/files/Chapter2/2008_conf_Schutz,%20J.pdf; *see also*, Gary D. Libecap, *Water Rights and Markets in the U.S. Semiarid West: Efficiency and Equity Issues*, in PROPERTY IN LAND AND OTHER RESOURCES 14 (Daniel H. Cole & Elinor Ostrom eds., 2012) *available at* <http://www2.bren.ucsb.edu/~glibecap/Lincolndevelopmentwaterrights.pdf> (“Groundwater rights vary across the western states and most are not as well defined as are surface water rights.”). For an example of the wide variations in state laws on water use, *compare* MD. CODE REGS. 26.17.06.02–08 (2010) (showing no restrictions on out-of-state use of its water resources), *with* 82 OKLA. STAT. ANN. § 1B (2013) (making exportation of its water resources incredibly difficult by requiring consent from the legislature to authorize sale or export of its water).

28. *See* DAVID H. GETCHES, WATER LAW IN A NUTSHELL 3 (4th ed. 2008) (“American jurisdictions can be grouped roughly into three systems of water law: riparian, prior appropriation, and hybrid states.”).

29. Maryland is a riparian state that expressly follows the reasonable use doctrine for permit requirements, meaning that a water-use permit holder can only use state water in a reasonable manner. MD. CODE REGS. 26.17.06.02 (2010). Owners of land along water bodies in riparian states were originally permitted “the right to have water flow past the land undiminished in quantity or quality.” *See* GETCHES, *supra* note 28, at 4. This right has morphed into the right to use water in a way that is *reasonable* relative to all other users. *Id.*

30. GETCHES, *supra* note 28, at 5–8. Twenty-nine states follow the riparian doctrine: Alabama, Arkansas, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin. *Id.* Nine states follow the doctrine of prior appropriation: Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. *Id.* Ten states follow a hybrid approach: California, Kansas, Mississippi, Nebraska, North Dakota, Oklahoma, Oregon, South Dakota, Texas, and Washington. *Id.*

31. *Id.* at 6.

32. *Id.*

33. *See, e.g.*, KRISTINA ALEXANDER & ROSS W. GORTE, CONG. RESEARCH SERV., RL34267, FEDERAL LAND OWNERSHIP: CONSTITUTIONAL AUTHORITY AND THE HISTORY OF ACQUISITION, DISPOSAL, AND RETENTION 1–3 (2007):

owned by the federal government, a new usage doctrine called prior appropriation developed.³⁴ Under the doctrine of prior appropriation,³⁵ he who first puts a portion of water to “beneficial use” is granted superior title over anyone who uses that water after him.³⁶

In contrast, the riparian rights doctrine grants property owners with land-bordering waterways the right to make use of the waters adjoining their property.³⁷ The right to adjacent waters is not boundless, however; riparian owners have the right to use the water only in a way that is reasonable compared to all other uses.³⁸ “If there is insufficient water to satisfy the reasonable needs of all riparians, all must reduce usage of water in proportion to their rights”³⁹ Ten states originally recognized the riparian rights doctrine but later shifted to prior appropriation while keeping intact existing riparian landowners’ rights.⁴⁰ These underlying doctrines establish the basic foundation for states’ current water systems and laws governing water use.

B. *Water as an Article of Commerce*

Because states have historically possessed the power to control their own natural resources,⁴¹ the U.S. Supreme Court has adopted a presumption in favor of a state holding title to its own water resources.⁴² This presumption is complicated by the fact that few water sources in the United States exist entirely within one state, as most rivers flow between states.⁴³ Upstream states tend to enjoy an advantage over downstream states, as they possess the potential to exhaust the river’s resources before those resources

At its inception, the federal government did not own land in the original states of the Union. Rather, ownership of lands between the Appalachian Mountains and the Mississippi River was ceded by the original states, and additional states were formed from those lands. West of the Mississippi River (except Texas), lands were primarily acquired by the U.S. federal government from foreign governments, as was Florida

Id. at 1–2.

34. *See* GETCHES, *supra* note 28, at 6–7.

35. *Id.*

36. *Id.*

37. *Id.* at 4.

38. *Id.* In the past, riparian owners followed a “natural flow” rule, which gave them “the right to have water flow past the land undiminished in quantity or quality.” *Id.*

39. *Id.*

40. *Id.* at 8.

41. *See supra* text accompanying note 26.

42. *See Montana v. United States*, 450 U.S. 544, 552 (1981) (“A court deciding a question of title to the bed of a navigable water must . . . begin with a strong presumption against conveyance by the United States”).

43. *See, e.g., Draper, supra* note 1, at 377 (noting that “much of the earth’s source water in surface water rivers and groundwater aquifers runs along or through political boundaries”).

even reach their downstream neighbors.⁴⁴ To address problems posed by interstate water resources, some states have promulgated statutes limiting the exportation of their water resources.⁴⁵

Such restrictive regulations can conflict with constitutional requirements. The U.S. Supreme Court has held that, in addition to granting Congress power to regulate commerce among states, the Commerce Clause also prohibits states from discriminating against interstate commerce.⁴⁶ Accordingly, state laws or practices that hamper interstate commerce have been held to violate the Commerce Clause.⁴⁷ Although the Commerce Clause can only limit state regulations on those items that function as articles of interstate commerce, the Court has recognized that water can qualify as an article of commerce.⁴⁸ Accordingly, any state regulations restricting the out-of-state use of water may be subject to the Commerce Clause's prohibition on discrimination against interstate commerce.⁴⁹

1. Overview of the Dormant Commerce Clause

The Commerce Clause provides that “Congress shall have Power . . . [t]o regulate [c]ommerce . . . among the several states”⁵⁰ The Commerce Clause not only grants Congress the affirmative power to regulate interstate commerce, but also prohibits states from discriminating against interstate commerce.⁵¹ The Commerce Clause's prohibitions emerged from the Court's increasing discouragement of economic isolation and protec-

44. *Id.* at 378.

45. *See, e.g.*, 82 OKLA. STAT. ANN., Waters and Water Rights, § 105.12 (West 2009) (“Approval of application by Oklahoma Water Resources Board—Use of water outside the state” and prioritizing in-state use over out-of-state use of Oklahoma water sources, thereby limiting the potential for external diversions).

46. *See* *New Energy Co. of Ind. v. Limbach*, 486 U.S. 269, 273 (1988) (“[T]he Commerce Clause not only grants Congress the authority to regulate commerce among the States, but also directly limits the power of the States to discriminate against interstate commerce.”).

47. *See, e.g.*, *Baldwin v. G.A.F. Seelig, Inc.*, 294 U.S. 511, 527 (1935) (invalidating a New York law that limited the intrastate sale of milk purchased out-of-state as violative of the Commerce Clause); *see also* *Hughes v. Oklahoma*, 441 U.S. 322, 336–38 (1979) (abrogating an Oklahoma law preventing the interstate transportation of minnows obtained from Oklahoma waters); *City of Philadelphia v. New Jersey*, 437 U.S. 617, 629 (1978) (striking down a New Jersey law prohibiting the importation of out-of-state garbage into the state); *H.P. Hood & Sons, Inc. v. Du Mond*, 336 U.S. 525, 542–45 (1949) (striking down New York's denial of a license to operate a milk-distribution center on the grounds that the denial equaled an attempt to benefit New York's milk producers and consumers at the expense of Massachusetts's milk producers and consumers).

48. *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941, 953–54 (1982) (holding that Nebraska's groundwater constituted an article of commerce); *City of Altus v. Carr*, 255 F. Supp. 828, 839 (W.D. Tex.) (recognizing that groundwater is an article of commerce under Texas law), *aff'd*, 385 U.S. 35 (1966).

49. *Sporhase*, 458 U.S. at 958–60.

50. U.S. CONST. art. I, § 8, cl. 3.

51. *New Energy Co. of Ind.*, 486 U.S. at 273.

tionism⁵² between states⁵³ for the purposes of promoting intrastate commerce at the expense of other states' economies.⁵⁴ This bar on economic protectionism is justified by the fact that the country's economic success "depends on the vigilant maintenance of the principle that our economic unit is the entire nation," not fifty states "operat[ing] as separate economic units."⁵⁵ The Court has referred to this "negative" aspect of the Commerce Clause as the dormant Commerce Clause.⁵⁶

All regulations geared toward promoting intrastate commerce at the expense of out-of-state competitors are prohibited under the Commerce Clause, including laws that clearly intend to burden interstate commerce and laws that impose more subtle burdens on interstate commerce.⁵⁷ Two general types of state regulations are prohibited:⁵⁸ (1) laws that facially discriminate against interstate commerce and (2) facially neutral laws that have a discriminatory effect.⁵⁹

The Court considers the first category of laws, those that constitute "simple economic protectionism" to be invalid *per se*.⁶⁰ Any law that clearly intends to burden out-of-state competitors in order to promote intrastate commerce is expressly invalid under the Commerce Clause⁶¹ and receives

52. *City of Philadelphia*, 437 U.S. at 623–24 ("The opinions of the Court through the years have reflected an alertness to the evils of 'economic isolation' and protectionism, while at the same time recognizing that incidental burdens on interstate commerce may be unavoidable when a State legislates to safeguard the health and safety of its people. Thus, where simple economic protectionism is effected by state legislation, a virtually *per se* rule of invalidity has been erected.")

53. *See Baldwin v. G.A.F. Seelig, Inc.*, 294 U.S. 511, 527 (1935) ("[O]ne state in its dealings with another may not place itself in a position of economic isolation.")

54. *New Energy Co. of Ind.*, 486 U.S. at 273–74 ("This 'negative' aspect of the Commerce Clause prohibits economic protectionism—that is, regulatory measures designed to benefit in-state economic interests by burdening out-of-state competitors.")

55. *City of El Paso v. Reynolds*, 563 F. Supp. 379, 389 (D.N.M. 1983).

56. *See, e.g., C & A Carbone, Inc. v. Town of Clarkstown*, 511 U.S. 383, 402 (1994) (O'Connor, J., concurring) ("Our decisions therefore hold that the dormant Commerce Clause forbids States and their subdivisions to regulate interstate commerce.")

57. *New Energy Co. of Ind.*, 486 U.S. at 273–75.

58. *Id.*; *see also* Anne Havemann, Comment, *Surviving the Commerce Clause: How Maryland Can Square Its Renewable Energy Laws with the Federal Constitution*, 71 MD. L. REV. 848, 852–58 (2012) (summarizing the types of laws prohibited by the dormant Commerce Clause).

59. *See City of Philadelphia v. New Jersey*, 437 U.S. 617, 624 (1978) (explaining that as to the first category, where state legislation is facially protectionist, it is *per se* unlawful, and as to the second category, "[t]he crucial inquiry, therefore, must be . . . whether [the state law] is basically a protectionist measure, or whether it can fairly be viewed as a law directed to legitimate local concerns, with effects upon interstate commerce that are only incidental.")

60. *Id.*; *see, e.g., C & A Carbone, Inc.*, 511 U.S. at 392 ("Discrimination against interstate commerce in favor of local business or investment is *per se* invalid . . .").

61. *See City of Philadelphia*, 437 U.S. at 628 (finding that such laws "fall[] squarely within the area that the Commerce Clause puts off limits to state regulation").

analysis of the strictest scrutiny.⁶² Although some laws overtly block the flow of interstate commerce at a state's borders,⁶³ other states have also adopted more nuanced forms of economic protectionism.⁶⁴ For instance, states have attempted to manipulate the price of out-of-state goods⁶⁵ or control out-of-state conduct in order to benefit intrastate commerce.⁶⁶

While facially discriminatory laws are generally deemed *per se* invalid, they can withstand Commerce Clause challenges if they can survive a two-part test resembling strict scrutiny.⁶⁷ Courts first will consider if the law advances a legitimate local purpose. If it does, courts will next consider if that purpose could be sufficiently achieved via reasonable nondiscriminatory alternatives.⁶⁸ This test has proven very hard to satisfy; while courts have accepted certain statutory goals as legitimate local purposes, very few facially discriminatory laws have ever been held valid based on a lack of nondiscriminatory alternatives.⁶⁹

62. See *Hughes v. Oklahoma*, 441 U.S. 322, 337 (1979) (“[S]uch facial discrimination invokes the strictest scrutiny of any purported legitimate local purpose and of the absence of nondiscriminatory alternatives.”).

