



# **WATER RIGHTS**

## ***A White Paper Report***

**Professor A. Dan Tarlock,  
Chicago-Kent College of Law,  
and**

**Vicki C. Krueger, Senior Research Manager,  
Legal Research Center, Inc.**

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## About the Authors

**A. Dan Tarlock** is a Distinguished Professor of Law at the [Chicago-Kent College of Law](#). He holds an A.B. and LL.B. from Stanford University and was previously a member of the faculties of the University of Kentucky and Indiana University, Bloomington. His teaching and research interests include water law and land use. Professor Tarlock is the author of a treatise on water law, *Law of Water Rights and Resources*, and is a co-author of four casebooks, *Water Resource Management*, *Environmental Law*, *Land Use Controls*, and *Environmental Protection: Law and Policy*.

Professor Tarlock has served on numerous National Research Council/National Academy of Sciences committees studying the protection and recovery of stressed aquatic ecosystems, including a ten-year review of the operation of Glen Canyon Dam on the Colorado River; a study of the restoration of the Missouri River ecosystem, published as *The Missouri River Ecosystem: Exploring the Prospects for Recovery*; and an assessment of the future of the U.S. Army Corps of Engineers. In 1998, he was the chief report writer for the Western Water Policy Review Advisory Commission report, *Water in the West*, which was one of the first major federal publications to examine the relationship between urban growth and water use. Professor Tarlock is a member of the special legal advisors to the Submissions Unit of the Commission on Environmental Cooperation in Montreal, Canada, which administers the NAFTA Environmental Side Agreement. Since 2009, he has also been a member of a standing National Research Council committee to advise to the U.S. Army Corps of Engineers.

**Vicki C. Krueger**, [Legal Research Center](#) Senior Research Manager, received her B.A. from the University of Minnesota School of Journalism and Mass

Communication. She pursued her writing and editing interests for ten years before attending the University of Minnesota Law School, where she was an editor of the *Journal of Law & Inequality* and a cum laude graduate. In private practice with Fredrikson & Byron and Rosenthal, Rondoni, McMillan & Joyner, Ms. Krueger worked primarily in the areas of litigation and family law, before joining LRC in 1989. Since that time, she has engaged in countless legal research projects, including studies of legal research practices and economics. Ms. Krueger specializes in multijurisdictional research and analysis, including legislative and regulatory tracking in hot topical areas of law.

Ms. Krueger has written and published on many legal subjects. Her publications include:

- *State-by-State Guide to Employee Leave and Disability*
- *Recovering Online Legal Research Costs*
- *Private Transfer Fees—Potential for Trouble, Problems for the Future?*
- *Government Responses to Climate Change—A Look at State and Local Actions Affecting the Real Estate Industry*
- *Maintaining Properties in Foreclosure—How Communities Across America are Responding to the Vacant Property Crisis in Their Own Backyards*
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## **Preface**

Water supplies for urban development continue to be stressed in many parts of the American West and are increasingly so in the more humid eastern part of the United States. There are many reasons for this phenomenon, including population growth, which uses available supplies; climate change, which may result in less net water in arid areas and prolonged droughts in other areas; competing demands, especially environmental, which require that more water be left in streams; and the contamination of available supplies. Over the past three decades or more, the federal government has stopped building new dams and carry-over storage reservoirs. Water suppliers can no longer rely on the federal government to backstop local supplies and to remove the risks of supply interruption inherent in water rights. As a result of these stresses, conflicts over the allocation and use of water likely will increase. Public and private water suppliers have up to this time enjoyed many *de facto* and *de jure* preferences to ensure that water is available for residential, commercial, and industrial development, but these preferences may decline in the future.

This White Paper Report, originally published in 2010, provides an update on the evolving law of water use and management in general, and as relevant to the real estate industry. As the discussion suggests, individual residential purchasers and commercial and residential developers alike will have to pay more attention to the way in which property is supplied with water, especially in areas most likely to be adversely affected by climate change. Water front developers must be aware of the scope of private riparian and littoral rights, as well public rights that may impact the use of the property. This Paper is a starting point in expanding that awareness.





## I. Introduction

Issues concerning water rights continue to gain attention across the United States, as recent research completed by Legal Research Center, Inc.<sup>1</sup> confirms. In the arid West, water concerns have taken on increasing importance as a result of rapid population growth and climate changes. The Eastern U.S., too, faces heightened challenges as pressure increases to share limited resources. As a result, all across the nation, conflicts brew, legislation is enacted, and rules change.<sup>2</sup> Because water rights can affect a variety of real estate transactions, it is vitally important for everyone involved in the real estate profession to stay abreast of current developments in water law.

Hence, NAR commissioned the Annual Report on Water Rights,<sup>3</sup> prepared by Legal Research Center (LRC), the highlights of which are discussed herein, together

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<sup>1</sup> For more information about Legal Research Center (LRC), see <http://www.legalresearch.com>.

<sup>2</sup> See generally A. Dan Tarlock, *Law of Water Rights and Resources* (Thomson Reuters/Clark Boardman Callaghan 2010/2015 (subsequent section references are to 2010 edition)); A. Dan Tarlock, James N. Corbridge, Jr., David H. Getches, Reed D. Benson, & Sarah F. Bates, *Water Resource Management: A Casebook in Law & Public Policy* (Foundation Press 7<sup>th</sup> ed. 2014); Gregory S. Weber, Jennifer L. Harder, & Bennett L. Bearden, *Cases and Materials on Water Law* (West Academic 9<sup>th</sup> ed. 2014); John. W. Johnson, *United States Water Law: An Introduction* (CRC Press 2008); David H. Getches, Sandi B. Zellmer, & Adell Amos, *Water Law in a Nutshell* (West Academic 4<sup>th</sup>/5<sup>th</sup> eds. 2015).

<sup>3</sup> The complete Annual Report is available online through the LRC-created NAR<sup>®</sup> *Multistate Issue Tracker Library*; sign-on information is available from NAR<sup>®</sup>. When research results are

with commentary from relevant media discussions and legal treatises. These authorities demonstrate that states throughout the nation are feeling the pressure to accommodate diverse and increasing water uses, while supplies dwindle. As public and private interests clash with environmental concerns, states and municipalities struggle to strike an appropriate balance. Some states have tightened their administrative oversight of water rights, while at the same time increasing their conservation efforts.<sup>4</sup> State surface-use laws have also evolved in response to recreational demands. And the role of federal law has become more pervasive, interjecting itself into disputes regarding, for example, the extent to which water can be allocated, and for what particular purposes.<sup>5</sup> Because states historically have been slower to address environmental and other public concerns in their laws, federal agencies have often stepped in first to safeguard public interests.<sup>6</sup>

Despite these changes, the basic water-law principles of riparian and appropriative rights, as discussed in the original White Paper and in greater detail below, have remained fairly constant. These faithful doctrines are less likely to be tapped to resolve a dispute today than are the newly enacted regulatory or

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referenced herein, accessing the Annual Report via the *Tracker Library* will provide greater detail on the information presented, as well as links to the original source material when available.

<sup>4</sup> See, e.g., *California Poised to Tighten Watering Restrictions*, The Sacramento Bee, Mar. 15, 2015, available at <http://www.sacbee.com/news/state/california/water-and-drought/article14076221.html>.

<sup>5</sup> See generally *Federal Reserved Water Rights and State Law Claims* (U.S. Dep't of Justice 2015), available at <http://www.justice.gov/enrd/federal-reserved-water-rights-and-state-law-claims>; Robert W. Adler, *Climate Change and the Hegemony of State Water Law*, 29 Stan. Envtl. L.J. 1 (2010), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1615723](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1615723).

<sup>6</sup> *Id.* Adler advocates for a heightened federal role in water law due to the existence of strong federal environmental regulation and the possibility of inconsistent policies and enforcement in the individual states' water laws.

administrative requirements of permitting laws; however, basic water law remains the default rule and forms the background of federal and state regulation. Other legal doctrines, such as the doctrine of beneficial use, continue to evolve to reflect changing views on which water uses and methods of use are indeed beneficial to society.

Why should water rights laws matter to REALTORS®? There are in fact several ways in which water rights may impact the real estate profession. Water rights may be highly desirable to a particular buyer, for instance. The right to use water for agricultural, recreational, or other uses can significantly increase a property's appeal.<sup>7</sup> Thus, it is essential to consider the impact that water rights may have on the associated property or on a common community interest. Sometimes, water rights attach to a property and are bought or sold together with it, but other times the water rights are separately owned and transferred. The value of the subject property will be affected by whether the water rights attach, or whether another owner holds the water rights. In other instances, there may be restrictions on the water rights that accompany property ownership—restrictions that must be carefully investigated, explained, conveyed, and recorded.

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<sup>7</sup> See, e.g., Financial Web, *How Do Water Rights Affect Real Estate Value*, available at <http://www.finweb.com/real-estate/how-do-water-rights-affect-real-estate-value.html>. See also Paul Noto, *Water Law in Real Estate Transactions* (Denver Bar Ass'n Real Estate Section 2014), available at <http://www.waterlaw.com/wp-content/uploads/2014/11/Colorado-Real-Estate-Bar-Association-2.pdf>; Tony Guerra, *How Do Water Rights Relate to Real Estate Transactions*, available at <http://homeguides.sfgate.com/water-rights-relate-real-estate-transactions-63690.html>.

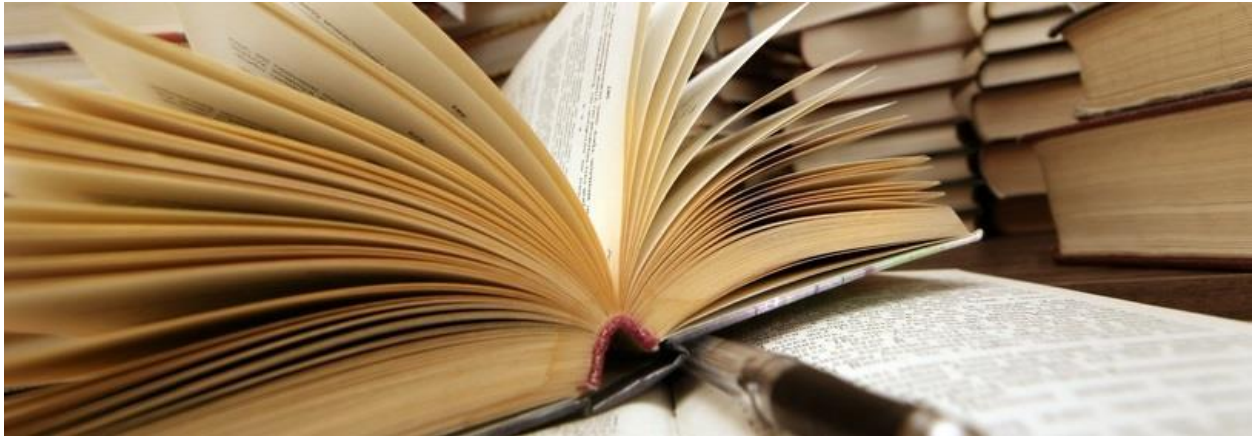
*REALTORS®: Do your due diligence!†*

- Check title policies for possible water rights
- Secure a title examination
- Verify that the seller actually owns the rights he or she purports to sell
- Determine transferability of rights
- Identify any defects in water rights
- Consider the potential for unrecorded agreements
- Commission a survey of the subject property
- Do a site visit and physical inspection
- Investigate historic water uses associated with the property
- Comply with all filing requirements to maintain rights
- Consider engaging legal counsel experienced in water law
- Determine the best type of deed to formalize the conveyance

† Adapted from Paul Noto, *Water Law in Real Estate Transactions* (Denver Bar Ass'n Presentation, Nov. 6, 2014), available at <http://www.waterlaw.com/wp-content/uploads/2014/11/Colorado-Real-Estate-Bar-Association-2.pdf>.

