

Chapter 11**Water Law in the Eastern United States:
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§ 11.01. Introduction.

Historically, water disputes have been common in the 17 western states and rare in the rest of the United States. The reason for this is pretty obvious:¹ in the 17 western states, water often was relatively scarce, and demand for water quickly outstripped supplies. In such a setting, legal disputes became endemic. The rest of the country was much more humid and locally available supplies of fresh water were nearly always greater than local demand. In such a setting, legal disputes over water were rare and never occurred except in response to a (usually localized) short-term drought.

Because of their differing experiences regarding water, different parts of the United States developed very different approaches to property rights

¹ See generally, Joseph W. Dellapenna, “Dual Systems,” 1 *Waters and Water Rights* ch. 8 (Robert E. Beck ed., repl. vol. 2001) [“Dellapenna, *Dual Systems*”]; Bernhard Grossfeld, “Geography and Law,” 82 *Mich. L. Rev.* 1510 (1984); Gregory J. Hobbs, Jr., “The Role of Climate in Shaping Western Water Institutions,” 7 *U. Denv. Water L. Rev.* 1 (2003).

relating to water. Riparian rights, predicated on treating waters as common property, evolved in the humid eastern states.² In contrast, the right to use water in the 17 western states came to be treated as private property under appropriative rights.³ Today, water in the eastern states is no longer plentiful relative to supply. First, there was a nine-fold increase *per capita* in consumptive uses of water throughout the United States between 1950 and 1980⁴ even while the population of the country was doubling. While there has been a small decline in the withdrawals of water since 1980 driven largely by the costs of treating wastewater required for compliance with the Clean Water Act,⁵ overall water use nationally remains (whether measured absolutely or on a *per capita* basis) at levels far higher than anywhere else in the world. At the same time, supplies of water available for use have contracted—initially because of pollution, although that is actually a declining problem, but more recently because of changing patterns of precipitation⁶ and because the increasing reservation of water from use in order to provide for ecological needs.⁷

² See generally, Joseph W. Dellapenna, “Introduction to Riparian Rights,” 1 *Waters and Water Rights* (Robert E. Beck ed., repl. vol. 2001), § 6.01(b)(1) [“Dellapenna, *Introduction*”]; Joseph W. Dellapenna, “The Right to Consume Water under ‘Pure’ Riparian Rights,” 1 *Waters and Water Rights* ch. 7 (Robert E. Beck ed., repl. vol. 2001) [“Dellapenna, “*Pure*” *Riparian Rights*”].

³ See generally, 2 *Waters and Water Rights* chs. 11-17 (Robert E. Beck ed., repl. vol. 2000)(written by several authors).

⁴ “War over Water: The Crisis of the ‘80s,” *U.S. News & World Rep.*, Oct. 31, 1983, at 57. On similar global patterns of changing demand for water, see Commission on Sustainable Development, *Comprehensive Assessment of the Fresh Water Resources of the World*, UN Doc. No. E/CN.17/1997/9 (1997); Marq de Villers, *Water: The Fate of Our Most Precious Resource* (2000); Peter H. Gleick *et al.*, *The World’s Water, 2004-2005: The Biennial Report on Freshwater Resources* (2005); Mark W. Rosegrant, Ximing Cai, and Sarah A. Cline, *World Water and Food to 2025: Dealing with Scarcity* (2002); Jeffrey Rothfeder, *Every Drop for Sale: Our Desperate Battle over Water in a World about to Run Out* (2001); UN Environmental Programme, *Global Environmental Outlook 3: Past, Present and Future Perspectives 151-210* (2002).

⁵ See *More People Using Less Water*, *Hydata: News & Views*, Nov. 1998, at 4.