63. See *City of Philadelphia*, 437 U.S. at 624 (describing the economic protectionism as legislation that “overtly blocks the flow of interstate commerce at a State’s borders”).

64. See, e.g., *Hunt v. Wash. State Apple Adver. Comm’n*, 432 U.S. 333, 335, 352–53 (1977) (abrogating a North Carolina law banning the sale of apples that bear a grading system other than the USDA system); see also *Havemann*, *supra* note 58, at 857–58 (citing *Exxon Corp. v. Governor of Maryland*, 437 U.S. 117 (1978)) (noting that a Maryland statute that prohibited petroleum refiners from operating in the state was upheld by the court despite Maryland’s lack of in-state refiners and the subtle burden on interstate commerce).

65. See, e.g., *Chem. Waste Mgmt. Inc. v. Hunt*, 504 U.S. 334, 336, 342 (1992) (invalidating an Alabama law imposing an extra fee on imported hazardous waste); see also *New Energy Co. of Ind. v. Limbach*, 486 U.S. 269, 271, 277–80 (1988) (striking down an Ohio law that offered state credit to fuel dealers who sold ethanol that was either produced in Ohio or in a state that granted reciprocal tax advantages to Ohio consumers).

66. Laws regulating out-of-state conduct have included: regulating price of out-of-state shippers and imposing in-state regulations on out-of-state producers or in-state producers selling their products out-of-state. See *Healy v. Beer Inst.*, 491 U.S. 324, 326–27 (1989) (requiring out-of-state shippers to affirm that the prices charged in Connecticut were no higher than prices charged in neighboring states); *Brown-Forman Distillers Corp. v. New York State Liquor Auth.*, 476 U.S. 573, 582–83 (1986) (concluding that the practical implications of a New York statute would require merchants to seek regulatory approval in New York before selling beer in another state).

67. See, e.g., *Oregon Waste Syst., Inc., v. Dep’t of Env’tl. Quality of the State of Oregon*, 511 U.S. 93, 100–01 (1994) (noting that after finding a law facially discriminatory, “the [law] must be invalidated unless . . . it advances a legitimate local purpose that cannot be adequately served by reasonable nondiscriminatory alternatives.” (quoting *New Energy Co. of Ind.*, 486 U.S. at 278 (internal quotation marks omitted))); see also *Hughes*, 441 U.S. at 337 (“[F]acial discrimination invokes the strictest scrutiny of any purported legitimate local purpose and of the absence of nondiscriminatory alternatives.”).

68. *Oregon Waste Systems, Inc.*, 511 U.S. at 100–01.

69. See, e.g., *Dean Milk Co. v. Madison*, 340 U.S. 349, 354–55 (1951) (recognizing that protecting the community’s health and safety is a legitimate local purpose, but striking down the statute based on the availability of reasonable alternatives). But see, e.g., *Maine v. Taylor*, 477 U.S. 131, 151–52 (1986) (upholding Maine’s ban on the importation of live baitfish after finding that

Facially neutral laws are subject to a lower standard of review than facially discriminatory laws. First, the Court will determine if the law has a legitimate local purpose, and second, the Court will weigh the law's local benefits against the burden on interstate commerce.⁷⁰ The Court distinguishes between laws that serve legitimate state purposes and those that are designed to cover up true discriminatory intent.⁷¹ Under the second part of the inquiry, the law will be upheld unless the burden imposed is "clearly excessive in relation to the putative local benefits,"⁷² or if the law's legitimate purpose could be served in a less burdensome manner.⁷³

Under both the facially discriminatory and facially neutral law tests, the Court has required that the regulation be "narrowly tailored" to its purported goal.⁷⁴ For instance, in *City of El Paso v. Reynolds*,⁷⁵ the U.S. Dis-

the ban "serves legitimate local purposes that could not adequately be served by available nondiscriminatory alternatives."); *Minnesota v. Clover Leaf Creamery Co.*, 449 U.S. 456, 472-74 (1981) (upholding a Minnesota statute after finding "ample" local benefits to support a legitimate state interest, and finding that "no approach with a lesser impact on interstate activities is available" (citation and internal quotation marks omitted)). The *Clover Leaf Creamery* Court also emphasized that "[a] nondiscriminatory regulation serving substantial state purposes is not invalid simply because it causes some business to shift from a predominantly out-of-state industry to a predominantly in-state industry." *Id.* The Court also has held, however, that overt economic protectionism, while masked by the veil of some public purpose, is not a legitimate public purpose:

[I]t does not matter whether the ultimate aim . . . is to reduce the waste disposal costs of New Jersey residents or to save remaining open lands from pollution . . . whatever New Jersey's ultimate purpose, it may not be accomplished by discriminating against articles of commerce coming from outside the State unless there is some reason, apart from their origin, to treat them differently.

City of Philadelphia v. New Jersey, 437 U.S. 617, 626-27 (1978).

70. *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970) ("Where the statute regulates evenhandedly to effectuate a legitimate local public interest, and its effects on interstate commerce are only incidental, it will be upheld unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits.").

71. For instance, the Court was willing to recognize that protecting the environment was a real and well-served purpose of a state law in *Minnesota v. Clover Leaf Creamery Co.*, 449 U.S. 456, 465-70 (1981), but in *New Energy Co. of Indiana v. Limbach*, 486 U.S. 269, 279 (1988), the Court acknowledged that protecting health was "merely an occasional and accidental effect" of the law's real purpose, which was to give in-state commerce an advantage over out-of-state commerce. See also *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941, 956 (1982) (noting that the Court has "long recognized a difference between economic protectionism, on the one hand, and health and safety regulation, on the other").

72. *Pike*, 397 U.S. at 142; see also *Clover Leaf Creamery Co.*, 449 U.S. at 472-74 (holding that "[o]nly if the burden on interstate commerce clearly outweighs the State's legitimate purposes does such a regulation violate the Commerce Clause").

73. *Pike*, 397 U.S. at 142 ("If a legitimate local purpose is found, then the question becomes one of degree. And the extent of the burden that will be tolerated will of course depend on the nature of the local interest involved, and on whether it could be promoted as well with a lesser impact on interstate activities.").

74. *Id.* at 142. For an example of a facially discriminatory law struck down because it was not narrowly tailored, see *Sporhase*, 458 U.S. at 957-58.

trict Court for the District of New Mexico struck down a state statute that completely banned the exportation of state groundwater, concluding that the regulation was “tantamount to economic protectionism.”⁷⁶ While recognizing the legitimacy of the purpose of “conserv[ing] and preserv[ing] the state’s internal water supply,” the court concluded that it could only justify “limited, non-discriminatory burdens on interstate commerce” and not “a total ban on interstate transportation of ground water.”⁷⁷ Accordingly, even state statutes with valid purposes that limit the exportation of state water must do so in the least burdensome way possible.⁷⁸

2. Commerce Clause Limitations on State Water Laws

Since the Commerce Clause applies only to state resources that constitute articles of commerce under state or federal law,⁷⁹ states that limit the out-of-state use of state water are subject to Commerce Clause limitations only if they treat their water resources as an article of commerce.⁸⁰ *Sporhase v. Nebraska ex rel. Douglas*⁸¹ elucidates this principle.⁸² Contra-

75. 563 F. Supp. 379 (D.N.M. 1983).

76. *Id.* at 390–92.

77. *Id.* at 388–89. In *Reynolds*, the district court also noted that

the Supreme Court held that a state may discriminate in favor of its citizens only to the extent that water is essential to human survival. Outside of fulfilling human survival needs, water is an economic resource. For purposes of constitutional analysis under the Commerce Clause, it is to be treated the same as other natural resources.

Id. at 389.

78. *Id.*

79. For example, in *Tangier Sound Watermen’s Ass’n v. Douglas*, the U.S. District Court for the Eastern District of Virginia concluded that the Commerce Clause did not apply to the right of non-Virginia residents to commercially harvest crabs in Virginia waters since a commercial fisherman’s interest in crossing state lines to harvest crabs falls outside the Commerce Clause’s scope as an article of commerce or the involvement in interstate commerce. 541 F. Supp. 1287, 1303–06 (E.D. Va. 1982). Whether an object constitutes an article of commerce depends on whether that object has

been recognized by custom or law as a fit subject for barter or sale, particularly if its manufacture has been made the subject of Federal regulation and taxation [An article] must . . . be recognized as a legitimate article of commerce although it may to a certain extent be within the police power of the states.

Austin v. Tennessee, 179 U.S. 343, 345 (1900). Courts give deference to congressional recognition of whether an object is an article of commerce: “If congress has affirmatively pronounced the article to be a proper subject of commerce, we should rightly be influenced by that declaration.” *Schollenberger v. Pennsylvania*, 171 U.S. 1, 8 (1898).

80. See generally Mark S. Davis & Michael Pappas, *Escaping the Sporhase Maze: Protecting State Waters Within the Commerce Clause*, 73 LA. L. REV. 175, 198–99 (2012) (“[B]oth state characterizations of water resources and state water practice will determine whether waters are articles of commerce and water regulations are subject to Dormant Commerce Clause review.”).

81. 458 U.S. 941 (1982).

82. *Id.* at 945–54; see also Davis & Pappas, *supra* note 80, at 198–206. Under *Sporhase*, courts must examine whether state law clearly treats water as an object of interstate commerce or

ry to popular understandings based on *Sporhase*,⁸³ because each state has its unique water law doctrine,⁸⁴ water does not automatically count as an article of commerce in all fifty states.⁸⁵

States that treat water as an article of commerce will be able to limit the exportation of their water resources only to the extent that those limitations do not discriminate against interstate commerce.⁸⁶ States that do not treat water as an article of commerce will remain free to limit the exportation of their water resources because those resources are not bound by the Commerce Clause.⁸⁷

Despite Commerce Clause limitations, states can gain more control over their water resources in certain situations. For instance, the *Sporhase* Court suggested that under drought conditions, states could have more control over their water resources than the dormant Commerce Clause would otherwise permit: “[W]e are reluctant to condemn as unreasonable, measures taken by a State to conserve and preserve for its own citizens this vital resource in times of severe shortage.”⁸⁸ The *Sporhase* Court also stat-

whether the state’s “de facto treatment of water resembles commerce” by looking at written law and state practice. *Id.* at 200.

83. *See, e.g.*, *City of El Paso v. Reynolds*, 563 F. Supp. 379, 388–89 (D.N.M. 1983) (mischaracterizing the *Sporhase* Court’s holding by stating that “water is an article of commerce and that Congress’ long-standing deference to state water law did not demonstrate an intent to permit discrimination against interstate commerce in ground water.”).

84. *See supra* Part I.A.

85. *See Davis & Pappas, supra* note 80, at 198–203 (describing a three-part inquiry courts use to determine whether water is treated as an article of commerce in a given state). Professors Davis and Pappas further explained that

[t]he state-specific nature of these three inquiries [whether states are empowered to characterize water so that it does not enter commerce, whether state law treats water as an article of commerce, and whether state conduct treats water as an article of commerce] illustrates that the *Sporhase* Doctrine contains no categorical conclusion that all water is necessarily an article of commerce. Rather, all of these cases look at the particularities of state law and practice to determine, on a state-by-state basis, whether water is an article of commerce in a given state.