Rights as to groundwater and surface waters can vary greatly in scope and detail. A right to *enjoy* the water, for instance, is not necessarily a right to *use* the water. It is important to understand the types and scope of rights, how they are attained, how they are transferred, and how they may be lost—whether the transaction at issue involves a large-scale developer or a first-time homebuyer.

This White Paper highlights pertinent points for consideration by real estate professionals involved in any transaction involving water rights laws and regulations and showcases why REALTORS® must exercise due diligence in any transaction that includes, or potentially includes, water rights.



## II. Water Rights Framework

Each state in the U.S. has enacted laws that govern the production and use of groundwater and surface water. These laws generally fall into one of three main categories:

- Riparian rights (by which water belongs to the person whose land it borders; riparian owners are permitted to make reasonable use of the water as long as they do not unreasonably interfere with its reasonable use by others with riparian rights);
- Prior appropriation (by which water rights are determined by priority of beneficial use, meaning that the first person to use water or divert water for a beneficial use or purpose can acquire individual rights to the water);  
or
- A hybrid of these two systems.<sup>8</sup>

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<sup>8</sup> See generally Tarlock, *supra* n. 2, *Law of Water Rights and Resources*; Johnson, *supra* n.2, *United States Water Law: An Introduction*.

Table 1 below summarizes the breakdown between riparian, appropriation, and hybrid jurisdictions.

**Table 1. Riparian, Prior Appropriation, and Hybrid States<sup>9</sup>**

Jurisdiction	Common-Law Riparian Rights	Riparian Rights + Permitting/Registration System	Prior Appropriation	Hybrid
Alabama		√ (minor requirements)		
Alaska			√	
Arizona			√	
Arkansas		√		
California				√
Colorado			√	
Connecticut		√		
Delaware		√		
D.C.	√			
Florida		√		
Georgia		√		
Hawaii		√		
Idaho			√	
Illinois	√			
Indiana		√		
Iowa		√		
Kansas				√
Kentucky		√		
Louisiana	√			
Maine	√			
Maryland		√		
Massachusetts	√			
Michigan		√		
Minnesota		√		
Mississippi		√		
Missouri		√		
Montana			√	
Nebraska				√
Nevada			√	
New Hampshire		√		
New Jersey		√		
New Mexico			√	
New York		√		
North Carolina	√			
North Dakota		√		√
Ohio		√		
Oklahoma				√
Oregon				√
Pennsylvania		√		
Rhode Island	√			
South Carolina		√		
South Dakota				√

<sup>9</sup> Based on research completed by Legal Research Center in March 2015.

Jurisdiction	Common-Law Riparian Rights	Riparian Rights + Permitting/Registration System	Prior Appropriation	Hybrid
Tennessee	√			
Texas				√
Utah			√	
Vermont		√		
Virgin Islands			√	
Virginia		√		
Washington				√
West Virginia	√			
Wisconsin		√		
Wyoming			√	

As the table demonstrates, many riparian-rights jurisdictions regulate water use through some type of permitting or registration system. Commonly, the permit requirements apply only to specific volumes of withdrawals, ranging from as low as 10,000 gallons per day (Minnesota) or 25,000 gallons per day (Iowa), to three million gallons per month (South Carolina) or one or two million per day (Michigan). In the majority of these jurisdictions (such as Florida, Kentucky, Maryland, Minnesota, Mississippi, and North Dakota) the permitting procedure applies to both ground and surface water withdrawals and to all proposed uses of the water, with domestic use frequently exempted. On the other hand, some states confine their permit regimes to groundwater (e.g., Vermont) or surface water (Virginia) withdrawals only, and others require permits only for specific types of uses, such as Georgia and Florida (consumptive use only), Pennsylvania (public water supply only) and Wisconsin (agriculture or irrigation).<sup>10</sup>

A few riparian rights states, such as Alabama, Arkansas, Hawaii, Michigan, Missouri, and New Hampshire, have instituted registration procedures requiring water users to register their water withdrawals and usage with a state agency, such as the

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<sup>10</sup> *Id.*

natural resources department or environmental protection department. Such registrations are for informational and planning purposes, and to facilitate restrictions and limitations on use during times of emergency or drought.<sup>11</sup>

These laws were developed to allocate the use of surface streams. In contrast, groundwater was allocated based on ownership of overlying land. Absolute ownership of groundwater has lost favor in recent years. Under the absolute ownership doctrine, property owners had the right to all water on and below their properties except for intentional waste. Thus, they could produce all the groundwater they wanted, in any way, wherever they desired, and without regard to the impact on their neighbors. Almost all states have replaced the absolute ownership doctrine with rules that provide more protection to neighbors. But absolute ownership retains some of its vitality in Indiana, Maine, and Texas.<sup>12</sup>

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<sup>11</sup> *Id.*

<sup>12</sup> See, e.g., Joseph W. Dellapenna, *The Rise and the Demise of the Absolute Dominion Doctrine for Groundwater* (Villanova Univ. School of Law Spring 2013), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2265067](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2265067); Gerald Torres, *Liquid Assets: Groundwater in Texas*, 22 Yale L.J. Online 143 (2012), <http://yalelawjournal.org/forum/liquid-assets-groundwater-in-texas>.



## A. Riparian Rights

Owners of property that borders a waterway are deemed “riparians.”<sup>13</sup> Under the laws of many states, primarily in the Eastern U.S., these riparians have long held certain rights relative to the abutting water simply by virtue of the location of their land. Historically, water-frontage property owners used the water for mills; to create energy; for boating, fishing, and transportation purposes; and to meet personal needs. Today, riparian rights are often limited to *reasonable* uses.<sup>14</sup> In many states, riparian rights holders must now obtain permits from the relevant state agency before exercising their rights.<sup>15</sup>

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<sup>13</sup> See generally Adler, *supra* n.5; John D. Leshy, Symposium, *A Conversation about Takings and Water Rights*, 83 Tex. L. Rev. 1985, 1986 (2005).

<sup>14</sup> Tarlock, *supra* n.2, *Law of Water Rights and Resources* § 4.7.

<sup>15</sup> *Id.* §§ 3:94–:96.

### Water as Trust

Developing residential property on the edge of the ocean or a navigable waterway is always naturally hazardous but it can also be legally hazardous. States own the beds of navigable waterways and tidelands in trust for the public, and determining what is public and what is private is fraught with complexity.

The dividing line between public and private lands is a moving and uncertain one determined by tidal records or vague standards such as the high water mark. It is the mean high tide line except in a few states such as Illinois. States can alienate trust lands, but the use must be for a trust purpose. Without a valid state patent, however, a residential development that is located on trust land is a trespasser. In addition, the public has a right to pass along trust lands.

Two cases from the Midwest illustrate the risks. In *State v. Trudeau*, 139 Wis. 2d 91, 408 N.W. 2d 337 (1987), a condominium developer obtained a variance to build a project partially over pilings that extended into the bed of Lake Superior. The Wisconsin Department of Natural Resources requested that the developer remove the portion of the project that extended into the lake. The developer claimed that the water beneath the pilings was not actually navigable, but the court held the bed was trust land because it was part of a basin naturally connected to Lake Superior. The court remanded the case for a determination of which parts of the project were prohibited. On remand, the court reiterated that any development within the established flood plain was technically on the lake bed, and it therefore fell within the county's jurisdiction and was prohibited.

In *Glass v. Goebel*, 262 Mich. App. 29, 683 N.W.2d 719 (2004), a Michigan lake-front property owner challenged the right of his neighbor and members of the public generally to walk along the shore of Lake Huron landward of the wet sand area. The intermediate appellate court sided with the property owner, but the state supreme court reversed, holding that the court of appeals erred by granting the landowners the exclusive right of use down to the water's edge. Littoral property remains subject to the public trust, and the landowner's rights supersede the public's rights only to the extent that they do not contravene the public trust. The court concluded that members of the public could walk the shores of the lake below the ordinary high water mark.

A riparian owner's property line generally extends to the middle of non-navigable bodies of water.<sup>16</sup> On navigable streams and rivers, however, the property line ends at

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<sup>16</sup> Randall Bullard, *How Do Water Rights Relate to Real Estate Transactions?* (Nov. 3, 2009), available at [http://www.ehow.com/how-does\\_5584611\\_do-relate-real-estate-transactions\\_.html](http://www.ehow.com/how-does_5584611_do-relate-real-estate-transactions_.html); see also *supra* n.7 (citing Noto, *Water Law in Real Estate Transactions*, <http://www.waterlaw.com/wp-content/uploads/2014/11/Colorado-Real-Estate-Bar-Association-2.pdf>; Guerra, *How Do Water Rights Relate to Real Estate Transactions*, <http://homeguides.sfgate.com/water-rights-relate-real-estate-transactions-63690.html>).

the water's edge; the waterway is deemed by the state to be a "public highway," and the state retains the rights to the land under the water.<sup>17</sup> Under the similar doctrine of "littoral" water rights, which apply to water on land bordering navigable lakes, oceans, and seas, owners have unrestricted access to the body of water, but the determination of the property line depends on the high-water mark or mean high tide. Land below these lines is state property, and land above it is retained by the landowner.<sup>18</sup> It is far more common for states' water laws and regulations to reference "riparian" rather than "littoral" rights.

Riparian rights include the right to control the flow of a stream; the right to make reasonable use of the water, as long as no other riparian rights are injured; the right of access to the body of water; the right to fish; the right to construct a dock; the right to prevent erosion of the banks; the right to purity of the water; and title to the beds of non-navigable lakes and streams.<sup>19</sup>

### ***Jurisdictional Review***

Among the jurisdictions surveyed by LRC for the Water Rights Annual Report, ten (Alabama, the District of Columbia, Illinois, Louisiana, Maine, Massachusetts, Missouri, North Carolina, Tennessee, and West Virginia) currently recognize common-law riparian water rights and do not otherwise *significantly* regulate water withdrawals and use through a permitting process.

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<sup>17</sup> *Id.*

<sup>18</sup> *Water Rights and Related Issues* (Land Title Inst. 2001), available at <https://www.altal.org/lti/docs/CH09.pdf>; Miss.-Ala. Sea Grant Legal Program, *Defining Littoral Rights*, <http://masglp.olemiss.edu/Water%20Log/WL17/littdef.htm>.

<sup>19</sup> Ben Gutshall, Attorneys' Title Guarantee Fund, *Riparian Rights*, <https://www.atgf.com/tools-publications/pubs/riparian-rights>.