⁶ Heejung Chang, Barry M. Evans, and Daniel R. Easterling, “The Effects of Climate Change on Stream Flow and Nutrient Loading,” 37 *J. Am. Water Resources Ass’n* 973

One result of these changes has been a sudden upsurge in litigation over water allocation in the eastern states even as western states have struggled to cope with the rigidities of the appropriative rights system. We have seen

(2001); Ashutosh S. Limaye *et al.*, “Macroscale Hydrologic Modeling for Regional Climate Assessment Studies in the Southeastern United States,” 37 *J. Am. Water Resources Ass’n* 709 (2001); Eugene Z. Stakhiv, “Policy Implications of Climate Change Impacts on Water Resources Management,” 1 *Water Pol’y* 159 (1998). *See also* Connie A. Woodhouse, “A Tree-Ring Reconstruction of Streamflow for the Colorado Front Range,” 37 *J. Am. Water Resources Ass’n* 561 (2001). *See generally* Robert H. Abrams, “Charting the Course of Riparianism: An Instrumentalist Theory of Change,” 35 *Wayne L. Rev.* 1381, 1405-1446 (1989); Joseph W. Dellapenna, “Adapting the Law of Water Management to Global Climate Change and Other Hydropolitical Stresses,” 35 *J. Am. Water Resources Ass’n* 1301 (1999); Harry F. Lins and Eugene Z. Stakhiv, “Managing the Nation’s Water in a Changing Climate?,” 34 *J. Am. Water Resources Ass’n* 1255 (1998).

⁷ Consider, for example, the turmoil created in the Klamath River Valley when a federal judge ordered long established water rights curtailed for the protection of endangered species. *See* Dep’t of Interior v. Klamath Water Users Protective Ass’n, 532 U.S. 1 (2001); Klamath Water Users Protective Ass’n v. Patterson, 204 F.3d 1206 (9th Cir. 1999), *amended*, 203 F.3d 1175 (9th Cir.), *cert. denied*, 531 U.S. 812 (2000); Tulare Lake Basin Water Storage Dist. v. United States, 49 Fed. Cl. 313 (2001); United States v. Adair, 187 F. Supp. 2d 1273 (D. Or. 2002); Kandra v. United States, 145 F. Supp. 2d 1192 (D. Or. 2001); Pac. Coast Fed’n of Fishermen’s Ass’ns v. U.S. Bureau of Reclamation, 138 F. Supp. 2d 1228 (N.D. Cal. 2001). *See generally* Roger E. Meiners and Lea-Rachel Kosnik, *Restoring Harmony in the Klamath Basin* (2003) (PERC Pol’y Ser. PS-27); Reed D. Benson, “Giving Suckers (and Salmon) an Even Break: Klamath Basin Water and the Endangered Species Act,” 15 *Tul. Envtl. L.J.* 197 (2002); Marcilynn A. Burke, “Klamath Farmers and Cappuccino Cowboys: The Rhetoric of the Endangered Species Act and Why It (Still) Matters,” 14 *Duke Envtl. L. & Pol’y J.* 441 (2004); Dow A. Davidson, Comment, “Who Wants Some Water: The Ongoing Battle for the Klamath River Basin and the Need for Moderate Institutional Change to End the War,” 34 *Cumb. L. Rev.* 531 (2004); Brittany K.T. Kauffman, Casenote, “What Remains of the Endangered Species Act and Western Water Rights after *Tulare Lake Basin Water Storage District v. United States*,” 74 *U. Colo. L. Rev.* 837 (2003); Matthew G. McHenry, Comment, “The Worst of Times: A Tale of Two Fishes in the Klamath River Basin,” 33 *Envtl. L.* 1019 (2003); Cari S. Parobek, Note, “Of Farmers’ ‘Takes and Fishes’ Takings: Fifth Amendment Compensation Claims when the Endangered Species Act and Western Water Rights Collide,” 27 *Harv. Envtl. L. Rev.* 177 (2003); Christine Swift, “Comment, Crises in the Klamath: New Considerations for Managing Water under the Endangered Species Act,” 22 *Temple Envtl. L. & Tech. J.* 65 (2003); Roy Whitehead Jr. and Walter Block, “Environmental Takings of Private Water Rights: The Case for Water Privatization,” 32 *Envtl. L. Rptr.* 11162 (2002).

courts seeking to apply riparian rights to rival claims of two communities in Connecticut⁸ and to resolve challenges to a Corps of Engineers permit to divert water from a reservoir for use by the City of Virginia Beach,⁹ a major interstate dispute between Alabama, Florida, and Georgia over the waters of two transboundary river basins,¹⁰ and the felt need to rewrite the agreements that determine water usage in the vast Great Lakes basin.¹¹ These and other disputes demonstrate that the factual premises of eastern water law no longer apply.