Id. at 203. As Davis and Pappas point out, the first inquiry was settled in *Hudson County Water Co. v. McCarter*, 209 U.S. 349, 356–57 (1908). *Id.* at 200. For an example of a court’s use of the second inquiry, see *City of Altus v. Carr*, 255 F. Supp. 828, 840 (W.D. Tex.), *aff’d*, 385 U.S. 35 (1966). For an example of a court’s use of the third inquiry, see *Sporhase*, 458 U.S. at 944, 951–52.

86. *See New Energy Co. of Ind. v. Limbach*, 486 U.S. 269, 273–74 (1988) (noting that the Commerce Clause “directly limits the power of the States to discriminate against interstate commerce” and that “state statutes that clearly discriminate against interstate commerce” will be struck down).

87. *See Davis & Pappas, supra* note 80, at 199 (“If [a state does not treat water as an article of commerce], then state water restrictions are immune from Dormant Commerce Clause review.”). However, the wide variety of factors that *Sporhase* examines to ascertain whether water is an article of commerce means that most states will be subject to dormant Commerce Clause analysis. *See supra* note 85 and accompanying text.

88. *Sporhase*, 458 U.S. at 956. The *Sporhase* court explained:

ed that well-documented water shortages could justify a state limiting the external use of its waters: “A demonstrably arid State conceivably might be able to marshal evidence to establish a close means-end relationship between even a total ban on the exportation of water and a purpose to conserve and preserve water.”⁸⁹ Thus, despite Commerce Clause requirements, states may be able to legally restrict the exportation of their water resources during a well-documented water shortage.⁹⁰

Additionally, state waters subject to an interstate compact are seemingly immune from dormant Commerce Clause analysis.⁹¹ Many interstate compacts apportion specific discrete amounts of water to specific states, thereby inherently limiting the interstate use of water.⁹² Because water

Our reluctance stems from the ‘confluence of [several] realities.’ First, a State’s power to regulate the use of water in times and places of shortage for the purpose of protecting the health of its citizens—and not simply the health of its economy—is at the core of its police power. For Commerce Clause purposes, we have long recognized a difference between economic protectionism, on the one hand, and health and safety regulation, on the other. Second, the legal expectation that under certain circumstances each State may restrict water within its borders has been fostered over the years not only by our equitable apportionment decrees, but also by the negotiation and enforcement of interstate compacts. Our law therefore has recognized the relevance of state boundaries in the allocation of scarce water resources. Third, although appellee’s claim to public ownership of Nebraska ground water cannot justify a total denial of federal regulatory power, it may support a limited preference for its own citizens in the utilization of that resource.

Id. (citations omitted).

89. *Id.* at 958.

90. *Id.*

91. *See id.* at 956 (“[T]he legal expectation that under certain circumstances each State may restrict water within its borders has been fostered over the years . . . by the negotiation and enforcement of interstate compacts.” (citation omitted)). This principle only applies, however, to compacts that allocate specific amounts of water between states. In *Tarrant Regional Water District v. Herrmann*, plaintiff Tarrant, a Texas water district, asserted that Oklahoma statutes limiting the exportation of state water “discriminat[ed] against interstate commerce . . . by erecting barriers to the distribution of water left unallocated under [the Red River] Compact.” 133 S. Ct. 2120, 2136 (2013) (internal quotation marks omitted). Tarrant interpreted the Red River Compact as allocating most, but not all of the water in the river, and asserted that, by favoring in-state water consumers, Oklahoma law prevented that “unallocated” water from being distributed out-of-state and thereby disrupted the interstate trade of water. *Id.* at 2129–30. The Court rejected Tarrant’s interpretation of the Compact based on drafting history which indicated that, during times of ample flow, each state can use as much water as it wants so long as it does not prevent downstream states from acquiring their apportionment of water. *Id.* at 2137. Therefore, the Court concluded, “Oklahoma water statutes cannot discriminate against interstate commerce with respect to unallocated waters because the Compact leaves no waters unallocated.” *Id.* For this reason, the Court found that Tarrant’s Commerce Clause argument failed. *Id.* It is worth noting, however, that the dormant Commerce Clause’s applicability is unclear for interstate compacts that do not divide up water between states via percentage of flow, specific amounts of water, or both, but merely establish an administrative board to allocate or monitor water use.

92. For example, the Sabine River Compact between Louisiana and Texas provides that “[a]ll free water in [the area between the border and Sabine Lake] shall be divided equally between the two States” and “neither State shall permit or authorize any additional uses which would have the

compacts are recognized as federal law,⁹³ it makes sense that such limitations on interstate commerce would receive extra deference.⁹⁴ Indeed, in *Intake Water Co. v. Yellowstone River Compact Commission*,⁹⁵ the U.S. Court of Appeals for the Ninth Circuit noted that because Congress approved the Yellowstone River Compact, “it is federal, not state, law for purposes of Commerce Clause objections; therefore, the Compact cannot, by definition, be a state law impermissibly interfering with commerce but is instead a federal law, immune from [Commerce Clause] attack[s].”⁹⁶ Nevertheless, interstate water compacts are only immune to Commerce Clause analysis to the extent that they cover state water sources.⁹⁷ For example, in *City of El Paso v. Reynolds* the court held that the Rio Grande Compact did not insulate New Mexico’s prohibition on all groundwater exports from Commerce Clause restrictions because the Compact did not cover groundwater.⁹⁸ Even if a compact purports to address an entire river but inadvertently leaves out some of the river, any state regulations restricting the use of that uncovered portion could be subject to Commerce Clause analysis.⁹⁹

Therefore, by entering into an interstate water compact, or during times of drought, states could have a greater ability to isolate their water resources from the thirsty mouths of other states.¹⁰⁰ Because it is unclear just how much control a state might have in times of drought without a compact—in order to ensure they are entitled to at least some portion of an interstate river flowing through a state’s borders—states should seek to ensure that their interstate water compacts remain intact.¹⁰¹

effect of reducing the flow [in the area between the border and Sabine Lake] to less than 36 cubic feet per second.” TEX. WATER CODE ANN. § 44.010, arts. V(a)–(b) (West 2008). Accordingly, neither state may sell water to other states to the extent that the sale will reduce the flow of the water within that specified area. *Id.*

93. See *Alabama v. North Carolina*, 560 U.S. 330, 351 (2010) (noting that “an interstate compact is not just a contract; it is a federal statute enacted by Congress”).

94. See *Intake Water Co. v. Yellowstone River Compact Comm’n*, 769 F.2d 568, 570 (9th Cir. 1985) (indicating deference by stating that the compact was a federal law “immune from [Commerce Clause] attack[s]”).

95. 769 F.2d 568 (9th Cir. 1985).

96. *Id.* at 569–70.

97. See *Tarrant Reg’l Water Dist. v. Herrmann*, 133 S. Ct. 2120, 2137 (2013) (holding that Oklahoma statutes limiting the export of state water did not violate the Commerce Clause because the Red River Compact’s provisions covered the water subject to the statutes, thereby rejecting Texas’s argument that there was water “unappropriated” by the Compact that was subject to Commerce Clause limitations).

98. *City of El Paso v. Reynolds*, 563 F. Supp. 379, 384 (D.N.M. 1983).

99. See *supra* notes 91–98 and accompanying text.

100. See *supra* notes 91–9799 and accompanying text.

101. See *infra* Part II.

C. *Compacts*

To address problems posed by the shared use of interstate water sources, many states have entered into compacts to divide up water sources.¹⁰² Although the Supreme Court and Congress may also apportion interstate waters,¹⁰³ compacts are the most frequently used mechanism.¹⁰⁴ Interstate water compacts are essentially congressionally sanctioned con-

102. See GETCHES, *supra* note 28, at 428, 438. Although compacts are by far the most frequently used mechanism for dividing up interstate water sources, the Supreme Court and Congress also have the authority to equitably apportion interstate waters. See U.S. CONST., art. III, § 2 (granting the Court original jurisdiction for disputes between “two or more States”); see also, *id.* at art. I, § 8, cl. 3 (granting Congress the power “to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes”).

103. The Court has equitably apportioned interstate water sources on only a few occasions. See, e.g., *Wyoming v. Colorado*, 259 U.S. 419, 495–96 (1922) (allocating the Laramie River between the two states), *vacated*, 353 U.S. 953 (1957) (changing the judgment to apportion Colorado’s 49,375 acre-feet of the Laramie River as opposed to the original amount of no more than 15,500 acre-feet); see also *Nebraska v. Wyoming*, 325 U.S. 589, 646 (1945) (equitably apportioning the North Platte River). For more examples of the Court deciding whether to exercise its powers to equitably apportion interstate waters, see *Kansas v. Colorado*, 206 U.S. 46, 117–18 (1907) and *Colorado v. New Mexico*, 459 U.S. 176, 182–83, 190 (1982).

In *Nebraska v. Wyoming*, the Court noted that “[equitable][a]pportionment calls for the exercise of an informed judgment on a consideration of many factors.” 325 U.S. at 618. These factors are characterized as those that “create equities in favor of one state or the other” and “must be weighed as of the date when the controversy is mooted.” *Id.* (quoting *Colorado v. Kansas*, 320 U.S. 383, 394 (1943)). The Court has listed several factors, emphasizing that the list is not exhaustive:

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

Id. However, more recently, the Court also considered conservation measures taken by New Mexico, the state seeking to prevent equitable apportionment, to counterbalance the proposed diversion to Colorado, the state seeking more water, in order to minimize harm to water users in New Mexico. *Colorado v. New Mexico*, 459 U.S. at 186. The Court also considered whether the state seeking to prevent the apportionment has taken reasonable steps to minimize the amount of diversion that will be required. *Id.* Moreover, the Court compared the harms and benefits to the competing states that will result from the requested apportionment. *Id.* at 186–87.

Congress has also sparingly exercised its power to allocate interstate water sources outside of approving interstate compacts. See, e.g., 43 U.S.C.A. § 617 (2007) (codifying the 1928 Boulder Canyon Project Act apportioning the lower Colorado River Basin); Fallon Paiute Shoshone Indian Tribes Water Rights Settlement Act of 1990, § 204, Pub. L. No. 101–618, 104 Stat. 3289 (apportioning the Carson River, the Truckee River, and Lake Tahoe). Congress remains reluctant to exercise these powers, emphasizing the extraordinary circumstances as a justification for their few instances of apportionment. Douglas L. Grant, *Interstate Water Allocation Compacts: When the Virtue of Permanence Becomes the Vice of Inflexibility*, 74 U. COLO. L. REV. 105, 174–75 (2003). Indeed, “[c]ongressional mandate, although the most authoritative alternate, is the least employed method.” Joseph W. Girardot, *Toward a Rational Scheme of Interstate Water Compact Adjudication*, 23 U. MICH. J.L. REFORM 151, 151–52 (1989).

104. See GRANT, *supra* note 103, at 105 (“[S]tates have preferred to make their own apportionments by entering into water allocation compacts.”).

tracts¹⁰⁵ that govern the use of a source of water among the states in which it flows. Congressional approval furnishes interstate compacts with the status of federal law.¹⁰⁶

Today, there are twenty-six congressionally sanctioned compacts addressing water supply in the United States.¹⁰⁷ Compacts that address water supply generally either allocate discrete amounts of water or establish an administrative board to oversee the management of interstate water supplies.¹⁰⁸ Compacts that allocate water do so in many ways: by percentage of total flow,¹⁰⁹ by discrete amounts in acre-feet or cubic feet per second,¹¹⁰ based on historical amounts,¹¹¹ based on geography,¹¹² or based on season.¹¹³ Most compacts do not entirely follow one method but rather apply a

105. The Compact Clause of the Constitution recognizes that states have the power to enter into agreements with each other. U.S. CONST., art. I, § 10, cl. 3 (“No State shall, without the Consent of Congress, . . . enter into any Agreement or Compact with another State . . .”). Compact formation, however, requires congressional approval unless the agreement is so inconsequential that it does not encroach on federal authority. *Virginia v. Tennessee*, 148 U.S. 503, 518–21 (1893). Congress must authorize the negotiation of the compact and the final agreement. GETCHES, *supra* note 28, at 439–40. Congress’s consent determines whether a compact is permissible. *Id.*; *see also* *Texas v. New Mexico (Texas II)*, 482 U.S. 124, 128 (1987) (“[A] Compact is, after all, a contract.” (quoting *Petty v. Tennessee-Missouri Bridge Comm’n*, 359 U.S. 275, 285 (1959) (Frankfurter, J., dissenting))).