Other riparian-rights jurisdictions regulate water use through some sort of permitting or registration system. These states include:

- Alabama (to a limited degree)
- Arkansas,
- Connecticut,
- Delaware,
- Florida,
- Georgia,
- Hawaii,
- Indiana,
- Iowa,
- Kentucky,
- Maryland,
- Michigan,
- Minnesota,
- Mississippi,
- New Hampshire,
- New Jersey,
- New York,
- North Dakota,
- Ohio,
- Pennsylvania,
- Rhode Island,
- South Carolina,
- Vermont,
- Virginia, and
- Wisconsin.

Commonly, these permit requirements apply only to specific volumes of withdrawals, ranging from as low as 10,000 gallons per day (Minnesota) or 25,000 gallons per day (Iowa), to three million gallons per month (South Carolina) or one or two million per day (Michigan). In the majority of these jurisdictions, the permitting procedure applies to both ground and surface water withdrawals and to all proposed uses of the water, with domestic use frequently exempted (such as in Florida, Kentucky, Maryland, Minnesota, Mississippi, and North Dakota). On the other hand, some states confine their permit regimes to groundwater (e.g., Vermont) or surface water (Virginia) withdrawals in stressed areas only, and others require permits only for specific types of

uses, such as consumptive use (Georgia), public water supply (Pennsylvania), and agriculture or irrigation (Wisconsin).

A few riparian rights states (Alabama, Arkansas, Hawaii, Michigan, Missouri, New Hampshire, and West Virginia) have instituted registration procedures requiring water users to register their water withdrawals and usage with a state agency, such as the natural resources department or environmental protection agency. Such registrations are for informational and planning purposes, and to facilitate restrictions and limitations on use during times of emergency or drought.<sup>20</sup>

## **B. Prior Appropriation**

While the doctrine of riparian rights has been adopted by most eastern states, the American West, with the exception of California, relies almost exclusively on the law of “prior appropriation.”<sup>21</sup> Water has long been scarcer in the West than in the East, and as the nation developed, oftentimes the persons who needed the water, such as miners, did not own the land.<sup>22</sup> The rights to water therefore developed on a basis of usage rather than land ownership.<sup>23</sup>

The prior appropriation doctrine is based on the principle of “first come, first served”—that is, the first person to develop a water resource in an area stakes a claim

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<sup>20</sup> Links to statutes and regulations for a particular jurisdiction are available in the *Multistate Issue Tracker Library* from LRC, *supra* n.3. For further research and discussion of representative eastern states’ water laws, see Joseph W. Dellapenna, *Water Law in the Eastern United States: No Longer a Hypothetical Issue*, 26 Energy & Min. L. Inst. ch. 11 (2005), available at [http://www.emlf.org/clientuploads/directory/whitepaper/Dellapenna\\_05.pdf](http://www.emlf.org/clientuploads/directory/whitepaper/Dellapenna_05.pdf).

<sup>21</sup> See generally Nicole L. Johnson, *Property Without Possession*, 24 Yale J. on Reg. 205 (2007).

<sup>22</sup> Tarlock, *supra* n.2, *Law of Water Rights and Resources* § 5:3

<sup>23</sup> See Adler, *supra* n.5, at 18-19.

to the amount of water he or she wishes to produce, and later users are limited to what is left.<sup>24</sup> Landowners in prior appropriation states generally must establish that they intend to put the water to a beneficial use, and that they will limit their use to what is required to serve that purpose.<sup>25</sup> “Beneficial use” is a cardinal principle underlying the prior appropriation doctrine, and the laws of the various states have different definitions of what uses are beneficial, as shown in Table 2 below. Such definitions may change over time.

**Table 2. Examples of Beneficial Uses for Granting Appropriation Permits in Prior Appropriation or Hybrid States<sup>26</sup>**

State	Domestic Use	Municipal Use	Irrigation or Agricultural Use	Industrial Use	Stock Watering	Power	Mining	Recreational Uses	Fish & Wildlife
AK	√	√	√	√		√	√	√	√
AZ	√	√	√		√	√	√	√	√
CA	√	√	√	√	√	√	√	√	√
CO	√	√	√	√				√	√
KS	√	√	√	√		√		√	
MT	√	√	√	√	√	√	√	√	√
NV			√				√	√	√
ND	√	√	√	√	√			√	√
OK		√	√	√				√	√
OR	√	√	√	√		√	√	√	√
TX	√	√	√	√	√	√	√	√	√

<sup>24</sup> See generally Tarlock, *supra* n.2, *Law of Water Rights and Resources* ch. 5; U.S Fish & Wildlife Service, *Water Rights Definitions*, [http://www.fws.gov/mountain-prairie/wtr/water\\_rights\\_def.htm](http://www.fws.gov/mountain-prairie/wtr/water_rights_def.htm).

<sup>25</sup> Tarlock, *supra* n.2, *Law of Water Rights and Resources* § 5:66; Bullard, *supra* n.17.

<sup>26</sup> Source: David H. Getches, *Water Law in a Nutshell* (Thomson West 4<sup>th</sup> ed. 2009), at 105.

State	Domestic Use	Municipal Use	Irrigation or Agricultural Use	Industrial Use	Stock Watering	Power	Mining	Recreational Uses	Fish & Wildlife
UT			√		√				
WA	√		√	√	√	√	√	√	√

In some states, there is no comprehensive definition of beneficial use provided in statutory or case law, or the definition of beneficial use may be general, without specific examples. In South Dakota, for instance, a beneficial use is defined by statute to include “any use of water . . . that is reasonable and useful and beneficial to the appropriator, and at the same time is consistent with the interests of the public of this state in the best utilization of water supplies.”<sup>27</sup> Beneficial use requires both that a use be for a socially useful purpose as well as non-wasteful. For example, New Mexico case law broadly defines beneficial use as “the use of such water as may be necessary for some useful and beneficial purpose in connection with the land from which it is taken.”<sup>28</sup>

A permit is required to establish prior-appropriation rights, except in states that recognize pre-permit appropriations, and a permit holder may have the option of selling the permitted rights to others.<sup>29</sup> If it is necessary for the new permit holder to cross another’s property to access the water source and exercise his rights, he must obtain permission from that owner (e.g., an easement) or must exercise a statutory right of private condemnation.<sup>30</sup> Prior appropriation rights are often subject to a “use it or lose it”

<sup>27</sup> [S.D. Codified Laws § 46-1-6\(3\) \(2015\)](#).

<sup>28</sup> [Erickson v. McLean, 62 N.M. 264, 308 P. 2d 983 \(1957\)](#). See generally James C. Brockmann, *Overview of New Mexico’s Ground Water Code* (Oct. 2009), available at [http://pg-tim.com/files/NM\\_Groundwater\\_Paper\\_JBrockmann.pdf](http://pg-tim.com/files/NM_Groundwater_Paper_JBrockmann.pdf).

<sup>29</sup> Tarlock, *supra* n.2, *Law of Water Rights and Resources* § 5:44; Bullard, *supra* n.13.

<sup>30</sup> Bullard, *supra* n.16.

rule; that is, the water right is perfected and continues to be valid as long as it continues to be exercised.<sup>31</sup>

### ***Jurisdictional Review***

Ten jurisdictions researched for the annual report—all Western states (with the exception of the Virgin Islands)—recognize appropriative water rights only. The prior appropriation states include Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Virgin Islands, and Wyoming.<sup>32</sup>

### **C. Hybrid Systems**

Although the riparian and appropriation systems seem distinct, there is in fact substantial overlap between them. Several states on the Pacific Coast and Great Plains have embraced parts of each system to enact a comprehensive body of water rights laws. Some states that initially recognized riparian rights, for instance, later converted to an appropriation system, while preserving existing riparian rights. The most important hybrid state is California, which is highlighted in greater detail throughout the discussion below.

States also adjust their water laws to their unique geography. Hawaii, for instance, employs a unique set of groundwater laws, established under the laws of the

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<sup>31</sup> Water Encyclopedia, *Prior Appropriation*, <http://www.waterencyclopedia.com/Po-Re/Prior-Appropriation.html>; Kathy Lackey, 'Use It or Lose It' vs. 'Reasonable Use', Water Online (Jan. 26, 2015), <http://www.wateronline.com/doc/use-it-or-lose-it-vs-reasonable-use-0001>.

<sup>32</sup> See LRC's *Multistate Issue Tracker Library*, *supra* n.3, for more detailed information for each prior appropriation state and for links to a particular jurisdictions statutes and regulations. For another concise summary of western states' water laws, see Holland & Hart, *Water Law*, <http://www.WesternWaterLaw.com>.



ancient Hawaiian Kingdom and recent statutes, which give preference to certain types of groundwater use based on that state's volcanic island geographic characteristics.<sup>33</sup>

### ***Jurisdictional Review***

California, Kansas, Nebraska, North Dakota, Oklahoma, Oregon, South Dakota, Texas, and Washington are technically hybrid states. The states initially adopted the common law of riparian rights, then switched to prior appropriation to promote irrigated agriculture. These states have integrated riparian rights into the doctrine of prior appropriation, generally by allowing riparian owners to claim a common law water right within a specified time and incorporate it into the state's appropriation system. Except in California, Nebraska, and Oklahoma, most Western common law riparian rights have now been converted to appropriative rights.

### ***California's Water Rights Model***

California is viewed as a trend-setting state in general, and in the legal arena in particular—and even more specifically with regard to water rights, by virtue of its implementation of a comprehensive hybrid water law system.<sup>34</sup> As a hybrid state, California recognizes both common law riparian and appropriative water rights. Unlike most other states, they need not be registered. With an emphasis on conservation measures, California law provides that a riparian landowner may use only so much

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<sup>33</sup> See Hawaii Comm'n on Water Resource Mgmt., *Laws & Regulations*, <http://dlnr.hawaii.gov/cwrm/aboutus/regulations/>; Lawrence H. Miike, *Water and the Law in Hawaii* (Univ. of Hawaii Press 2004), available for purchase at <http://www.uhpress.hawaii.edu/p-3121-9780824828110.aspx>.

<sup>34</sup> California's water rights are set out in [Cal. Const. art. 10 § 2](#); [Cal. Civ. Code § 1414 \(2015\)](#); [Cal. Water Code \(2015\)](#); and [Cal. Code Regs. tit. 23 \(2015\)](#).

water “as may be required or used . . . for the purposes for which such lands are, or may be made adaptable.”

Unappropriated water that flows in a natural channel and that is not reasonably needed for a beneficial use by a riparian owner is deemed public water in California and is subject to appropriation. An appropriation must be limited to such water as is reasonably required for a beneficial use. California defines “beneficial use” to include:

- Domestic uses;
- Irrigation (except that the use of more than 2.5 acre-feet of water per acre in one year to irrigate uncultivated land not devoted to cultivated crops is not a “beneficial use”);
- Hydroelectric power;
- Frost protection or heat control for growing crops;
- Municipal use;
- Mining or industrial use;
- Fish and wildlife protection, enhancement, and preservation;
- Aquaculture;
- Recreation;
- Water quality use; and
- Stock watering.