The sudden prospect of courts frequently applying riparian rights and having to supervise the use of water resources on a long-term basis have brought home the inadequacies of that system of law. Under common property systems like riparian rights, co-owners are left to their individual judgment to decide whether, when, and how to use the resource.¹² Each owner receives the full benefit of any added use, while the cost of the benefit is spread over all owners. Garrett Hardin explained 37 years ago that when a common property system approaches the carrying capacity of the resource, a “tragedy of the commons” ensues.¹³ Acting purely rationally, each co-owner continues to place ever greater demands on the resource even as it

⁸ City of Waterbury v. Town of Washington, 800 A.2d 1102, 1147-60 (Conn. 2002).

⁹ North Carolina v. FERC, 112 F.3d 1175 (4th Cir. 1997), *cert. denied*, 522 U.S. 1108 (1998); Roanoke River Basin Ass’n v. Hudson, 940 F.2d 58 (D.C. Cir. 1991), *cert. denied*, 502 U.S. 1092 (1992), *attorney’s fees denied*, 991 F.2d 132 (4th Cir.), *cert. denied*, 510 U.S. 864 (1993); North Carolina v. City of Virginia Beach, 882 F. Supp. 77 (E.D.N.C. 1997), vacated mem., 1998 WL 34069374 (4th Cir. 1998).

¹⁰ Georgia v. Corps of Eng’rs, 302 F.3d 1242 (11th Cir. 2002), *on remand*, 223 F.R.D. 691 (N.D. Ga. 2004); Southwest Fed. Power Customers, Inc. v. Caldera, 301 F. Supp. 2d 26 (D.D.C. 2004).

¹¹ See Gary Ballestros, “Great Lakes Water Exports and Diversions: Annex 2001 and the Looming Environmental Battle,” 32 *Env’tl. L. Rptr.* 10611 (2002); Brad A. Everhardt, Comment, “Great Lakes Water Resources: Planning for the Nation’s Future,” 3 *Tol. J. Great Lakes’ L. Sci. & Pol’y* 90 (2001); Jerome Hinkle, “Troubled Waters: Policy and Action in the Great Lakes,” 20 *T.M. Cooley L. Rev.* 281, 306-10 (2003); Sandra Zellmer, David Gecas, and Kori Anne Mann, “The Improvement of Water and Water-Dependent Resources under the Great Lakes Charter Annex,” 4 *Tol. J. Great Lakes’ L. Sci. & Pol’y* 289 (2002).

¹² Dellapenna, “Pure” Riparian Rights, *supra* note 2, §§ 7.02 to 7.03(e).

¹³ Garret Hardin, “The Tragedy of the Commons,” 162 *Sci.* 1243 (1968). See also *Managing the Commons* (2nd ed. Garrett Hardin and John A. Baden eds. 1977).

is exhausted, if only because other co-owners are doing likewise. Adding demand is the only way to appropriate a share of a resource being grabbed by all. The many actual examples include the exhaustion of fisheries in the high seas, national park access, and even the Federal treasury.¹⁴

Just as with other common property systems, riparian rights leads to the tragedy of the commons as demand approaches the available supply. The resulting pressures on waters within the boundaries of about half of the eastern states have already forced them to abandon or to modify radically the system of riparian rights evolved on the assumption of permanent surpluses. These states have not, however, simply imported appropriative rights to solve these problems. Western states have struggled to find legal devices for introducing flexibility into a system the major effect of which was to freeze uses in place.¹⁵ Rather, eastern states have evolved a new system of

¹⁴ See, e.g., Joseph L. Sax, *Mountains Without Handrails* (1980)(national parks); Rodney D. Fort and John Baden, "The Federal Treasury as a Common Pool Resource and the Development of a Federal Bureaucracy," *Bureaucracy vs. Environment* 9 (John Baden and Richard L. Stroup eds. 1981); Kristen M. Fletcher, "When Economics and Conservation Clash: Challenges to Economic Analysis in Fisheries Management," 31 *Envtl. L. Rptr.* 11168 (2001); Seth Macinko and Daniel W. Bromley, "Changing Tides in Ocean Management: Property and Fisheries for the Twenty-First Century: Seeking Coherence from Legal and Economic Doctrine," 28 *Vt. L. Rev.* 623 (2004); Ronald D. Fischer and Leonard J. Mirman, "The Compleat Fish Wars: Biological and Dynamic Interactions," 30 *J. Env'tl. Econ. & Mgmt.* 34 (1996); Patrick A. Nickler, "A Tragedy of the Commons in Coastal Fisheries: Contending Prescriptions for Conservation and the Case of the Atlantic Bluefin Tuna," 26 *B.C. Env't'l Aff. L. Rev.* 549 (1999).