106. *See* *Cuyler v. Adams*, 449 U.S. 433, 438 (1981) (“[C]ongressional consent transforms an interstate compact within [the Compact Clause] into a law of the United States . . .”).

107. *See* U.S. FISH & WILDLIFE SERV., DIGEST OF FEDERAL RESOURCE LAWS OF INTEREST TO THE U.S. FISH AND WILDLIFE SERVICE: INTERSTATE COMPACTS, <http://www.fws.gov/laws/lawsdigest/compact.html> (last visited May 1, 2014) (listing the current twenty-six interstate water apportionment compacts); *see also* *Virginia v. Tennessee*, 148 U.S. 503, 518–21 (1893) (setting forth the types of interstate agreements requiring congressional approval).

108. *See, e.g.*, MD. CODE ANN., *Envir.* § 5-301 (West 2014) (detailing the Susquehanna River Basin Compact, which that establishes an administrative board to manage interstate water supplies); *infra* notes 109–113 (discussing various statutes that allocate discrete amounts of water).

109. *See, e.g.*, WYO. STAT. ANN. § 41-12-205 (LexisNexis 2013) (detailing that the Belle Fourche River Compact allocates ninety percent of the flow of the river to South Dakota and ten percent of the flow to Wyoming).

110. *See, e.g.*, COLO. REV. STAT. ANN. § 37-62-101 (West 2004) (detailing that the Upper Colorado River Compact guarantees Arizona at least 50,000 acre-feet of storage per year, and after that the waters are divided based on percentage).

111. *See, e.g.*, TEX. WATER CODE ANN. § 42.010 (West 2008) (detailing that the Pecos River Compact guarantees Texas an amount of water “equivalent to that available to Texas under the 1947 condition”).

112. *See, e.g., id.* § 43.006 (detailing that the Canadian River Compact grants New Mexico “free and unrestricted use of all waters originating in the drainage basin of Canadian River above Conchas Dam” and a limited amount of water below the dam, grants Texas “free and unrestricted use of all waters of Canadian River in Texas” within specified limits, and grants Oklahoma “free and unrestricted use of all waters of Canadian River in Oklahoma”).

113. *See, e.g.*, COLO. REV. STAT. ANN. § 37-69-101, art. V (West 2004). The Arkansas River Compact apportions amounts based on the conservation storage supply in a reservoir along the river. *Id.* During the winter months (November 1 to March 31), Colorado can demand up to 100 cubic feet per second from the reservoir; during the summer months (April 1 to October 31), Colo-

variety of approaches. For instance, the Pecos River Compact dictates that “New Mexico shall not deplete by man’s activities the flow of the Pecos River at the New Mexico-Texas state line below an amount which will give to Texas a quantity of water equivalent to that available to Texas under the 1947 condition.”¹¹⁴ Moreover, the Compact allocates forty-three percent and fifty-seven percent of excess water to Texas and New Mexico, respectively.¹¹⁵ Apportionments of water via compact are binding upon all citizens of the compacting states, however states choose to allocate that water.¹¹⁶

Even in the presence of compacts, disputes over water supplies still arise, largely over compact interpretation and implementation.¹¹⁷ For instance, in *Tarrant Regional Water District v. Herrmann*,¹¹⁸ parties from Texas and Oklahoma argued over the interpretation of the Red River Compact, an interstate compact allocating portions of the Red River between Texas, Oklahoma, Louisiana, and Arkansas.¹¹⁹ Tarrant, a Texas water district, argued that the Compact left some water “unallocated,” thereby creating “a borderless common in which each of the four signatory States may cross each other’s boundaries to access a shared pool of water.”¹²⁰ The Supreme Court rejected Tarrant’s interpretation that the Compact left water “unallocated,” and concluded that there was no dormant Commerce Clause problem.¹²¹ Thus, even though the goal of compacts is to resolve future interstate water disputes, problems inevitably arise.

rado can demand up to 500 cubic feet per second and Kansas can demand 500–750 cubic feet per second. *Id.*

114. TEX. WATER CODE ANN. § 42.010, art. III(a) (West 2008).

115. *Id.* at art. III(c).

116. See GETCHES, *supra* note 28, at 441 (“Apportionments of water by compact are binding upon the citizens of the compacting states whether or not individual citizens were parties to the negotiations.”).

117. For instance, the Apalachicola-Chattahoochee-Flint River Basin Compact and the Alabama-Coosa-Tallapoosa River Basin Compacts have been subject to substantial controversy in recent years, to the extent that some would say they failed entirely. See, e.g., Charles T. DuMars & David Seeley, *The Failure of the Apalachicola-Chattahoochee-Flint River Basin and Alabama-Coosa-Tallapoosa River Basin Compacts and a Guide to the Successful Establishment of Interstate Water Compacts*, 21 GA. ST. U. L. REV. 373, 376–84 (2004) (describing the controversy over the Apalachicola-Chattahoochee-Flint and Alabama-Coosa-Tallapoosa River Compacts); see also Dustin S. Stephenson, *The Tri-State Compact: Falling Waters and Fading Opportunities*, 16 J. LAND USE & ENVTL. L. 83, 86–88 (2000) (summarizing the history of the Apalachicola-Chattahoochee-Flint River Basin Compact).

118. 133 S. Ct. 2120 (2013).

119. *Id.* at 2125–30.

120. *Id.* at 2129.

121. *Id.* at 2137.

D. Threats to Interstate Compacts

Despite the problems that do and will likely continue to arise based on compact interpretation, interstate water compacts face even more daunting problems. The Supreme Court held that, although congressional approval transforms an interstate compact into U.S. law,¹²² compacts are fundamentally contracts.¹²³ Accordingly, compacts are subject to most of the doctrines that apply to traditional contracts.¹²⁴ For example, the *Tarrant* Court held that courts should interpret compacts according to their specific terms, and if those terms are not clear, a court should look to the parties' intent,¹²⁵ consistent with principles of contract law.¹²⁶ While some contract doctrines—rooted in state law—apply to interstate compacts,¹²⁷ the ratified provisions of a compact will generally be given deference¹²⁸ and certain contract doctrines will be displaced because congressional consent transforms an interstate compact into a federal law.¹²⁹ For example, the Court has refused to find that an interstate compact includes an implied duty of good faith and fair dealing because such a holding would render judges “potent lawmakers.”¹³⁰

As contracts, compacts are also subject to the contract defenses of impracticability and frustration of purpose.¹³¹ Unlike the contract doctrines mentioned above, impracticability and frustration of purpose do not change a contract but merely provide justifications for the contract's nullifica-

122. See *Alabama v. North Carolina*, 560 U.S. 330, 351 (2010) (noting that “an interstate compact is not just a contract; it is a federal statute enacted by Congress.”).

123. *Texas v. New Mexico (Texas II)*, 482 U.S. 124, 128 (1987).

124. *Id.*; see, e.g., *Texas v. New Mexico (Texas I)*, 462 U.S. 554, 564 (1983) (applying the contract interpretation principle that prohibits courts from “order[ing] relief inconsistent with [a contract's] express terms”).

125. *Tarrant*, 133 S. Ct. at 2130.

126. See CHARLES L. KNAPP, NATHAN M. CRYSTAL & HARRY G. PRINCE, *PROBLEMS IN CONTRACT LAW: CASES AND MATERIALS* 390 (7th ed., 2012). “Courts often state that the ‘plain meaning’ of the language of a contract should govern and that extrinsic evidence is admissible only if the court concludes that the contract is ambiguous.” *Id.*

127. See *Texas II*, 482 U.S. at 128 (noting that interstate compacts are “legal document[s] that must be construed and applied in accordance with [their] terms”).

128. See *Texas I*, 462 U.S. at 564 (“One consequence of this metamorphosis is that, unless the compact to which Congress has consented is somehow unconstitutional, no court may order relief inconsistent with its express terms.”).

129. *Cuyler v. Adams*, 449 U.S. 433, 438 (1981).

130. *Alabama v. North Carolina*, 560 U.S. 330, 351–52 (2010). The Court expressed reluctance “to read absent terms into an interstate compact given the federalism and separation-of-powers concerns that would arise were [the Court] to rewrite an agreement among sovereign States.” *Id.* at 352.

131. See, e.g., *id.* at 366 (Breyer, J., concurring) (applying the doctrine of impracticability to an interstate compact).

tion.¹³² Impracticability and frustration of purpose excuse parties from performing contractual duties when something occurs that is contrary to a basic assumption on which the contracting parties relied, thereby rendering performance impracticable or meaningless.¹³³ During times of water scarcity, states may claim impracticability or frustration of purpose in an attempt to void the compact and regain the ability to restrict water exportation.

1. *Impracticability*

The doctrine of impracticability¹³⁴ applies when parties have entered a contract and an unexpected event occurs, rendering performance of the contract impracticable.¹³⁵ The event must be so unexpected that its nonoccurrence was a basic assumption on which the contract was made; therefore parties are excused from performing their contractual duties.¹³⁶ Events that trigger the impracticability defense include the death or incapacity of a person necessary for performance,¹³⁷ the prevention of action by government regulation,¹³⁸ and the destruction or deterioration of something necessary for contract performance.¹³⁹ There are four elements required to satisfy a defense of impracticability: (1) an event occurs after contract formation that renders performance impracticable; (2) the event is contrary to a basic assumption on which the contract was made; (3) the event occurs without fault of either party; and (4) the event was unforeseeable at the time of contract formation.¹⁴⁰ In certain circumstances, claims of impracticability could result in voided interstate water compacts.¹⁴¹

2. *Frustration of Purpose*

The frustration of purpose doctrine applies when parties enter a contract and an unexpected event occurs that renders a contract pointless—that

132. *See infra* Parts I.D.1–2.

133. *See infra* Parts I.D.1–2.

134. The doctrine of impracticability is sometimes referred to as impossibility. RESTATEMENT (SECOND) OF CONTRACTS § 261, cmt. d (1981).

135. *Id.* § 261.

136. *Id.* “Where, after a contract is made, a party’s performance is made impracticable without his fault by the occurrence of an event the non-occurrence of which was a basic assumption on which the contract was made, his duty to render that performance is discharged, unless the language or the circumstances indicate the contrary.” *Id.*

137. *Id.* § 262.

138. *Id.* § 264.

139. *Id.* § 263.

140. *Id.* § 261, cmts. a–f; *see also* Damien M. Schiff, *Rollin’, Rollin’, Rollin’ on the River: A Story of Drought, Treaty Interpretation, and Other Rio Grande Problems*, 14 *IND. INT’L & COMP. L. REV.* 117, 149 (2003) (noting that impracticability requires that “the failure of a basic assumption . . . must not have been reasonably foreseeable at the time of contracting”).