By its willingness to consider such innovative options as water conservation mandates, groundwater monitoring, fines for illegal diversions, and agricultural water-management plans, California serves as an example to other states striving to resolve water rights issues. One particularly innovative approach, implemented by California’s

Building Standards Commission, involves permit-free single-fixture “graywater” systems for small residences. “Graywater” is water that has already been put to household use for washing clothes and dishes, for instance, but has not been contaminated by wastes (unlike water from the toilet, or “black water”). This water can be used to sprinkle lawns and for other non-potable purposes, thereby achieving California’s conservation objectives.<sup>35</sup>

California’s permitting requirements, as well as the transfer and forfeiture of water rights in that state, are considered further below.

#### **D. East-West Differences**

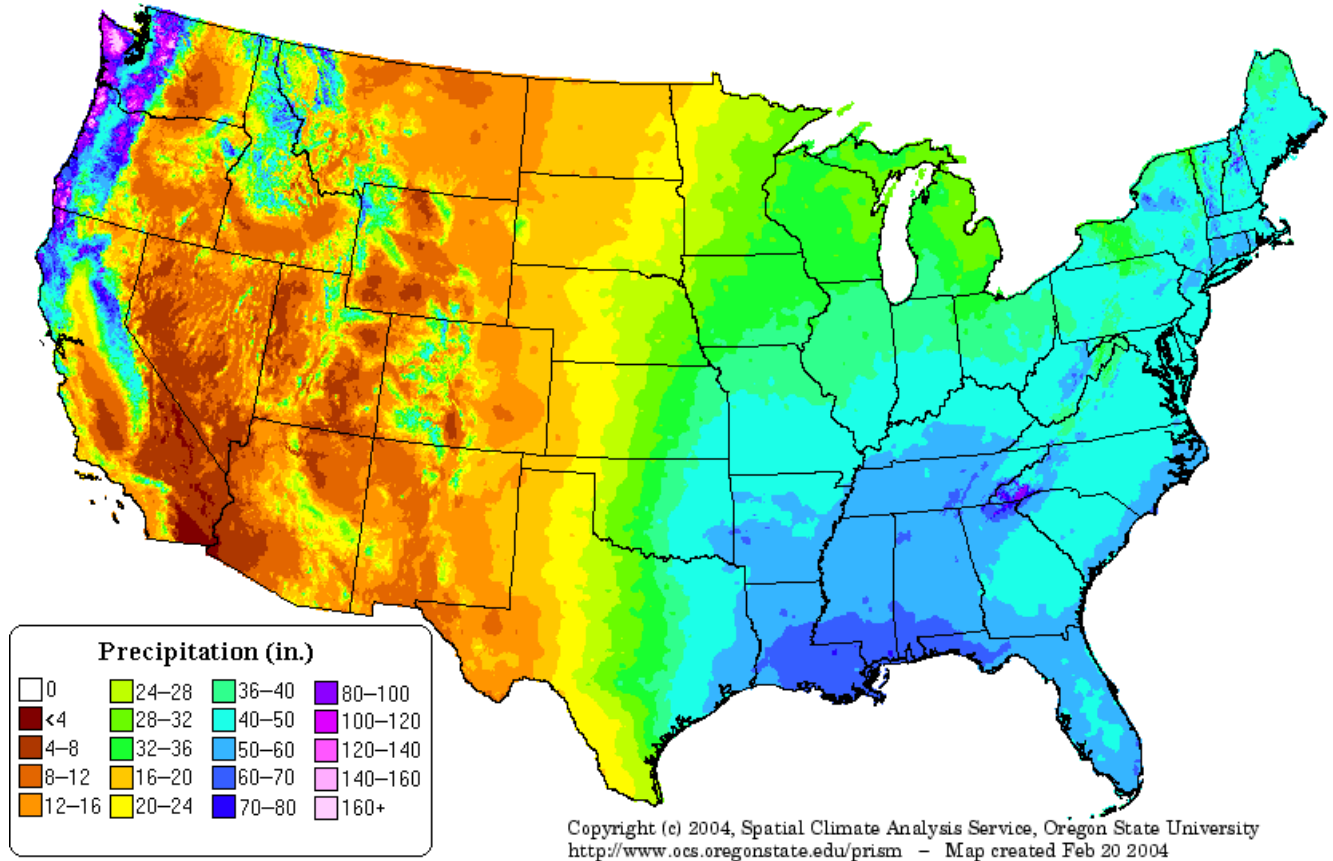
As noted, water rights across the nation break down into somewhat of an East-West divide, with the East favoring riparian rights and the Western United States leaning more heavily on the prior appropriation doctrine. The map in Figure 1 below illustrates how the application of these principles breaks down state by state, demonstrating a fairly clear East-West distinction.

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<sup>35</sup> For more on California’s evolving groundwater laws, see Ian James, *Gov. Jerry Brown Signs Landmark Groundwater Legislation—State to Manage Groundwater for 1<sup>st</sup> Time, Taking on New Authority*, The Desert Sun, Sept. 30, 2014, available at <http://www.desertsun.com/story/news/environment/2014/09/16/california-groundwater-legislation/15725863/>; see also *How California’s New Water Laws Inform the Coming National Crisis*, Popular Mechanics (Dec. 18, 2009), <http://www.popularmechanics.com/science/environment/water/4335060>. For a thorough discussion of water law issues in California, see *California’s Water: An LAO Primer*, available at [http://www.lao.ca.gov/2008/rsrc/water\\_primer/water\\_primer\\_102208.aspx](http://www.lao.ca.gov/2008/rsrc/water_primer/water_primer_102208.aspx); see also 6 Harry D. Miller & Marvin B. Starr, *California Real Estate* § 17:26, *Water Rights—Regulation of Water Rights* (3d ed. 2009). In addition, links to the relevant statutes are included in the *Multistate Issue Tracker*.



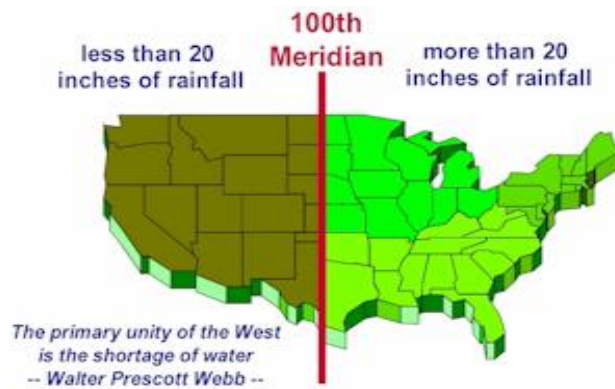
## Precipitation: Annual Climatology (1971–2000)



**Figure 2. Map Showing Historical Average Annual Rainfall, Nationally<sup>37</sup>**

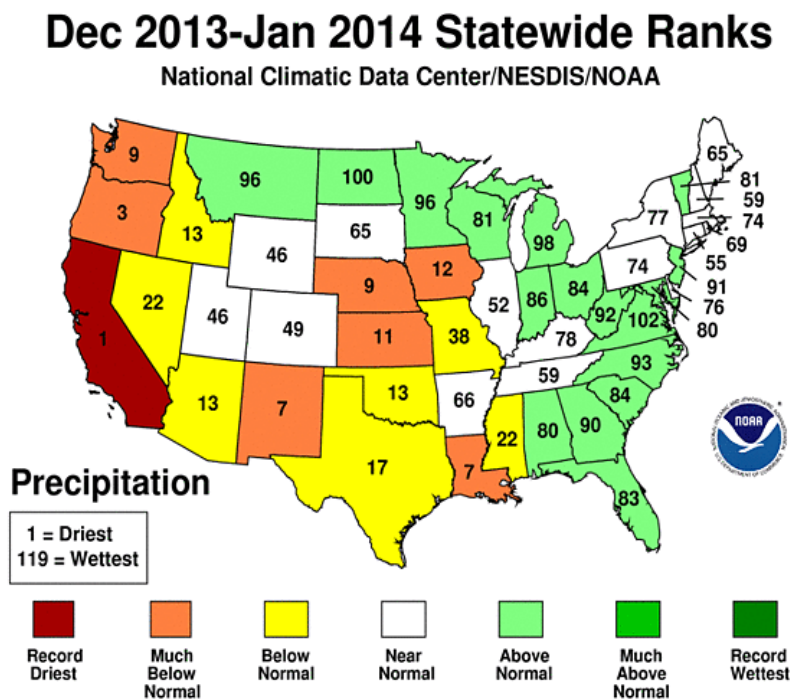
Figure 3 below brings the distinction in average annual rainfall in each half of the country into even higher relief. This disparity helps explain why the East and West tended to develop—at least initially—different water rights systems. It also speaks to why, currently, different problems tend to plague the East and West.

<sup>37</sup> Source: National Weather Service Forecast Office,  
[http://www.erh.noaa.gov/btv/images/us\\_pcpn.png](http://www.erh.noaa.gov/btv/images/us_pcpn.png).



**Figure 3. Map Showing East/West Comparative Annual Rainfall<sup>38</sup>**

More recent information confirms that this pattern continues—that is, the rain, it's plain, does *not* fall mainly in the plain.



**Figure 4. Map Showing Comparative Rainfall Amounts for Early 2014<sup>39</sup>**

<sup>38</sup> Source: South Dakota Dep't of Environment & Natural Resources, *Historical Background of Water Rights in South Dakota*, <http://denr.sd.gov/des/wr/history.aspx>.

<sup>39</sup> Source: National Centers for Environmental Information, *National Temperature and Precipitation Maps*, <https://www.ncdc.noaa.gov/temp-and-precip/us->

As a result of the western water shortfall, water rights have long been a hot button in the arid and semi-arid regions of the Western United States. Early in the nation's development, western demands for water were primarily agricultural and mining-related.<sup>40</sup> Farmers and mining companies gained valuable rights to use as much water from nearby sources that they needed, without limit, based on the prior appropriation doctrine. More recently, as the western states—California in particular—have become highly urbanized, the demand for water for consumer and business use has dramatically increased. Accordingly, those early water rights owned by farmers and miners have become more and more valuable. In the West, water rights themselves are often a distinct real property interest, which can become incidental to the principal property in a conveyance by sale, transfer, inheritance, or the like.<sup>41</sup>

In the Eastern United States, by contrast, the emphasis is often on groundwater usage. Because water rights in the Eastern U.S. are primarily riparian in nature, they tend to be tied to the land. In any transaction, the parties should make sure that water rights are, if desired, transferred with the sale of the associated property (if any), and that their subsequent use is consistent with any restrictions or limitations placed on those rights.

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[maps/12/201401?products\[\]=nationalpcpnrank](https://maps/12/201401?products[]=nationalpcpnrank). The numbers 1—119 are a ranking system used by the National Climatic Data Center in both the precipitation and temperature context.

<sup>40</sup> Tarlock, *supra* n.2, *Law of Water Rights and Resources* §§ 5:2, :3; Fred W. Welden, *History of Water Law in Nevada and the Western States*, <http://www.leg.state.nv.us/Division/Research/Publications/Bkground/BP03-02.pdf>.

<sup>41</sup> See generally Johnson, *supra* n.21, 24 Yale J. on Reg. 205.

### **Water Supply and Demand**

For decades, developers assumed that public and private water providers would supply necessary water from local supplies or contracts with federal and state water suppliers. Public utility law required that all suppliers acquire the necessary water to support anticipated growth. As supplies become tighter, states are shifting more responsibilities to municipalities and thus developers to ensure that reliable, long-term, drought-proof supplies are available. California's assured water supply law exemplifies the new duties that suppliers face. The law applies to developments of over 500 units and certain industrial facilities, and defines a sufficient supply as the total supply available during "normal, single-dry, and multiple-dry years within a 20-year projection." Cal. Gov't Code § 66473.7(a)(2).