¹⁵ See, e.g., Michael C. Blumm, "Seven Myths of Northwest Water Law and Associated Stories," 26 *Env'tl. L.* 141, 145-46 (1996); Eric L. Garner and Janice L. Weis, "Water Management Options for the Future," *The Natural Resources Law Manual* 330 (Richard J. Fink ed. 1995); Thomas J. Graff and David Yardas, "Reforming Western Water Policy: Markets and Regulation," 12 *Nat. Resources & Env't.*, 165 (1998); Helen M. Ingram, "Lessons Learned and Recommendations for Coping with Future Scarcity," 39 *Nat. Resources J.* 179 (1999); Lawrence J. MacDonnell and Teresa A. Rice, "Moving Agricultural Water to the Cities: The Search for Smarter Approaches," 2 *Hastings W.-Nw. J. Env'tl. L. & Pol'y* 27 (1994); Janet C. Neuman, "Adaptive Management: How the Water Law Needs to Change," 31 *Env'tl. L. Rptr.* 11432 (2001); A. Dan Tarlock and Sarah B. Van de Wetering, "Growth Management and Western Water Law from Urban Oases to Archipelagos," 5 *Hastings W.-Nw. J. Env'tl. L. & Pol'y* 163 (1999).

law based on treating the water as public property, a system that is coming to be called “regulated riparianism.”¹⁶ There are now three distinct systems of water law in use in the United States, each of which requires discussion in order to understand the present law relating to the allocation of the use of surface waters. The law of groundwater allocation exhibits similar changes, but is even more complex than the law of surface water allocation.

§ 11.02. Riparian Rights.

Today, every state has regulatory statutes dealing with at least certain aspects of water allocation,¹⁷ and thus no state relies solely on “pure” riparian rights. In the states that still basically follow common law riparian rights, regulation protects the public interest in water yet plays little part in the resolution of quantity disputes between such direct water users.¹⁸ In about half of the eastern states, the common law of riparian rights continues to apply to disputes over the allocation of water between individual users who withdraw water directly from a natural surface source. In these states, regulation plays little, if any, part in quantity disputes between direct water users.

Riparian rights derive from the premise that the right to use water is a natural attribute of land, dependent on the natural availability of water to the land.¹⁹ The word “riparian” itself comes from the Latin word “*ripa*,” meaning

¹⁶ See generally Joseph W. Dellapenna, “Regulated Riparianism,” 1 *Waters and Water Rights* ch.9 (Robert E. Beck ed., repl. vol. 2001). For a list of the regulated riparian states, with references to their statutes, see the text at notes 107-25.

¹⁷ *Id.* § 9.02.

¹⁸ Consider the example of Pennsylvania: The Water Power and Water Supply Permit Act, 32 Pa. Stat. §§ 591 to 641 (West 1997); The Clean Stream Act, Pa. Stat. Ann. tit. 35, §§ 691.1 to 691.1001 (West 2003); the Flood Plain Management Act, Pa. Stat. Ann. tit. 32, §§ 679.101 to 679.601 (West 1997); the Storm Water Management Act, 32 Pa. Stat. Ann. §§ 680.1 to 680.17 (West 1997); the Dam Safety and Encroachments Act, Pa. Stat. Ann. tit. 32, §§ 693.1 to 693.27 (West 1997).

¹⁹ See *Tyler v. Wilkinson*, 24 Fed. Cas. 472, 474 (No. 14,312)(D. R.I. 1827)(“The natural stream, existing by the bounty of Providence for the benefit of the land through which it flows, is an incident annexed, by operation of law, to the land itself.”). Justice Story’s opinion in that case is often cited as the first true riparian rights case. For a modern expression of the view that riparian rights are a natural attribute of the land abutting a watercourse, see *Niagara*