141. *See infra* Part II.A.

is, substantially frustrates the contract's purpose—thereby discharging the parties of their duties to perform the contract.¹⁴² A successful claim of frustration of purpose requires that (1) an event occurs that frustrates a principal purpose of the contract, (2) the event substantially frustrates the contract's purpose, (3) the non-occurrence of this event was a basic assumption on which the contract was made, and (4) neither party was at fault.¹⁴³

II. ANALYSIS

With water shortages on the rise due to global warming,¹⁴⁴ specific allocation schemes required by interstate compacts may become increasingly difficult to fulfill. Moreover, droughts are likely to affect more states, including states like Maryland that are historically devoid of water conflicts due to an abundance of water.¹⁴⁵ Despite its historic bounty of water resources,¹⁴⁶ Maryland has already begun preparing for potential shortages.¹⁴⁷ Yet, as they now stand, many water compacts remain susceptible to the possibility of one state claiming a defense of impracticability or frustration

142. *Id.* § 265.

143. *Id.*

144. See ANDERSON ET AL., *supra* note 7, at 44 (predicting a higher incidence rate and greater intensity of future droughts); see also INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY, 186–88 (Martin Parry et al. eds., 2007) (“A warmer climate, with its increased climate variability, will increase the risk of both floods and droughts.”). For information on drought conditions in the United States, see *Climate Change Indicators in the United States*, U.S. ENV'T'L PROT. AGENCY, http://www.epa.gov/climatechange/pdfs/print_drought-2013.pdf (last visited Apr. 13, 2014).

145. See, e.g., WOLMAN, *supra* note 12, at ES-1 (“Although water resource indicators for Maryland suggest that there is an abundance of water to meet present and future needs, in recent years some communities have suffered serious water supply shortages. The 2002 drought experienced throughout Maryland ignited widespread concern for the adequacy of the State's water resources to meet the future demand. There was an alarming realization that unless and until adequate measures are taken, Maryland will have great difficulties in the future in meeting its growing water demand, which could lead to a water crisis of significant proportions.”).

146. *Id.* at ES-5.

147. WOLMAN, *supra* note 13, at 3–4. The Advisory Committee on the Management and Protection of the State's Water resources gave the following recommendations:

[T]he Committee recommends that Maryland move as quickly as possible to: Prepare Statewide and regional long-term plans with federal, State and local government agencies and utilities working collaboratively; [e]stablish a broader and more reliable network of monitoring stations; [f]ully fund two major hydrologic studies: the Coastal Plain Aquifer and Fractured Rock Water Supply Studies; [i]mprove the analytical tools for assessing the impacts of proposed new water uses; [i]ntegrate those new tools into allocation and permitting decisions; [d]evelop comprehensive guidance and incentives to increase water conservation in all sectors; [p]rovide all interested parties with ready access to all the water resources data; [s]trengthen enforcement programs for permit requirements to ensure that the interests of all water users are protected; and [e]stablish adequate funding for the water supply program to properly manage water resources for future generations.

Id.

of purpose when water levels decrease, as a means of escaping its compact duties. The contract doctrines of impracticability and frustration of purpose have not yet been applied in the context of interstate water compacts.¹⁴⁸ A close analysis of the requirements of impracticability and frustration of purpose under circumstances other than water shortages suggests that such claims could succeed in certain drought situations.¹⁴⁹ This Comment will analyze these doctrines' viability in the context of interstate compacts,¹⁵⁰ and then suggest potential drafting strategies in order to protect compacts from future dissolution as a result of these doctrines.¹⁵¹

A. *Impracticability*

As discussed in Part I.D.1, the contract defense of impracticability consists of four elements which this Section will discuss in turn.

1. *After Contract Formation, an Event Renders Performance Impracticable*

A successful claim of impracticability requires that after contract formation, an event occurs, rendering performance impracticable.¹⁵² "A mere change in the degree of difficulty or expense . . . does not amount to impracticability since it is this sort of risk that a fixed-price contract is intended to cover."¹⁵³ A "severe shortage of raw materials or of supplies due to war, embargo, local crop failure, unforeseen shutdown of major sources of supply, or the like, which either causes a marked increase in cost or prevents performance altogether" may suffice, however.¹⁵⁴

Whether a water shortage renders performance of a compact impracticable depends on the compact's specific allocation provisions and the currently existing compacts that allocate water supplies; each use a slightly different method of allocation.¹⁵⁵ Generally, however, interstate water

148. *But see supra* note 131 (applying the doctrine of impracticability to an interstate waste management compact).

149. *See infra* Parts II.A–B.

150. *See infra* Parts II.A–C.

151. *See infra* Part II.D.

152. RESTATEMENT (SECOND) OF CONTRACTS § 261 (1981).

153. *Id.* § 261 cmt. d; *see also* *Karl Wendt Farm Equip. Co. v. Int'l Harvester Co.*, 931 F.2d 1112, 1116–18 (6th Cir. 1991) (explaining that mere unprofitability does not excuse nonperformance).

154. *Karl Wendt Farm Equip. Co.*, 931 F.2d at 1117 (quoting RESTATEMENT (SECOND) OF CONTRACTS § 261 cmt. d (1981)).

155. *See supra* notes 107–113 and accompanying text.

compacts that allocate water largely utilize two methods of allocation: percentage of total flow and specific amounts of water.¹⁵⁶

The vast majority of compacts allocate water in specific portions using the units of acre-feet or cubic feet per second. For example, the Canadian River Compact (“CRC”) allocates discrete amounts of water to the three states it governs.¹⁵⁷ The CRC allots 200,000 acre-feet of water to New Mexico, the most upstream state,¹⁵⁸ 500,000 acre-feet of water to Texas,¹⁵⁹ and grants Oklahoma, the most downstream state, “free and unrestricted use” of the river within its boundaries.¹⁶⁰ Would a drought that reduces the Canadian River’s water level such that one or all states are unable to obtain their apportionments render compact performance impracticable?

If a drought reduced the river’s level to provide only 300,000 acre-feet to New Mexico, New Mexico could appropriate its full 200,000 acre-feet of water, leaving Texas with 100,000 acre-feet and Oklahoma with nothing.¹⁶¹

156. For an example of a compact that divides available water by percentages, see the Belle Fourche River Compact, WYO. STAT. ANN. § 41-12-205 (2013). Other compacts that divide water using percentages include: the Sabine River Compact, TEX. WATER CODE ANN. § 44.010, art. V (West 2008); the Snake River Compact, WYO. STAT. ANN. § 41-12-501, art. III (West 2008); and the Yellowstone River Compact, WYO. STAT. ANN. § 41-12-601, art. V (West 2008).

Examples of compacts that use fixed amounts of water to divide up a river include: the La Plata River Compact, COLO. REV. STAT. ANN. § 37-63-101, art. II (West 1922); the Republican River Compact, COLO. REV. STAT. ANN. § 37-67-101, art. IV (West 1942); the Kansas-Oklahoma Arkansas River Basin Compact, OKLA. STAT. ANN., Waters and Water Rights, § 1401, art. V–VI (West 1965); and the Colorado River Compact, WYO. STAT. ANN. § 41-12-301, art. III (West 1922).

Some compacts use a combination approach of percentages and specific amounts while others use entirely different methods. For examples, see: the Bear River Compact, Pub. L. No. 96-189, 94 Stat. 4, art. V (1980) (using a combination approach); the Big Blue River Compact, KAN. STAT. ANN. § 82a-529, art. V (West 1971) (allotting states different volumes of river flow during each month); and the Klamath River Compact, OR. REV. STAT. ANN. § 542.620, art. III (West 1957) (prioritizing different uses of water for purposes of permit applications and defining from where each state can take water geographically).

157. TEX. WATER CODE ANN. § 43.006, art. IV–VI (West 2008).

158. *See id.* at art. IV(b) (“New Mexico shall have free and unrestricted use of all waters originating in the drainage basin of Canadian River in New Mexico below Conchas Dam, provided that the amount of conservation storage in New Mexico available for impounding these waters which originate in the drainage basin of Canadian River below Conchas Dam shall be limited to an aggregate of two hundred thousand (200,000) acre-feet.”).

159. *Id.* at art. V. However, the Compact is slightly more complex than described above:

Until more than three hundred thousand (300,000) acre-feet of conservation storage shall be provided in Oklahoma . . . the right of Texas to retain water in conservation storage . . . shall be limited to five hundred thousand (500,000) acre-feet; thereafter the right of Texas to impound and retain such waters in storage shall be limited to an aggregate quantity equal to two hundred thousand (200,000) acre-feet . . .

Id. at art. V(b).

160. *Id.* at art. VI.

161. *See supra* notes 157–160 and accompanying text. If the river ran dry completely, it seems likely that the Compact would be rendered meaningless: states would not be concerned

In this situation, could Texas and Oklahoma argue that CRC performance is impracticable? Dissolving the CRC would be in Texas's and Oklahoma's best interests, as it would enable them to have stronger claims to the dwindling water supply by rendering the dormant Commerce Clause applicable to New Mexico law. However, the CRC merely caps Texas's uses of the river at 500,000 acre-feet of water; it does not guarantee Texas that much.¹⁶² Nor does the CRC obligate each state to take the specified amounts of water.¹⁶³ In light of the permissiveness of these allocations, a claim of impracticability might not succeed. Considering the CRC's purpose of "promot[ing] interstate comity,"¹⁶⁴ however, Texas and Oklahoma could argue that the parties' ability to specifically "promote interstate comity" is destroyed by the drought, thereby rendering the compact impracticable. Examining the CRC holistically, and taking all relevant provisions into consideration, would give the states a very strong claim that compact performance has been rendered impracticable.

Compacts that allocate water with percentages, on the other hand, are less likely to be subject to a valid impracticability defense. As long as there is some water present, that water can be divided up by percentage. For instance, the Belle Fourche River Compact allocates ninety percent of the Belle Fourche River to South Dakota and the remaining ten percent to Wyoming.¹⁶⁵ Even if the river were reduced to a meager flow, ninety percent of that flow could still be apportioned to South Dakota and ten percent to Wyoming. Unless a river completely dries up, it is unlikely that, for compacts that distribute water based on percentages, the first element of an event rendering compact performance impracticable would ever be satisfied.

2. *The Event Is Contrary to a Basic Assumption on Which the Contract Was Made*

The second element in an impracticability defense is the occurrence of an event so contrary to a basic assumption on which the contract was made that it renders performance impracticable.¹⁶⁶ For example, when entering

with vindicating their rights under the Compact, but rather with obtaining alternate sources of water. Accordingly, the doctrine of impracticability would most likely be inapplicable in such circumstances.

162. See *supra* note 159 and accompanying text.

163. See *supra* notes 157–160 and accompanying text. The Compact merely gives each state the right, not the obligation, to take its allotted amount of water.

164. TEX. WATER CODE ANN. § 43.006, art. I (West 2008).

165. See *supra* note 109 and accompanying text.

166. RESTATEMENT (SECOND) OF CONTRACTS § 261 (1981).

into a contract to sell wheat, parties are assuming that the field of wheat will not be destroyed by fire or flood.¹⁶⁷

The existence of a body of water with a certain level of flow constitutes a basic assumption on which every interstate water compact is made; the river is essential for the compact's performance.¹⁶⁸ Although it seems unlikely that a drought would reduce a river to a mere dry riverbed, water shortages could reduce the quantity of water flowing through a river such that sharing that river's resources becomes nearly impossible.¹⁶⁹

3. *Neither Party Is Responsible for the Event's Occurrence*

To satisfy the third element, the event must occur without fault by either party. If one party is at fault, nonperformance will constitute a breach of contract.¹⁷⁰ Within the water compact context, a naturally occurring event, such as a drought, is not the fault of any state. One could argue, however, that certain state actions contributed to global warming, which in turn induced the drought.¹⁷¹ This connection, however, would likely be too tenuous to merit a successful breach claim. One could also argue that, by using the river, states contributed to the drought.¹⁷² This argument could be difficult to prove, but not impossible, especially in light of the fact that some compacts require states to monitor water levels.¹⁷³

4. *Unforeseeability*

Finally, the event rendering the contract impracticable must be unforeseeable, meaning that neither party assumed the risk of this event occurring.¹⁷⁴ By entering into an interstate compact, states may implicitly acknowledge that a risk of water shortages may exist in the future, regardless of whether or not they expressly address the potential for droughts.