To calculate this, the supplier must include a number of contingencies, such as the availability of water from water supply projects, "federal, state, and local water initiatives such as CALFED," and water conservation. Water suppliers must prepare Urban Water Management plans. Subsequent water supply assessments must either be consistent with these plans or meet the available water supply criteria and may trigger a duty to acquire additional water supplies. These duties will be enforced primarily under the California Environmental Quality Act (CEQA). See *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova*, 40 Cal. 4<sup>th</sup> 412, 150 P.3d 709 (2007). Courts have shown a willingness to invalidate "unrealistic" supply projections, and cities are starting to deny or delay development permits. So-called "show me" statutes also exist in Arizona and Colorado, and other statutes are increasingly linking water supply and land use planning decisions.





### **III. How Water Rights Are Obtained**

The type of water rights system drives how rights are secured. Whether riparian, appropriative, or hybrid, real estate agents and brokers should understand their jurisdiction's model and its consequences for buyers and sellers.

#### **A. Riparian Rights**

In riparian rights states, “riparians” hold certain rights relative to the abutting water simply by virtue of the location of their land. When ownership of the land changes hands, so do the associated rights with respect to the abutting water. Before riparian rights holders may exercise their rights, however, they often must obtain permits from the relevant state agency.<sup>42</sup> Riparian rights can be either consumptive or non-consumptive. The scope of non-consumptive rights is an important element of lake-front subdivisions.

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<sup>42</sup> Tarlock, *supra* n.2, *Law of Water Rights and Resources* §§ 3:94–:96.

### Lakefront Properties at the Forefront of Debate

Small lakes are attractive second home sites. Property owners who purchase land that fronts on a lake naturally expect to be able to have a non-consumptive littoral right to use the entire surface of the lake for recreation. However, that is not always the case. If the lake is non-navigable, property owners own the bed from the shore to the center of the lake. In most cases property boundaries are determined by slicing an imaginary pie. The common law rule limits littoral rights to the water above the pie wedge unless the owners consent to use. A number of states have rejected this rule on the ground that it discourages recreational development and does not comport with the way that lakes are actually used. These states have instead adopted the civil law, which allows each littoral owner to use the entire surface of the lake. But many states still adhere to the common law rule.

The Iowa Supreme Court adopted the common law rule, over a strong dissent, in a case that did not require the state to make a choice between the common and civil law rules. In *Orr v. Mortvedt*, 735 N.W.2d 610 (Iowa 2007), a landowner claimed that its land bordered a quarry, which had become a thirty-acre artificial lake enjoyed by several littoral owners. The basis of the landowner's claim was that his grantor intended to transfer littoral rights and thus the deed, which did not extend ownership to the water's edge, should be reformed. Reformation was denied because a bona fide purchaser now owned the claimed strip. To make sure that the littoral owners could exclude the claimant, the court adopted the "majority" common law rule. The court could have limited its holding, as some states have done, to artificial rather than natural lakes. In a common law state, a littoral owner can claim a prescriptive right based on prior use to the entire surface, but some courts deny these rights, claiming the use can only be with the permission of the other owners.

As mentioned earlier, for many years disputes involving riparian rights were determined under the common law—that is, they were subject to judge-made law, as water-related cases and controversies made their way through the courts.<sup>43</sup> As the population of the eastern states grew and demands on water increased, the disposition of water rights issues became more frequent and complex, and states responded by enacting permitting statutes that would lessen the number of individual or unique controversies that had to be decided by the courts.<sup>44</sup> Most riparian states

### Planning for Growth

One of the core principles of beneficial use is that water cannot be used for speculative purposes. Thus, water rights cannot be acquired if there is no plan to put them to beneficial use. The strict application of this doctrine would prevent cities from planning for future growth, but in the West cities have long been exempt from the anti-speculative doctrine under the growing cities doctrine.

However, Colorado's Supreme Court applied the general anti-speculation doctrine and a statutory codification of it to police municipal appropriations in *Pagosa Area Water & Sanitation District v. Trout Unlimited*, 170 P.3d 307 (Colo. 2007); 219 P.3d 774 (Colo. 2009). The court in that case remanded a water court decision for failure to make sufficient findings concerning the area's future growth projections. The water court awarded two small districts in southwestern Colorado a conditional water right for 29,000 acre feet and return flows of water with the right to continuously refill a reservoir based on a 100-year planning horizon. Citing a National Research Council study, the court held that a statutory exemption for municipalities from the need to have a vested legal interest in the lands served does not immunize governmental water supply agencies from the state's anti-speculative doctrines, and it laid down a strict test for municipal appropriations to promote the maximum utilization of the state's limited waters. The case makes it easier for agricultural and environmental users to challenge municipal appropriations, but Colorado cities argue that it may curtail urban growth in the state.

now have permitting statutes, at least for larger water uses.<sup>45</sup> Iowa and Florida have implemented very detailed permitting systems, while other states' systems are less complex.<sup>46</sup> Whether simple or demanding, these permitting statutes all require

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<sup>43</sup> Adler, *supra* n.5, 29 Stan. Env'tl. L.J. at 18-19.

<sup>44</sup> *Id.* at 19.

<sup>45</sup> See Table 1 above and the corresponding discussion.

<sup>46</sup> In Iowa, a water use permit is issued to convey the right to the beneficial use of water. Generally, a permit from the Iowa Department of Natural Resources (DNR) is required if a person or entity wishes to divert, withdraw, or store 25,000 or more gallons of water in a 24-hour

landowners who want to divert or impound water to first obtain permission to do so from the relevant state administrative agency.<sup>47</sup>

## **B. Prior Appropriation Rights**

Generally speaking, prior appropriation rights do not grant the holder of the right an actual ownership interest in the water. Rather, appropriators simply have the right to make *use* of the water. Still, appropriation rights can be viewed as property interests, which can be transferred, assigned, and mortgaged. Such interests are usually limited to the right to divert and use a certain quantity of water for a certain beneficial purpose, but, generally speaking, the right holder may use the water for a different purpose

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period during any calendar year from any surface or groundwater source, regardless of public water supply status. The DNR may allocate water upon the occurrence of specific triggering events, in which case the highest priority water use is human consumption and sanitation supplied by a private water supply. Any person retains the right to construct an impoundment on his or her property or across any stream originating on the person's property if it is safely constructed and provision is made for a continued established average minimum flow when the flow is required to protect the rights of water users below. See [Iowa Code §§ 455B.261, .268, .270 \(2015\)](#); [Iowa Admin. Code r. 567-52.10 \(2015\)](#).

Florida also regulates the consumptive use of surface water and groundwater through a permitting system. A permit is not required for domestic consumption of water by individual users. To obtain a permit the applicant must establish that the proposed use of water is a reasonable-beneficial use that is consistent with the public interest and that will not interfere with any existing legal use of water. A "reasonable-beneficial use" is the "use of water in such a quantity as is necessary for economic and efficient utilization for a purpose and in a manner which is both reasonable and consistent with the public interest." All existing uses of water may be continued after adoption of the permitting system only with a permit issued as provided by the Florida Water Resources Act. The governing board of a water management district or the Department of Environmental Protection may issue permits. Any permits or permit agreements for consumptive use of water executed or issued by an existing flood control, water management, or water regulatory district prior to December 31, 1976 remain in effect according to their terms until otherwise modified or revoked as authorized by the Florida Water Resources Act. See [Fla. Stat. §§ 253.141; 373.019, .219, .224, .226, .233 \(2014\)](#).

<sup>47</sup> A list of state water agencies is available at [http://www.waterwebster.com/state\\_framebottom.htm](http://www.waterwebster.com/state_framebottom.htm).

without losing the right.<sup>48</sup> A prior appropriation rights holder may also, in some instances, sell the right to another party who may use it for a different purpose, as long as no other appropriators will be injured by the change of use.<sup>49</sup>

Nowadays, appropriators, like riparian rights holders, must generally apply for a permit before exercising their rights.<sup>50</sup> One of the major requirements for the granting of such a permit is that the appropriated water be put to a “beneficial use.”<sup>51</sup> The meaning of that phrase varies from state to state, as demonstrated by the examples in Table 2, above.

### **C. The Permitting Process**

In order to obtain a permit for water withdrawals in either an appropriative state or a regulated riparian state, an application must be submitted to a designated governmental agency charged with management of the state’s water resources.<sup>52</sup> The permit application must include the items required by local statute, which typically consist of:

- The applicant’s name,
- The body of water at issue,

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<sup>48</sup> Tarlock, *supra* n.2, *Law of Water Rights and Resources* § 5:66; see generally *The Water Rights Process* (Cal. Environmental Protection Agency, State Water Resources Control Bd. 2015), [http://www.waterboards.ca.gov/waterrights/board\\_info/water\\_rights\\_process.shtml](http://www.waterboards.ca.gov/waterrights/board_info/water_rights_process.shtml).

<sup>49</sup> Tarlock, *supra* n.2, *Law of Water Rights and Resources* § 5:71; see, e.g., Water Colorado, *Water Rights—What the Prior Appropriations Doctrine Means to You*, [http://www.watercolorado.com/water\\_rights3.shtml](http://www.watercolorado.com/water_rights3.shtml). Water Colorado is a water rights brokerage firm.

<sup>50</sup> Johnson, *supra* n.21, 24 Yale J. on Reg. at 221.

<sup>51</sup> *Id.*

<sup>52</sup> See state water agencies list, *supra* n.47.

- The quantity of water required,
- The time of the anticipated use,
- The legal description of the point of diversion, and
- The purpose of the use.<sup>53</sup>

After notice of the application filing is published, time is allowed for affected parties to object to the application, based on some failure to meet the statutory criteria for the granting of a permit, such as:

- The lack of beneficial use,
- The unavailability of unappropriated water at the time of anticipated use,
- Potential harm to prior appropriators and/or interference with reservations for future use,
- Inadequate diversion facilities, or
- No possessory interest in the property where the water will be put to the beneficial use.<sup>54</sup>

After the time for objections has passed, the state agency generally will hold a public hearing on the permit application, during which any properly filed objections will be considered, and after which the agency will approve, disapprove, or approve with

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<sup>53</sup> See, e.g., *North Dakota's Water Permitting Process* (N.D. State Water Comm'n), <http://www.swc.nd.gov/4dlink9/4dcgi/GetContentPDF/PB-2303/Water%20Permitting%20Process.pdf>; *Applications for Surface Water Rights and Ownership Changes* (Tex. Comm'n on Environmental Quality 2015), [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/wr\\_applications.html](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/wr_applications.html).