167. *Id.* at cmt. d.

168. *Id.* at cmt. b.

169. *See, e.g.,* Wines, *supra* note 3, at A1 (describing the Colorado River, "once broad and blue," as having "dwindled to a murky trickle").

170. RESTATEMENT (SECOND) OF CONTRACTS § 261, cmt. d (1981).

171. *See, e.g.,* Complaint at 3–4, *Blades v. California*, No. CGC 11-510725 (S.F. Super. Ct. May 4, 2011) (arguing that California has failed to protect its atmosphere from greenhouse gas pollution); *see also* Ari Phillips, *College Student Sues Alaska over Climate Change*, CLIMATEPROGRESS (October 4, 2013), <http://thinkprogress.org/climate/2013/10/04/2726421/student-sue-alaska-climate-change/>.

172. While states have sued each other over failures to comply with compact requirements during times of drought, thereby exacerbating their own water shortages, the author is unaware of any suits where one state accused another of causing a drought.

173. *See, e.g.,* TEX. WATER CODE ANN. § 42.010, art. VI (West 2008).

174. *See* RESTATEMENT (SECOND) OF CONTRACTS § 261, cmt. b (1981) ("The fact that the event was foreseeable, or even foreseen, does not necessarily compel a conclusion that its non-occurrence was not a basic assumption.").

Some states explicitly address the possibility of water shortages by including express contingencies for how to allocate water during times of drought.¹⁷⁵ By acknowledging a risk's existence and taking steps to mitigate that risk, states essentially admit that the risk was foreseeable. Accordingly, states that expressly address contingencies for times of drought may eliminate the contract defense of impracticability.¹⁷⁶ Without expressing clear steps to take in times of water shortages, interstate compacts are in a grey zone: If the compact fails to mention droughts at all, then any drought could be considered an unforeseen risk. If the compact does mention droughts, parties may have only foreseen typical droughts at the time of drafting, not the potentially extreme droughts caused by climate change.¹⁷⁷ Therefore, climate-change-induced droughts could be considered an unforeseen risk.

B. Frustration of Purpose

For a successful claim of frustration of purpose, the purpose that is frustrated must be “the basis of the contract that, as both parties understand, without it the transaction would make little sense.”¹⁷⁸ Every interstate water compact describes the principle purpose of the compact at the beginning of the document.¹⁷⁹ Most, if not all, interstate water compacts that allocate water describe the following purposes: to promote interstate comity, to remove all causes of present and future controversy between states, and to provide for an equitable apportionment of the source of water.¹⁸⁰ Many others also include the goal of facilitating development within and between

175. See, e.g., Bear River Compact, Pub. L. No. 96-189, 94 Stat. 4, art. IV(A) (1980) (“When there is a water emergency, as hereinafter defined for each division, water shall be distributed therein as provided below.”).

176. See *supra* Part II.A.4 (describing the fourth element of the impracticability defense as unforeseeability).

177. See generally Daniel Yergin, *The History of Climate Change: From Glaciers to Global Warming* (Jan. 14, 2014, 12:20 AM), <http://danielyergin.com/history-of-climate-change/> (describing the history of climate change science and the relatively recent acceptance of climate change as a phenomenon); see also ANDERSON ET AL., *supra* note 7, at 44.

178. RESTATEMENT (SECOND) OF CONTRACTS § 265, cmt. a (1981).

179. See, e.g., La Plata River Compact, COLO. REV. STAT. ANN. § 37-63-101 (West 2004) (“The State of Colorado and the State of New Mexico, desiring to provide for the equitable distribution of the waters of the La Plata River and to remove all causes of present and future controversy between them with respect thereto, and being moved by considerations of interstate comity . . . have resolved to conclude a compact for these purposes”); Rio Grande Compact, TEX. WATER CODE ANN. § 41.009 (West 2008) (“The State of Colorado, the State of New Mexico, and the State of Texas, desiring to remove all causes of present and future controversy among these States and between citizens of one of these States and citizens of another State . . . and being moved by considerations of interstate comity, and for the purpose of effecting an equitable apportionment of such waters, have resolved to conclude a Compact for the attainment of these purposes”); South Platte River Compact, COLO. REV. STAT. ANN. § 37-65-101 (West 2004) (same).

180. See *supra* note 179.

the states.¹⁸¹ Returning to the CRC scenario, if a drought reduced the river water level so that only 300,000 acre-feet of water flowed through New Mexico, enabling New Mexico to obtain its full 200,000 acre-feet apportionment, but left Texas and Oklahoma with less water than provided for in the CRC, equitable apportionment would be thwarted. Allowing New Mexico 200,000 acre-feet of water and Texas 100,000 could arguably be considered equitable, but leaving nothing for Oklahoma is inherently inequitable. Moreover, such a scenario would likely cause disputes between the parties, thereby destroying interstate comity and initiating controversy.

As for the second element, the *Restatement (Second) of Contracts* states that the frustration must be substantial: “It is not enough that the transaction has become less profitable for the affected party or even that he will sustain a loss. The frustration must be so severe that it is not fairly to be regarded as within the risks that he assumed under the contract.”¹⁸² In their present form, most compacts do not provide for contingencies in case of drought-like scenarios. Accordingly, left with little flexibility, such a drought as described above would substantially frustrate the compact’s main purposes, thus satisfying this element.

The remaining elements of the frustration of purpose doctrine—without the fault of either party and contrary to a basic assumption on which the contract was made—are the same as the elements of impracticability previously described.¹⁸³

C. Viability of the Doctrines

In a severe drought, a frustration of purpose claim is more likely to succeed in court than impracticability.¹⁸⁴ In the rare case that a body of water is completely depleted, states likely would not pursue an attempt to dis-

181. See, e.g., Sabine River Compact, TEX. WATER CODE ANN. § 44.010 (West 2008). The Compact states:

The major purposes of this Compact are to provide for an equitable apportionment between the States of Louisiana and Texas of the waters of the Sabine River and its tributaries . . . to encourage the development, conservation and utilization of the water resources of the Sabine River and its tributaries; and to establish a basis for cooperative planning and action by the States for the construction, operation and maintenance of projects for water conservation and utilization purposes on that reach of the Sabine River touching both States, and for apportionment of the benefits therefrom.

Id.

182. RESTATEMENT (SECOND) OF CONTRACTS § 265, cmt. a (1981).

183. *Id.* §§ 261, 265; see also *supra* Parts II.A.2–3.

184. Cf. Schiff, *supra* note 140, at 148–52 (detailing the impracticability and frustration doctrines and noting the difficulty of applying the impracticability doctrine in water rights issues at a time of drought because “impracticability requires more than the failure of a basic assumption (or changed circumstances); the failure must not have been reasonably foreseeable at the time of contracting” but reasoning that frustration of purpose provides a “good argument”).

solve an interstate compact; instead, they likely would focus on finding alternative sources of water in what would be a very serious emergency. If states did attempt to dissolve the compact, however, it is likely that either doctrine would succeed.¹⁸⁵ In the more probable instance of a river's water levels being diminished but not eliminated, a frustration of purpose defense would most likely succeed, given the broad purposes the majority of compacts have and the frustration of those purposes caused by a diminished water supply.¹⁸⁶ The doctrine of impracticability, however, may work under more limited circumstances, such as if the compact allocated discrete amounts of water rather than percentages, provided, of course, that loss of those discrete amounts was unforeseeable.¹⁸⁷

D. Recommendations

A successful claim of impracticability or frustration of purpose brought in the wake of a drought would most likely result in dissolution of the compact in its entirety.¹⁸⁸ Compacts are complex agreements, filled with many obligations; they do not merely allocate water resources.¹⁸⁹ However, every provision in a compact relates in some way to the usage of water.¹⁹⁰ For example, many compacts facilitate the development of and collaboration on river-related projects.¹⁹¹ If flow were diminished significantly, these purposes might be thwarted and rendered impracticable in addition to rendering the allocation scheme impracticable. Accordingly, with a severe enough drought, striking down the entire compact might be necessary.¹⁹² In other cases, where only those provisions or purposes addressing

185. *Cf. id.* (noting that “[t]he value . . . of a perpetual treaty purporting to divide fairly the waters of shared streams is nil when the treaty proves to be an unequal allocator”).

186. *See supra* note 184.

187. *Cf. Schiff, supra* note 140, at 148 (explaining that a “party’s performance is made impracticable without his fault by the occurrence of an event the non-occurrence of which was a basic assumption on which the contract was made” (quoting RESTATEMENT (SECOND) OF CONTRACTS § 261 (1979))).

188. A claim of impracticability or frustration of purpose would be more likely in a scenario where some but not all of the water is reduced in a water body, so it would be worth the states’ efforts to attempt to obtain control over the remaining water.

189. *See, e.g.,* Klamath River Basin Compact, OR. REV. STAT. ANN. § 542.620, art. VII (West 2013) (providing for pollution control in addition to managing the river’s use).

190. *See, e.g., id.*

191. *See, e.g.,* Republican River Compact, COLO. REV. STAT. ANN. § 37-67-101, art. VI–VII (West 2004) (facilitating development of storage reservoirs and other projects along the river); South Platte River Compact, COLO. REV. STAT. ANN. § 37-65-101, art. VI (West 2004) (permitting the future development of a canal along the river).

192. *Cf. State ex rel. Douglas v. Sporhase*, 329 N.W.2d 855, 856–57 (Neb. 1983) (severing “a portion of a statutory scheme for conservation and preservation of ground water[]” from the remainder of the statute upon performing the following test: “(1) Whether, when absent the invalid portions, a workable plan remains. (2) Whether the valid portions of an act can be enforced inde-

equitable division are rendered impracticable or frustrated, it seems more likely that specific portions of the compact would be struck down while others would remain.¹⁹³

Whether the whole or only part of a compact is struck down, the water allocated would most likely revert to its precompact legal status. Thus, any state laws that remained after dissolution of the compact would be subject to dormant Commerce Clause limitations per *Sporhase*.¹⁹⁴ The *Sporhase* Court's note that shortages could justify acts that would otherwise be prohibited by the Commerce Clause, however, implies otherwise¹⁹⁵—that in times of drought, for example, each state could limit distribution of its water sources to the detriment of other states. Therefore, it would be in the best interests of downstream states to preserve the compact's allocation schemes in order to ensure they are entitled to some water. Otherwise, they would risk being guaranteed no water at all.

If states want to prevent the voiding of water allocation provisions and preserve compacts, they must amend compacts in order to take into account the possibility of extreme drought scenarios.¹⁹⁶ In order to preserve compacts in the face of severe water shortages, states should draft compact provisions in order to undermine claims of impracticability and frustration of purpose in times of water shortages¹⁹⁷ by amending compacts to allocate water based on percentages,¹⁹⁸ defining the purposes of compacts more narrowly,¹⁹⁹ and including emergency provisions.²⁰⁰ Additionally, states could benefit from a complete overhaul of their compacts in order to reflect current data on river levels, water consumption demands, and increased flexibility.²⁰¹

pendently, and where the invalid portions do not constitute such an inducement to the valid parts that the valid parts would not have passed without the invalid parts. (3) Whether the severance will do violence to the intent of the Legislature. (4) Whether a declaration of separability is included in the act, indicating that the Legislature would have enacted the bill absent the invalid portion.”).

193. *Id.*

194. *See supra* Part I.B.

195. *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941, 956 (1982); *see also supra* notes 88–91 and accompanying text.