<sup>54</sup> See, e.g., [Mont. Water Use Act](#), [Mont. Admin. R. 36.12.117 \(2015\)](#).

modification the permit application. An applicant who is dissatisfied with the outcome may appeal the agency's decision to a court of law.<sup>55</sup>

The state administrator considering a permit application will not only determine whether to approve the application, but he or she may also be called upon to determine how much water may be used by each applicant. When competing interests are at play and there is not enough water for all applicants' requested uses, certain uses will take precedence.<sup>56</sup> According to LRC's research, "domestic use," which includes private wells and other sources supplying water to only a very limited number of households, is the highest preferred use in many jurisdictions (including California, Colorado, Florida, Idaho, Kansas, Minnesota, Nebraska, Puerto Rico, South Dakota, Virgin Islands, and Washington), while other jurisdictions (e.g., Alaska, Arizona, Arkansas, Guam, Mississippi, and Texas) rank municipal or public water supply usage highest.<sup>57</sup>

About half of all permitting states grant perpetual permits, meaning that the rights they grant last until some action is taken that would terminate them. Other states limit the duration of a permit to a fixed term, ranging anywhere from three to fifty years. Even these so-called "fixed" permit periods are generally renewable.<sup>58</sup>

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<sup>55</sup> *Water Law in a Nutshell* (4<sup>th</sup> ed.), *supra* n.2, at 152-53.

<sup>56</sup> *Id.* at 60.

<sup>57</sup> The LRC Water Rights Annual Report, part of the *Multistate Issue Tracker Library* commissioned by NAR®, *supra* n.3, details the permitting requirements for each jurisdiction and provides links to the primary source materials for each state.

<sup>58</sup> *Water Law in a Nutshell* (4<sup>th</sup> ed.), *supra* n.2, at 61.

## ***The California System***

In California<sup>59</sup>, permission for a particular appropriation must be granted by the State Water Resources Control Board. When making decisions on applications, the Board is guided by the principle that domestic use is the highest use of water, and that irrigation is the next highest. In 2012, the Legislature declared that it is the established policy of California "that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes," and that all relevant state agencies must consider this state policy when revising, adopting, or establishing policies, regulations, and grant criteria when those policies, regulations, and criteria are pertinent to the those uses of water.<sup>60</sup>

The Board defines "domestic use" to include:

- The use of water in homes, resorts, motels, organization camps, camp grounds, etc.;
- The incidental watering of domestic stock for family sustenance or enjoyment;
- The irrigation of not more than one-half acre of lawn, ornamental shrubbery, or gardens at any single establishment; and
- The use of water at a camp ground or resort for human consumption, cooking or sanitary purposes.

As in all prior appropriation jurisdictions, in California, as between appropriators, the first one in time is the one first in right. A properly made application thus gives the applicant priority of right as of the date of the application, until the application is

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<sup>59</sup> California's water rights are set out in [Cal. Const. art. 10 § 2](#); [Cal. Civ. Code § 1414](#), [Water Code §§ 100, 102 1202, 1225, 1240, 1243, 1254, 1450 \(2015\)](#); and Cal. Code Regs. tit. 23, § 660 (2015).

<sup>60</sup> [Cal. Water Code § 106.3 \(2015\)](#).



approved or rejected. The Board must reject an application if it determines that the proposed appropriation “would not best conserve the public interest.” In determining public interest, the Board considers:

- Any general or coordinated plan for the control, protection, development, utilization, and conservation of water resources, including the California Water Plan;
- The relative benefit to be derived from all beneficial uses of the water concerned;
- The reuse or reclamation of the water sought to be appropriated, as proposed by the applicant;
- Streamflow requirements proposed for fish and wildlife;
- Water quality control plans; and
- The state goal of providing a decent home and suitable living environment for every Californian.

Any change in the point of diversion, place of use, or purpose of use must also be approved by the Board. That is, water appropriated for a specific purpose may not be used for another purpose without Board permission. A petitioner who requests a change in use must demonstrate to the satisfaction of the Board that the change will not operate to the injury of any other legal user of the water. If an interested person(s) protests the change, the petitioner and the protester(s) must make a good faith effort to resolve the protest among themselves.



## **IV. Changes to Water Rights**

Water rights may shift by operation of law, transfer of ownership, or action by regulators. Rights can even be lost if not exercised.

### **A. Altering Rights**

Riparian rights granted by permit may be modified as set out in a particular jurisdiction's statutes. Appropriative rights and permitted rights in riparian states may be modified nearly universally as to the place of use, rate of use, and point of diversion, subject to the approval of the regulatory authority and to the conditions that may be included in the modified permit. Water rights are also subject to modification by the state during droughts or other emergencies (e.g., Arkansas, Connecticut, Idaho, Iowa, Maryland, and New Jersey), or when an area of the state is determined to be a critical use area where the withdrawal of water resources exceeds or threatens to exceed natural replenishment (Alabama, Arkansas, Hawaii, Indiana, and South Carolina).<sup>61</sup>

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<sup>61</sup> For more detailed information on each of these states, see *Multistate Issue Tracker Library*, *supra* n.3. The *Library* includes links to the original source material for each state.

## **B. Transferring Rights**

Generally speaking, riparian and littoral water rights attach to the land, and are transferred when ownership of the land changes hands.<sup>62</sup> Withdrawal permits in riparian states may be similarly transferred. In New Jersey, New Hampshire, and Vermont, for instance, riparian permits are transferred to a new owner when a facility is sold. In other jurisdictions, the permit itself may be transferred, without transferring the property (e.g., Alabama, Connecticut, Iowa, Maryland, New Jersey, Puerto Rico, and Virginia). Such transfers are subject to notice to and approval by the state regulatory authority.<sup>63</sup>

Generally speaking, when riparian land is conveyed, there is a presumption that the water rights associated with the land are also conveyed, even if such a transfer is not specifically stated in the deed.<sup>64</sup> But that presumption is rebuttable. To be on the safe side, the deed should state exactly what rights are being conveyed. Both consumptive and non-consumptive riparian rights may be reserved from the conveyance of the land and conveyed to a separate party, *if* such intent is stated in writing. Because riparian rights are interests in property, any grant thereof apart from land is subject to the Statute of Frauds, which requires transfers of property to be in written form.<sup>65</sup>

A tricky situation could arise, for instance, if a landowner conveyed part of her parcel—the appurtenant part—to someone else, but retained the right to use the water or have access to it herself (such as if she owned acreage on a lake and retained the

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<sup>62</sup> See Bullard, *supra* n.16.

<sup>63</sup> See *Multistate Issue Tracker Library*, *supra* n.3.

<sup>64</sup> *Water Law in a Nutshell* (4<sup>th</sup> ed.), *supra* n.2, at 62.

<sup>65</sup> *Id.*

back portion as well as rights to the water, while selling the lakefront cabin). Later, if she sells her retained portion, she may wish to sell her water rights along with it. In such a case, although the transfer is not of the appurtenant land, riparian rights may be included, but only if the deed explicitly states these details.

Appropriative rights are not strictly tied to ownership of land, and thus are, at least theoretically, transferable apart from the land as long as there is no injury to other right holders.<sup>66</sup> In reality, however, some states' legislatures have tied water rights to land such that appurtenancy requirements do exist.<sup>67</sup> In New Mexico, for example, irrigation water is deemed appurtenant; the right to it may be severed from the associated property only with the consent of the surface owner.<sup>68</sup> Nowadays, appurtenancy primarily is a rule of conveyancing, such that surface rights pass with the transfer of the surface estate unless there is an express severance.<sup>69</sup>

The research performed by LRC indicates that appropriation rights are separately transferable in some states according to statute (e.g., Colorado, Utah, and Wyoming). In Oklahoma, as in New Mexico, irrigation appropriation rights may be severed from the realty and transferred, and other types of usage rights may be assigned in New Mexico as well. Withdrawal permits in riparian states may also be transferred. For instance, New Hampshire, New Jersey, and Vermont allow permits to be transferred to the new owner when a facility is sold. In other jurisdictions (Alabama, Connecticut, Iowa, Maryland, New Jersey, Puerto Rico, Virginia, and Wyoming), the permit itself may be

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<sup>66</sup> Tarlock, *supra* n.2, *Law of Water Rights and Resources* § 5:72.

<sup>67</sup> *Id.*

<sup>68</sup> *Id.* (citing [N.M. Stat. § 75-5-23](#)).

<sup>69</sup> *Id.*

transferred, generally subject to notice to and approval by the relevant regulatory authority. In Alaska, Arizona, and Nebraska, water rights may be sold as distinct property interests.<sup>70</sup>

It is also important to bear in mind that the transfer of water rights may trigger certain tax obligations. In Washington state, for example, a taxable transaction may occur when water rights used on one person's land are transferred for use on another person's land for valuable consideration, when water rights are consolidated, or when development or changes to a privately owned water supply system result in a transfer of ownership rights.<sup>71</sup>

### **C. Loss of Rights**

According to LRC's research, appropriation rights permits and permits issued in riparian states are universally subject to revocation for failure to comply with applicable state laws and regulations, and for noncompliance with the conditions of the permit or license, such as by changing the use from that for which the right or permit was granted (e.g., in California). Moreover, in most jurisdictions, if a right holder or permittee fails to use the water for a defined period of time, usually ranging from three to five years, the permit is subject to revocation for nonuse or abandonment.<sup>72</sup>

Whether permitted or not, non-use of water rights may result in the loss of rights through prescription or forfeiture. Because riparian rights are property rights, they may be extinguished by "prescription," which means continuous non-use by the record

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<sup>70</sup> See *Multistate Issue Tracker Library*, *supra* n.3.

<sup>71</sup> See Washington Department of Revenue, Special Notice, *Water Rights Transfers*, available at [http://dor.wa.gov/Docs/Pubs/SpecialNotices/2006/sn\\_06\\_WaterRightsSubjectToREET.pdf](http://dor.wa.gov/Docs/Pubs/SpecialNotices/2006/sn_06_WaterRightsSubjectToREET.pdf).

<sup>72</sup> See *Multistate Issue Tracker Library*, *supra* n.3.

owner, or continuous use by someone else with the owner's knowledge or permission.<sup>73</sup> The permitting statutes of a particular jurisdiction may also set out other circumstances under which a riparian right will be lost.

"Forfeiture" involves the involuntary relinquishment of a water right due to the failure to comply with a statutorily imposed requirement, or through non-use.<sup>74</sup> In many states, water rights may not be forfeited without "due process of law," which means that the holder of the right must be provided with a reasonable opportunity to preserve the right, either by putting it to a reasonable use or by justifying the non-use.<sup>75</sup> Several western states' statutes provide that if water is not put to a beneficial use for a certain period of time—usually five years—the water returns to the public domain, subject to appropriation by others.<sup>76</sup>

Forfeiture must be proven by clear and convincing evidence, although no showing of intent to abandon is required. The holder of the right may raise certain defenses to forfeiture. Texas, for example, exempts water rights from cancellation if the holder of the right takes part in a federal conservation reserve program.<sup>77</sup> Idaho law lists ten non-exclusive defenses against forfeiture, including a defense specifically available for water appurtenant to land in a federal set-aside program, a defense applicable to

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<sup>73</sup> In this regard, prescription is akin to the taking of property by adverse possession. For more information on adverse possession, see [http://topics.law.cornell.edu/wex/adverse\\_possession](http://topics.law.cornell.edu/wex/adverse_possession). See also *Water Law in a Nutshell* (4<sup>th</sup> ed.), *supra* n.2, at 72.