196. *See Tarrant Reg'l Water Dist. v. Herrmann*, 133 S. Ct. 2120, 2130 (2013) (explaining that parties can account for many conditions that may occur under the compact, and courts will give deference to the express intentions of the parties: “[A]s with any contract, we begin by examining the express terms of the Compact as the best indication of the intent of the parties.”).

197. *See infra* Part II.D.1.

198. *See infra* Part II.D.1.

199. *See infra* Part II.D.2.

200. *See infra* Part II.D.3.

201. *See infra* Part II.D.4; *see also* Jenny Huang, Note, *Finding Flow: The Need for a Dynamic Approach to Water Allocation*, 81 N.Y.U. L. REV. 734, 765 (2006) (emphasizing the im-

1. *Percentage Allocations*

States should amend compacts to allocate water in terms of percentages, rather than in specific amounts. As discussed earlier, compacts that allocate specific amounts of water in terms of percentages are more likely to withstand claims of impracticability.²⁰² Percentage allocations ensure that an impracticability or frustration of purpose claim can never succeed:²⁰³ as long as the river has some water remaining, a percentage of that water can be delivered to each state.

2. *Define Compacts' Purposes with More Precision*

As discussed above, successful claims of frustration of purpose require the frustration of a fundamental purpose of the compact—so fundamental that, without that purpose, the compact's transaction is nonsensical.²⁰⁴ Most water compacts define their main purposes quite generally, aiming to: promote interstate comity, remove sources of controversy between states, and provide for an equitable apportionment of the source of water.²⁰⁵ As documented in regions around the world, water scarcity can foster conflict.²⁰⁶ Accordingly, the purpose of preserving interstate comity could be easily frustrated by a water shortage.²⁰⁷

If the compacts' purposes were defined with more precision than merely preventing controversy, a water shortage would be less likely to bring the entire compact to its knees. Narrowing the purpose of compacts would enable the preservation of certain compact provisions; only those purposes threatened by a water shortage would be vulnerable. For instance, the La Plata River Compact's purpose is "to provide for the equitable distribution of the waters of the La Plata River and to remove all causes of present and future controversy between" New Mexico and Colorado.²⁰⁸ Because this purpose is so broad, many events could be said to frustrate the La Plata River Compact's purpose.

The solution to this problem depends, of course, on each compact's contents. If the compact primarily aims to equitably apportion waters, the

portance of flexibility in interstate water compacts); Grant, *supra* note 103, at 109–20 (2003) (describing several instances where fixed compact terms rendered compacts unworkable).

202. See *supra* Part II.A.1.

203. See *supra* Part II.A.1.

204. RESTATEMENT (SECOND) OF CONTRACTS § 265, cmt. a (1981).

205. See *supra* notes 179–181 and accompanying text.

206. See, e.g., *Water Conflict Chronology List*, PACIFIC INST., <http://www.worldwater.org/conflict/list/> (last visited May 2, 2014) (summarizing global water conflicts dating back to as early as 3,000 B.C. through 2012).

207. See *supra* note 180 and accompanying text (showing examples of compacts that include or emphasize the purpose of promoting interstate comity).

208. La Plata River Compact, COLO. REV. STAT. ANN. § 37-63-101 (West 2004).

compact's purpose language should be drafted so that conflicts between the states will not have the potential of voiding the compact. Conversely, if a compact contains various provisions that equitably apportion the river's waters, manage hydrologic projects such as dams, and control flooding, the compact could be redrafted with several separate purposes; or parties could effectively create several mini-compacts within the larger compact. The Klamath River Basin Compact is a good prototype because it divides the compact's purposes into two groups:

A. To facilitate and promote the orderly, integrated and comprehensive development, use, conservation and control thereof for various purposes, including, among others: The use of water for domestic purposes; the development of lands by irrigation and other means; the protection and enhancement of fish, wildlife and recreational resources; the use of water for industrial purposes and hydroelectric power production; and the use and control of water for navigation and flood prevention.

B. To further intergovernmental cooperation and comity with respect to these resources and programs for their use and development and to remove causes of present and future controversies by providing (1) for equitable distribution and use of water among the two states and the Federal Government, (2) for preferential rights to the use of water after the effective date of this compact for the anticipated ultimate requirements for domestic and irrigation purposes in the Upper Klamath River Basin in Oregon and California . . .²⁰⁹

This compact is drafted with each purpose served by specific portions of the compact.²¹⁰ Accordingly, if a water shortage frustrated purposes under Section B of the Klamath River Basin Compact, those provisions could be struck down while the others would be preserved.

3. *Emergency Provisions*

To avoid threats to interstate water compacts during droughts, states should amend their compacts to include emergency provisions. In general, emergency provisions set out procedures for what to do in extreme drought situations.²¹¹ Such provisions are crucial for the preservation of compacts. Some existing compacts include provisions that, although not formally

209. Klamath River Basin Compact, OR. REV. STAT. ANN. § 542.620, art. I (West 2013).

210. *Id.* at arts. III–IX. Article III of the Compact governs the general distribution and use of water; Article IV governs hydroelectric power; Article V governs interstate diversion and storage rights; Article VI governs acquisition of property for storage and diversion; Article VII governs pollution control; and Article IX governs administration of the Compact's provisions. *Id.*

211. *See, e.g.*, Bear River Compact, Pub. L. No. 96-189, 94 Stat. 4, art. IV (1980).

called emergency provisions, describe steps to take in drought situations.²¹² Some compacts empower state engineers²¹³ or a compact's administrative body to determine that a water emergency exists and decide on the appropriate actions.²¹⁴ For instance, the Susquehanna River Basin Compact empowers the Susquehanna River Basin Compact Commission²¹⁵ to declare a drought emergency in a specific area and "direct increases or decreases in allocations, diversions, or releases previously granted or required, for a limited time to meet the emergency condition."²¹⁶

The Bear River Compact, which divides the river into geographic regions for allocation purposes,²¹⁷ goes even further. In addition to granting the administrative body the authority to declare that a water emergency exists, the compact defines specific conditions in each region that constitute a water emergency.²¹⁸ Moreover, the compact sets out precise actions to be taken in each region to best manage that water emergency.²¹⁹ Additionally, the Bear River Compact enables water users to petition the Bear River Compact Commission to find that a water emergency exists based on depri-

212. *Id.*

213. *See, e.g.*, La Plata River Compact, COLO. REV. STAT. ANN. § 37-63-101, art. III (West 2004) ("The State Engineers of the States by agreement, from time to time, may formulate rules and regulations for carrying out the provisions of this compact, which, when signed and promulgated by them, shall be binding until amended by agreement between them or until terminated by written notice from one to the other.").

214. *See, e.g.*, Arkansas River Compact, COLO. REV. STAT. ANN. § 37-69-101, art. V(F) (West 2004)(permitting the compact administrators to take steps to conserve water if the water in the conservation pool "will be or is liable to be exhausted"); Bear River Compact, Pub. L. 96-189, 94 Stat. 4, art. IV.B (1980)("The Commission shall have authority upon its own motion (1) to declare a water emergency in any or all river divisions based upon its determination that there are diversions which violate this Compact and which encroach upon water rights in a lower State, (2) to make appropriate orders to prevent such encroachments, and (3) to enforce such orders by action before State administrative officials or by court proceedings.").

215. The Susquehanna River Basin Compact Commission is responsible with carrying out the compact. Susquehanna River Basin Compact, MD. CODE. ANN. ENVIR., § 5-301, art. 3 (West 2013).

216. *Id.* at art. 11.4(a). The Code states:

In the event of a drought which may cause an actual and immediate shortage of available water supply within the basin . . . the commission after public hearing, upon due notice given, may determine and delineate the area of the shortage and by unanimous vote declare a drought emergency therein. For the duration of the drought emergency as determined by the commission, it thereupon may direct increases or decreases in any allocations, diversions, or releases previously granted or required, for a limited time to meet the emergency condition.

Id.

217. Pub. L. No. 96-189, 94 Stat. 4, art. II (1980) (dividing the river into the Upper, Central, and Lower Divisions of the Bear River).

218. *See, e.g., id.* at art. IV (noting that the "Upper Division" of the river is in a state of emergency when the "divertible flow . . . for the upper division is less than 1,250 second-feet").

219. *Id.* For instance, the Compact dictates specific allocations for tributaries in the Upper Division of the river. *Id.*

vations of water to which that user is “justly entitled” and request remedial water supplies.²²⁰ Upon determining if such an emergency does in fact exist, the Commission will establish water delivery schedules.²²¹ The Bear River Compact wisely provides several ways for a water emergency to be recognized and addressed, ensuring that all interested parties have a voice and minimizing the potential for disputes.²²² By establishing very specific procedures, the Compact also limits disputes over how to best manage a water emergency.²²³

The Kansas-Oklahoma Arkansas River Basin Compact takes a broader approach, giving the administrative body more discretion in dealing with water emergencies:

Recognizing the present limited uses of the available water supplies of the Arkansas River Basin in the two states and the uncertainties of their ultimate water needs, the States of Kansas and Oklahoma deem it imprudent and inadvisable to attempt at this time to make final allocations of the new conservation storage capacity which may ultimately be required in either state Accordingly, after the expiration of 25 years following the effective date of this Compact, [the Arkansas River Commission] may review any provisions of the Compact for the purpose of amending or supplementing the same²²⁴

The Kansas-Oklahoma Arkansas River Basin Compact explicitly deems none of the allocations made therein final, thereby ensuring flexibility in the future.²²⁵ However, the requirement that twenty-five years pass before any amendments are made could be problematic if drought conditions arise before those years have passed.

Drafting more specific water emergency provisions would lessen the probability that a state would threaten to use the compact’s termination clause. Most interstate water compacts include termination clauses, which permit the states to agree to dissolve the compact, sometimes preserving select obligations.²²⁶ While termination clauses can be helpful, they also have

220. *See id.* (“When the flow of water in an interstate tributary across a State boundary line is insufficient to satisfy water rights on such tributary in a lower State, any water user may file a petition with the Commission alleging that by reason of diversions in an upstream State he is being deprived of water to which he is justly entitled and that by reason thereof a water emergency exists, and requesting distribution of water under the direction of the Commission.”).

221. *Id.*

222. *See supra* notes 217–221 and accompanying text.

223. *See supra* notes 217–221 and accompanying text.

224. OKLA. STAT. ANN. Waters and Water Rights, § 1401, art. XII (West 2013).

225. *Id.*

226. *See, e.g.,* South Platte River Compact, COLO. REV. STAT. ANN. § 37-65-101, art. X (West 2004). The South Platte River Compact states:

the potential to produce additional controversy if both states do not agree to terminate the compact, especially if one state is claiming impracticability or frustration of purpose in a time of drought. The majority of termination clauses permit for the termination of a compact by the agreement of both signatory states.²²⁷ Other compacts, such as the Big Blue River Compact, are more specific by preserving some obligations while terminating others: “In the event of amendment or termination of the compact, the water-resource developments made in compliance with, and reliant upon, this compact shall continue unimpaired.”²²⁸

Compacts should adopt emergency provisions similar to those included in the Bear River Compact or the Arkansas River Compact previously discussed. Although the Arkansas River Compact method is sound, the Bear River Compact method is preferable: adopting extremely specific contingencies eliminates ambiguity and room for interpretation, thereby undermining any potential claims of impracticability and frustration of purpose in times of shortages.²²⁹ In fact, general precision throughout the entire compact, not just in emergency provisions, is superior in order to best

This compact may be modified or terminated at any time by mutual consent of the signatory States, but, if so terminated and Nebraska or its citizens shall seek to enforce any claims of vested rights in the waters of the South Platte River, the statutes of limitation shall not run in favor of Colorado or its citizens with reference to claims of the Western Irrigation District to the water of the South Platte River from the sixteenth day of April, 1916, and as to all other present claims from the date of the approval of this compact to the date of such termination, and the State of Colorado and its citizens who may be made defendants in any action brought for such purpose shall not be permitted to plead the statutes of limitation for such period of time.

Id.

227. *See, e.g.*, Kansas-Oklahoma Arkansas River Basin Compact, OKLA. STAT. ANN. Waters and Water Rights, § 1401, art. XII (West 2013) (“This Compact may be terminated at any time by the appropriate action of the legislatures of both signatory states.”); *see also* Arkansas River Compact, COLO. REV. STAT. ANN. § 37-69-101, art. IX (West 2004) (“This compact shall remain in effect until modified or terminated by unanimous action of the states and in the event of modification or termination all rights then established or recognized by this compact shall continue unimpaired.”); Bear River Compact, Pub. L. No. 96-189, 94 Stat. 4, art. XV (1980) (same); Belle Fourche River Compact, WYO. STAT. ANN. § 41-12-211 (West 2013) (same); Colorado River Compact, COLO. REV. STAT. ANN. § 41-12-301, art. X (West 2004) (same); Klamath River Basin Compact, OR. REV. STAT. ANN. § 542.620, art. XIV (West 2013) (same); and Pecos River Compact, TEX. WATER CODE ANN. § 42.010, art. IV (West 2008) (same).

228. Big Blue River Compact, KAN. STAT. ANN. § 82a-529, art. VII (West 2008).

229. For example, to render the Bear River Compact impracticable in a drought situation, an event would have to occur that prevented the administrative body from being able to declare the existence of a water emergency and prevent each region from undertaking the prescribed actions to mitigate the emergency. *See supra* notes 217–221 and accompanying text. If a compact has specific contingencies in place for times of shortages in lieu of a standard termination clause (that is—one that permits the dissolution of the compact), the compact will be much harder to nullify. States would have to argue that the emergency provisions are impracticable or frustrated, as opposed to merely agreeing to dissolve the compact.

preserve compacts: Specificity in contracting is more easily upheld in court.²³⁰

If a compact is silent on an issue or if the compact's language is ambiguous, courts will follow the well-accepted rules of contract interpretation: Interstate compacts remain "legal document[s] that must be construed and applied in accordance with [their] terms."²³¹ Courts will look first to the compact's specific terms, and then examine the parties' intent and expectations to the extent that the compact's express terms are ambiguous.²³² Courts will only follow such interpretation schemes to the extent that they do not read absent terms into a compact.²³³ Accordingly, adopting extremely specific provisions leaves less room for interpretation and disagreement among the parties and within the courts. Adopting specific emergency provisions preserves compacts when disputes over compact interpretation are most likely, and when compact preservation is most needed.

4. Amend Compacts in Light of Changed Circumstances

Aside from the inability to withstand periods of water scarcity, critics have noted many general problems with compacts, namely their inherent inflexibility.²³⁴ There are three main criticisms of compacts.

First, because some compacts were drafted over ninety years ago,²³⁵ they are outdated and no longer rely on accurate data.²³⁶ The passage of time, depletion of water sources, plus the increasing uncertainty of climate change's impacts on water supplies renders many aspects of interstate com-

230. See, e.g., Henry W. Humble, *Certainty in Contracts*, 20 KY. L.J. 120, 121, 127 (1931) ("Though an agreement may be void at the outset by reason of some element of uncertainty in it, the agreement may become binding when the uncertain element has been rendered certain.").

231. *Texas v. New Mexico (Texas II)*, 482 U.S. 124, 128 (1987).

232. *Tarrant Reg'l Water Dist. v. Herrmann*, 133 S. Ct. 2120, 2130 (2013).

233. See *Alabama v. North Carolina*, 560 U.S. 330, 352 (2010) (expressing reluctance "to read absent terms into an interstate compact" as this would raise federalism and separation of powers concerns). Applying the same rationale, the Court has refused to hold that an interstate compact includes an implied duty of good faith and fair dealing as such a holding would render judges "potent lawmakers." *Id.*

234. See Huang, *supra* note 201, at 747 (noting that "existing water allocation solutions fail to account for changed circumstances, rely on inadequate ex post dispute resolution mechanisms, and create institutions with minimal flexibility and authority"). Furthermore, "reliance on fixed allocation formulas is misplaced, and depending on dispute resolution mechanisms to enforce or adjust these fixed allocations is an ineffective alternative." *Id.* at 765.

235. For instance, the Colorado River Compact was ratified by Congress in 1921. COLO. REV. STAT. ANN. § 37-61-101 (West 2004).

236. See Christina Hoffman & Sandra Zellmer, *Assessing Institutional Ability to Support Adaptive, Integrated Water Resources Management*, 91 NEB. L. REV. 805, 806 (2013) ("In many ways, resource management institutions in the United States and throughout the world have become 'prisoners of history' which embody past rather than present, much less future, knowledge and necessity.").

pacts outmoded.²³⁷ Moreover, no matter how specific a water compact's provisions are, a drafter can never account for all possible circumstances that may arise.²³⁸

Second, many critics have noted that compacts are too specific, putting "too much emphasis on one-time allocations despite warnings that imposing hard and fast rules unnecessarily burdens the ability to adapt to future changes in water conditions."²³⁹ Compacts are "limited in scope and oriented to specific problems rather than holistic water management of the basin's water."²⁴⁰

Finally, many critics have noted that compacts' dispute resolution mechanisms are inadequate²⁴¹ due to a lack of technical expertise²⁴² and the fact that the permanence of a compact implies a lack of ability to adapt to new circumstances.²⁴³

These drafting limitations, combined with inadequate administrative machinery and dispute resolution mechanisms, have imprisoned compacts

237. See, e.g., *id.* at 806–07 (noting the many changes that have occurred since most interstate water compacts were drafted).

238. See Huang, *supra* note 201, at 748 (noting that it is difficult to draft compacts "comprehensively to predict future conditions"); see also Grant, *supra* note 103, at 108 ("Even if the measures fulfill demands for a time, they may fail after decades of further changes, some now foreseeable and others surely not. And even in the shorter term, the social, political, and economic costs of coping with outdated compact allocations may become inordinate from any perspective other than that of a state advantaged by an old compact.").

239. Huang, *supra* note 201, at 734–35; see also, Ernest A. Engelbert, *Federalism and Water Resources Development*, 22 LAW & CONTEMP. PROBS. 325, 341 (1957) ("The chief weakness of [interstate] compacts has been that they have negotiated agreements too precisely and in too much detail, without sufficient information and study of the problems involved.").

240. Draper, *supra* note 1, at 377.

241. See Engelbert, *supra* note 239, at 341 ("Moreover, compacts have not provided the proper kind of administrative machinery to deal with the evolving problems of a basin.").

242. Huang, *supra* note 201, at 751.

243. See *id.* at 752 ("The second reason that dispute and litigation mechanisms are flawed stems from the fact that interstate compacts and international treaties are essentially contracts, and the role of any adjudicator is to enforce the promises made by the parties to the contract. In situations where the parties could not predict the consequences of their agreement, unaware of future developments in water resources, enforcement of these agreements is an imperfect solution."); see also Girardot, *supra* note 103, at 159–60 (attributing a compact's disputes to a failure "to foresee that an issue where [the signatory states] could not reach agreement would arise"); Grant, *supra* note 103, at 108–09 ("At the root of the inquiry is the widely held view that interstate compacts—not only water allocation compacts but compacts in general—are characterized by their permanence. According to the conventional wisdom, a signatory state to a compact cannot unilaterally modify its obligations or withdraw from the compact unless the compact expressly so provides. No western water allocation compact expressly provides for that. When western states negotiated their compacts, they sought permanent water allocations to encourage the private and governmental investments needed to put water to use for economic development within their borders. Some compacts even declare that termination requires unanimous agreement of the signatory states and that all rights established under the compact will continue unimpaired upon termination, though established rights probably would continue without such language.").

in outmoded provisions²⁴⁴ and rendered them inflexible and unable to withstand the test of time. Accordingly, compacts could benefit from a complete redrafting that would take into account changed and changing circumstances. Several solutions have been proposed by interstate compact analysts, including adaptive management,²⁴⁵ joint management institutions,²⁴⁶ and completely withdrawing from compacts.²⁴⁷ Regardless of the specific solution chosen, compacts should be redrafted in a manner that shifts “the focus from allocation formulas that assume a static water supply to creating procedures that allow for ongoing development of changing water resources.”²⁴⁸ Moreover, the science behind apportionments should be reevaluated to take into account current water use trends as well as predicted future water supplies. Building flexibility into compacts is crucial for

244. See *supra* notes 235–238 and accompanying text.

245. See Hoffman & Zellmer, *supra* note 236, at 828 (defining adaptive management concepts). Adaptive management is “the idea of using experimentation and monitoring to inform management actions . . . [or] strategic learning-by-doing or quasi-experimental approach to the management of natural resources encouraged by institutional flexibility.” *Id.* (internal quotation marks omitted). However, adaptive management of interstate compacts poses its own challenges:

If adaptive, integrated management of surface and groundwater resources is indeed a way forward in managing complex water resource systems, can water resource institutions embrace flexibility and adaptation while maintaining the stability associated with existing legal frameworks and investment-backed expectations? Such a balance will require resource managers to identify and understand the problems faced by the social-ecologically linked system and to calibrate their strategies to address those problems, while ensuring accountability and enforceability, promoting focused learning that seeks and takes advantage of feedback loops, and securing sufficient funding for present future actions.

Id. at 807–08.

246. Huang, *supra* note 201, at 754. The author proposes replacing compact administration bodies with joint management institutions that provide expert administration over these issues and describes two requirements for any joint management institution to provide a dynamic approach to water allocation:

First, a joint management institution must have the authority to make allocation decisions that are responsive to changing circumstances and emergent knowledge about water conditions, unlike existing water commissions that are not given any power to alter original allocations. Second, joint management institutions must be structured to manage any water projects that have the potential to harm the water system as a whole, rather than being limited to water issues that physically cross borders.

Id.

247. Grant, *supra* note 103, at 179–80 (explaining that a state that is dissatisfied with an old water allocation compact can revoke its ratification of the compact and seek a better allocation by showing, “first, that the reserved powers doctrine applies to water allocation compacts and, second, that a state’s power under this doctrine to revoke its ratification is unaffected by either the ‘law of the case’ doctrine or the ‘law of the Union’ doctrine.”).

248. Huang, *supra* note 201, at 765.

their long-term viability and ability to survive disputes and changing conditions.²⁴⁹

III. CONCLUSION

Congressional approval of interstate water compacts essentially eliminates any Commerce Clause restrictions on water exportation limits, thereby increasing states' opportunities to obtain more water than they would otherwise be able to obtain without the interstate compact.²⁵⁰ Accordingly, states should work to preserve, not nullify, their interstate water compacts in order to maximize their future water supplies.²⁵¹ Although interstate compacts are not perfect and often lead to disputes, in the case of a serious deprivation of water, states would be best served by ensuring their citizens have adequate access to water. In order to buffer compacts against potential threats, such as the contract doctrines of impracticability and frustration of purpose, states should modify their compacts. To ensure the viability of compacts for the future, states should amend their agreements to allocate water by percentages rather than specific amounts,²⁵² define the purposes of interstate compacts with more precision,²⁵³ adopt detailed emergency provisions,²⁵⁴ and amend compacts in light of new data to reflect current conditions.²⁵⁵

249. See, e.g., Hoffman & Zellmer, *supra* note 236, at 806 (“Institutions that embrace flexibility, as well as the ability to cope with change, will be essential in managing the water resource challenges that face our country.”).

250. See *supra* Part I.B.2.

251. See *supra* Part II.

252. See *supra* Part II.D.1.

253. See *supra* Part II.D.2.

254. See *supra* Part II.D.3.

255. See *supra* Part II.D.4.