<sup>74</sup> Tarlock, *supra* n.2, *Law of Water Rights & Resources* § 5.88 (citing [\*United States v. Locke\*, 471 U.S. 84 \(1985\)](#); [\*Texaco, Inc. v. Short\*, 454 U.S. 516 \(1982\)](#)).

<sup>75</sup> *Id.*

<sup>76</sup> *Id.* (citing, *inter alia*, [Idaho Code § 42-222\(2\)](#); [Ore. Rev. Stat. §§ 537.270, 540.610\(1\)](#); [Utah Code § 73-1-3](#); [Wash. Rev. Code Ann. § 90.14.160](#)).

<sup>77</sup> *Id.* (citing [Tex. Water Code § 11.173\(b\)\(1\)](#)).

water rights deposited in water banks, and another for water dedicated to mitigate the impact of new diversions.<sup>78</sup>

### ***The California Example***

As noted above, any change in the point of diversion, place of use, or purpose of use must be approved by the California Water Resources Control Board.<sup>79</sup> That is, water appropriated for a specific purpose may not be used for another purpose in California without Board permission. A petitioner who requests a change in use must demonstrate to the satisfaction of the Board that the change will not operate to the injury of any legal user of the water. If an interested person protests the change, the petitioner and the protester must make a good faith effort to resolve the protest.

Riparian rights are appurtenant to the land, and may not be transferred separately. A long-term transfer of appropriation rights, defined as a transfer for a period in excess of one year, must be approved by the Board. The Board may approve the transfer if the transfer would not result in substantial injury to any legal user of water and would not unreasonably affect fish, wildlife, or other instream beneficial uses. At the expiration of the transfer period, the rights automatically revert to the original owner without Board action. Water rights determined by a court decree may be transferred upon issuance by the court of a supplemental decree.

The right to appropriate water is granted for a particular purpose. If the water is no longer used for that purpose, the right ceases. As a general rule, the failure to

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<sup>78</sup> *Id.* (citing [Idaho Code § 42-223](#)).

<sup>79</sup> California's water rights are set out in [Cal. Const. art. 10 § 2](#); [Cal. Civ. Code § 1414](#), [Water Code §§ 100, 102, 1202, 1225, 1240, 1243, 1254, 1450 \(2015\)](#); and [Cal. Code Regs. tit. 23, § 660 \(2015\)](#).

exercise all or part of a right of appropriation for five years will cause the water to revert to the public and be deemed unappropriated. An exception is made for water rights appurtenant to land that was Indian trust land, the unrestricted title to which was conveyed by the United States.

The Board may revoke a permit or license to appropriate water if the permit holder:

- Fails to commence or complete construction work or beneficial use of water with due diligence,
- Ceases the beneficial use of the water, or
- Fails to observe any of the terms or conditions of the permit or license.





## V. Public-Private Water Partnerships

Water suppliers may be public entities, or private entities subject to public control—thereby constituting a “public-private partnership.” Partnerships between the public and private sectors in the water and wastewater industries range from those providing basic services and supplies, to those engaged in the design, construction, operation, and ownership of public utilities.<sup>80</sup> The public sector has historically privatized water services in order to realize cost savings, utilize expertise, achieve efficiencies in construction and operation, access private capital, and improve the quality of water and wastewater services.<sup>81</sup>

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<sup>80</sup> See U.S. EPA, *Public-Private Partnerships (Privatization)*, <http://www.epa.gov/owm/cwfinance/privatization.htm>.

<sup>81</sup> *Id.*

## **A. State and Local Partnerships**

Private companies typically gain the right to divert, store, and distribute water to their customers by virtue of a grant of authority from the state or a political subdivision of the state.<sup>82</sup> Public-private partnership (PPP) arrangements between municipalities and private companies have come into widespread use in the last forty years.<sup>83</sup> Under these arrangements, the municipality often retains ownership of the utility, but the private company runs all or part of the operation. The municipality is still responsible for setting rates and making necessary capital investments. The benefits of public-private water partnerships include lower costs, guaranteed performance, strict environmental and safety compliance, increased opportunities for employees, and shared liability.<sup>84</sup>

Legal research performed by LRC indicates that at least twenty jurisdictions have statutory schemes that specifically allow for some type of partnering between governmental and private entities for the purpose of building or maintaining water system infrastructure. These jurisdictions include Arizona, Arkansas, California, Florida, Georgia, Guam, Iowa, Montana, New Hampshire, New Jersey, New Mexico, North Dakota, South Dakota, Texas, Utah, Vermont, Virgin Islands, Virginia, Washington, and Wisconsin. Five states (Arkansas, Florida, Georgia, Texas, and Washington) have programs at both the state and local governmental levels. Generally, these arrangements authorize financial assistance to the private partner in the form of grants

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<sup>82</sup> See generally *Water Law in a Nutshell* (4<sup>th</sup> ed.), *supra* n.2, at 453-54.

<sup>83</sup> See U.S. Environmental Protection Agency, *Public Private Partnerships (Privatization)*, <http://www.epa.gov/owm/cwfinance/privatization.htm>; Michael Deane, 2013: *The Year of Public Private Partnerships*, Huff Post Business, Apr. 24, 2013, available at [http://www.huffingtonpost.com/michael-deane/2013-the-year-of-publicpr\\_b\\_3108378.html](http://www.huffingtonpost.com/michael-deane/2013-the-year-of-publicpr_b_3108378.html).

<sup>84</sup> *Id.*

or loans from the government to fund construction of water supply projects, including mains, lines, and storage and treatment facilities. In some instances the assistance is limited to a particular percentage of the project costs or a set maximum amount per project, or to a specific class of private partner, such as a non-governmental community water supply company.<sup>85</sup>

One example of this legislation in action occurred in the City of Holyoke, Massachusetts, which was challenged by a situation many communities continue to face: its sewer overflow system could no longer handle current levels, nor could it meet environmental regulations enacted to protect waterways from untreated overflows. When the EPA required Holyoke to reduce overflows into the Connecticut River, the city sought a private partner to build a new facility, upgrade its treatment and pipe system, and operate and maintain the city's water management for the next twenty years. The city partnered with United Water, a large investor-owned utility, and the resulting PPP saved the city \$10 million in resources that it was able to invest in other government priorities.<sup>86</sup>

Another example of a PPP occurred in Tampa Bay, where Tampa Bay Water's expanding customer base was quickly outpacing its groundwater supply. In developing a plan to meet these needs, Tampa Bay Water pursued construction of what would become the nation's largest seawater desalination facility. But desalination is challenging, and although the original plant did produce some water, it was not enough, and the expensive filters clogged too quickly. Tampa Bay Water closed down the plant

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<sup>85</sup> See *Multistate Issue Tracker Library*, *supra* n.3.

<sup>86</sup> Deane, *supra* n.83, 2013: *The Year of Public Private Partnerships*, [http://www.huffingtonpost.com/michael-deane/2013-the-year-of-publicpr\\_b\\_3108378.html](http://www.huffingtonpost.com/michael-deane/2013-the-year-of-publicpr_b_3108378.html).

and partnered with American Water and Acciona Agua to develop a solution. Three years later, the renovated plant, with new technologies and efficiencies in place, has an expected lifespan of thirty to fifty years and produces up to 25 million gallons of fresh water per day at less than one cent per gallon.<sup>87</sup>

## **B. Federal Involvement in Partnership Arrangements**

The federal government has also become involved in the privatization of water services.<sup>88</sup> Executive Order 12803, issued in 1992, simplified federal requirements related to the disposition of the federal interest in grant-funded infrastructure facilities. The Order defines privatization as "the disposition or transfer of an infrastructure asset, such as by sale or by long-term lease, from a State or local government to a private party."<sup>89</sup> When federal grants have been used to fund a facility, the privatization transactions must comply with federal construction grant and property disposition regulations. Often, the grantee must receive prior approval from the EPA for the proposed privatization agreement.<sup>90</sup>

The United States Environmental Protection Agency acknowledges that the U.S. enjoys the health, economic, and environmental benefits of an extensive network of drinking water, wastewater, and storm-water infrastructures, but that those systems are rapidly aging.<sup>91</sup> If those systems are to continue to provide the services Americans have

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<sup>87</sup> *Id.*

<sup>88</sup> U.S. EPA, *Public-Private Partnerships (Privatization)*, <http://www.epa.gov/owm/cwfinance/privatization.htm>.

<sup>89</sup> *Id.*

<sup>90</sup> *Id.*

<sup>91</sup> See U.S. EPA, *Water Infrastructure*, <http://water.epa.gov/infrastructure/>.

come to expect, the EPA advocates changes in the way citizens think about and reinvest in that infrastructure. EPA programs currently in place include:

- [The Sustainable Infrastructure Program](#), in which the EPA is partnering with stakeholders to help ensure the U.S. water infrastructure keeps working effectively by establishing “best practices” to ensure greater efficiency.
- [Infrastructure Financing Programs](#), through which the EPA helps finance the country’s water infrastructure needs through the Drinking Water and Clean Water State Revolving Loan Programs.
- [Green Infrastructure/Low Impact Development Programs](#), which are environmentally focused initiatives that bring multiple benefits, including better storm-water management, a reduced burden on the infrastructure, more livable communities, and a reduced heat-island effect, to name just a few.
- [The WaterSense Program](#), an EPA-sponsored partnership program that seeks to protect the future of the nation's water supply by promoting water efficiency and enhancing the market for water-efficient products, programs, and practices by reducing demands on water supplies and thus the need to construct additional water and wastewater treatment and storage facilities, as well as delaying the need to replace aging infrastructure.
- [Climate Ready Water Utilities Program](#), which provides resources to help drinking water and wastewater utilities understand and plan for potential climate change impacts.<sup>92</sup>

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<sup>92</sup> *Id.*

The EPA's programs are national in scope, but public-private partnership programs at the state and local level also help support the infrastructure. Such relationships also provide funding resources and help preserve scarce water supplies.<sup>93</sup>

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<sup>93</sup> More information on public-private water partnerships is available from the National Council for Public-Private Partnerships, <http://www.ncppp.org/>.



## VI. Federal Water Resource Issues

Earlier in U.S. history, federal involvement in water resource legislation addressed issues of water use such as managing the commons (e.g., regulating fisheries) and regulating navigable waterways to support navigation and commerce.<sup>94</sup> As the nation expanded to the West, water legislation was used to fund massive development projects to increase water supplies for irrigation, hydroelectricity, flood control, and municipal and industrial water supplies. More recently, however, as water quality has degraded across the country, federal legislation has moved into the environmental-protection arena. Recent decades have thus seen an evolution in federal water law toward an emphasis on nationwide water quality standards.<sup>95</sup> The role of the federal government in future water resources issues promises to be different from its role in the past, with an even sharper focus on environmental protection and water conservation measures.<sup>96</sup>

In most situations, state law governs the use and allocation of water. But the ability of states to address water resource issues is complicated by the existence of highly fragmented water laws and policies, which often vary by jurisdiction, by region,

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<sup>94</sup> See Laurel E. Phoenix, *Legislation, Federal Water* (Water Encyclopedia 2015), <http://www.waterencyclopedia.com/La-Mi/Legislation-Federal-Water.html>.

<sup>95</sup> *Id.*

<sup>96</sup> Tarlock, *supra* n.2, *Law of Water Rights & Resources* § 9:4.

and according to whether ground or surface water is at issue.<sup>97</sup> Although federal law now commonly addresses water *quality* issues (through federal legislation such as the Clean Water Act,<sup>98</sup> the Safe Drinking Water Act,<sup>99</sup> and the Endangered Species Act<sup>100</sup>), some argue that federal law should interject itself into water allocation issues as well.<sup>101</sup>

Climate-change proponents, for instance, emphasize that water resources are destined to become scarcer in the coming years, and that the need for federal intervention will increase.<sup>102</sup> As the following Environmental Protection Agency map shows, as the population is projected to increase, so is the demand for water (next page).

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<sup>97</sup> Adler, *supra* n.5, 29 Stan. Envtl. L.J. at 30.

<sup>98</sup> U.S. EPA, *Summary of the Clean Water Act*, <http://www2.epa.gov/laws-regulations/summary-clean-water-act>.

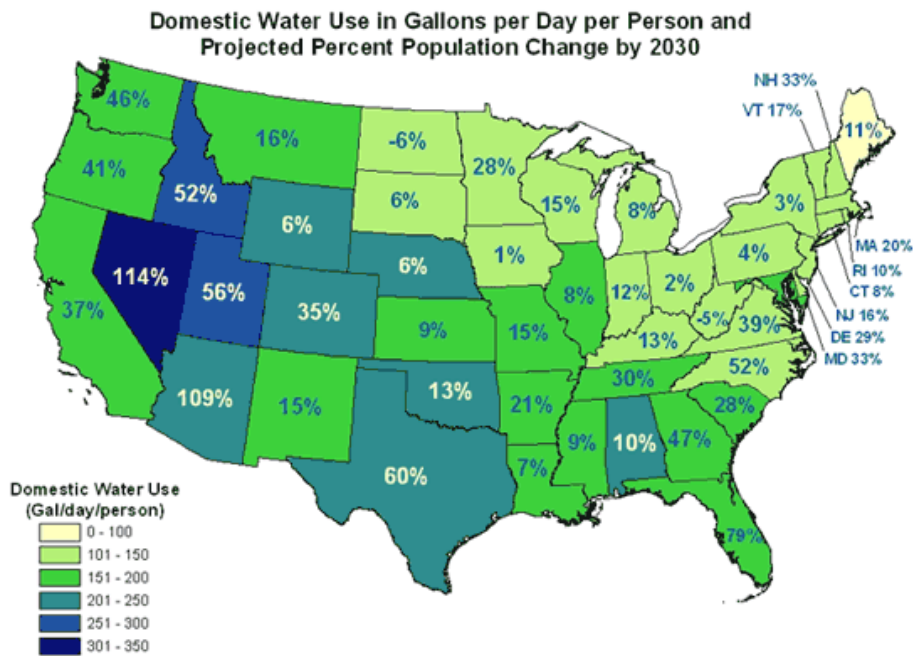
<sup>99</sup> U.S. EPA, *Safe Drinking Water Act (SDWA)*, <http://water.epa.gov/lawsregs/rulesregs/sdwa/index.cfm>.

<sup>100</sup> U.S. EPA, *Summary of the Endangered Species Act*, <http://www2.epa.gov/laws-regulations/summary-endangered-species-act>.

<sup>101</sup> Adler, *supra* n.5, 29 Stan. Envtl. L.J. at 30. The extent of federal involvement in water policy is open to debate. See, e.g., David H. Getches, Article, *The Metamorphosis of Western Water Policy: Have Federal Laws and Local Decisions Eclipsed the States' Role?*, 20 Stan. Envtl. L.J. 3 (2001), available at <https://lawweb.colorado.edu/profiles/pubpdfs/getches/GetchesSELJ.pdf>.

<sup>102</sup> For more discussion of the impact of climate change on water issues, see United States Department of the Interior, U.S. Geological Survey, Circular 1331, *Climate Change and Water Resources Management: A Federal Perspective*, available at <http://pubs.usgs.gov/circ/1331/>.





**Figure 5. EPA Population and Water Use Predictions for the Next Decade<sup>103</sup>**

The U.S. Supreme Court has already ruled that water is an article of interstate commerce.<sup>104</sup> The federal government therefore has the authority under the Commerce Clause of the United States Constitution<sup>105</sup> to establish national water efficiency standards. Indeed, Congress has imposed water efficiency standards on plumbing fixtures, limiting the water that may be used by such common household items as

<sup>103</sup> Eartheasy, *The Outlook for Water Availability in Your Region*, <http://learn.eartheasy.com/2014/03/the-outlook-for-water-availability-in-your-region/>.

<sup>104</sup> See *Sporhase v. Nebraska*, 458 U.S. 941, 953-54 (1982), available at [https://scholar.google.com/scholar\\_case?case=10359653512515838060&q=Sporhase+v.+Nebraska&hl=en&as\\_sdt=6,24&as\\_vis=1](https://scholar.google.com/scholar_case?case=10359653512515838060&q=Sporhase+v.+Nebraska&hl=en&as_sdt=6,24&as_vis=1).

<sup>105</sup> U.S. Constitution, Art. 1, § 8, cl. 3 ("Congress shall have the Power . . . [t]o regulate Commerce . . . among the several States"), available at [http://www.archives.gov/exhibits/charters/constitution\\_transcript.html](http://www.archives.gov/exhibits/charters/constitution_transcript.html). The U.S. Constitution also grants Congress the power to allocate water between the states. E.g., Charles T. DuMars, *Methods for Allocating Water Among States* (Law & Resource Planning Associates, PC 2008), [https://www.owrb.ok.gov/supply/ocwp/pdf\\_ocwp/WaterPlanUpdate/waterlawseminar/DuMars.pdf](https://www.owrb.ok.gov/supply/ocwp/pdf_ocwp/WaterPlanUpdate/waterlawseminar/DuMars.pdf).

toilets, faucets, and showerheads.<sup>106</sup> But household uses are a drop in the proverbial bucket when it comes to scarce resource allocation. Similar limits on agricultural or commercial uses may be in order.<sup>107</sup>

Some commentators advocate nationwide water efficiency standards, enforced, for instance, through the imposition of usage taxes.<sup>108</sup> And, as noted above, the EPA has already implemented several new federal initiatives to address recent and coming water resource issues. But not everyone agrees that the federal government should become overly involved in water resource allocation issues, preferring to leave such matters in the hands of the states.

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<sup>106</sup> See [42 U.S.C. § 6295 \(2015\)](#).

<sup>107</sup> Adler, *supra* n.5, 29 Stan. Envtl. L.J. at 36.

<sup>108</sup> *Id.* at 37-38.



## **VII. Interstate Water Conflicts**

Water respects no boundaries. When a river winds through multiple states, or an aquifer serves different populations, governmental conflicts can arise.

### **A. Water Rights Litigation**

One problem with leaving water-resource allocation or water-quality issues in state hands is that many bodies of water, including groundwater aquifers, cross state borders. Accordingly, their use and allocation may be, and often is, subject to competing claims and the laws of more than one jurisdiction. Some interstate water disputes involve private parties, such as when a downstream plaintiff alleges harm from diversions of an upstream defendant in another state, or when a downstream user/owner causes upstream pollution.<sup>109</sup> In such cases, questions may arise regarding which state's courts have jurisdiction over the parties and the subject matter of the lawsuit. There may also be questions as to which state's laws will apply to resolve the

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<sup>109</sup> *Water Law in a Nutshell* (4<sup>th</sup> ed.), *supra* n.2, at 428-29.

suit. Such litigation can be costly. Thus, other methods of resolving these disputes—or of heading them off in the first place—may be desirable.

Some interstate water disputes involve litigation between the states themselves. In such cases, questions of jurisdiction are less likely to arise, because the United States Supreme Court has original jurisdiction in all water rights cases in which a state is a party.<sup>110</sup> Even so, the requirement of a “justiciable” issue applies, meaning that there must be a real, live case or controversy between the states.<sup>111</sup> In other words, states may not turn to the Court for guidance ahead of an anticipated dispute, or otherwise have the Court forestall issues.

The Supreme Court has developed a comprehensive federal common law doctrine that applies to interstate water allocation, deemed “equitable apportionment.” This doctrine requires that all states be treated equally when water disputes arise. The “first in time, first in line” motto of the prior appropriation doctrine is generally applied by the Court between appropriation states, unless Congress has exercised its power to apportion interstate streams. But the Court will deviate from strict application of prior appropriation principles when the circumstances require such a result based on the equitable-apportionment equal-footing rationale.<sup>112</sup>

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<sup>110</sup> *Id.* at 433; see U.S. Const. Art. III, § 2, available at <http://caselaw.lp.findlaw.com/data/constitution/article03/>.

<sup>111</sup> *Water Law in a Nutshell* (4<sup>th</sup> ed.), *supra* n.2, at 433.

<sup>112</sup> *Id.* at 436-37.

While most water disputes have arisen in the Western United States, recently the East has seen its share of interstate water disputes as well.<sup>113</sup> In early 2010, the United States Supreme Court issued two new decisions regarding interstate water issues, both arising in the East. One of these cases, *South Carolina v. North Carolina*, opened the door for non-state entities to participate as parties in interstate litigation before the Supreme Court.<sup>114</sup> In that case, the Court granted two non-state parties the right to intervene in interstate litigation involving the Catawba River, which runs from the mountains of North Carolina into South Carolina. The Court concluded that the Catawba River Water Supply Project (CRWSP) and Duke Energy Carolinas, which owned and operated eleven dams on the river for electric generation purposes, could intervene in the lawsuit, even though they were not states. The CRWSP, the Court reasoned, was a unique bi-state entity that delivered water and collected revenues on both sides of the border, with an interest that could not be adequately represented by the two state governments. Duke Energy, too, was unique in that it held a Federal Energy Regulatory Commission license that had recently been reissued based on a seventy-party settlement agreement that neither litigating state had signed nor had any interest in protecting. As a result, it, too, could intervene to protect its interests. The City of Charlotte, by contrast, was not allowed to intervene, since it was a typical municipality and had no unique need to intervene to protect its interests.<sup>115</sup>

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<sup>113</sup> See Wes Strickland, *U.S. Supreme Court Opens, Closes Gates in Interstate Water Disputes* (Feb. 8, 2010), available at <http://privatewaterlaw.com/2010/02/08/us-supreme-court-opens-closes-gates-in-interstate-water-disputes/>.

<sup>114</sup> *Id.* For the decision in the *S.C. v. N.C.* case, see [https://scholar.google.com/scholar\\_case?case=10608856305563459212&hl=en&as\\_sdt=6&as\\_vis=1&oi=scholar](https://scholar.google.com/scholar_case?case=10608856305563459212&hl=en&as_sdt=6&as_vis=1&oi=scholar).

<sup>115</sup> *Id.*

The second case involved a motion by the State of Mississippi for leave to file a complaint against the City of Memphis, Tennessee, alleging that the city water utility was over-pumping the Memphis Sand Aquifer and pulling Mississippi's groundwater across state boundaries to the State of Mississippi's detriment. Without issuing a written opinion, the Court denied the motion. In an earlier case—*Colorado v. New Mexico*—the Court had held that a state seeking to prevent or enjoin a diversion by another state bears the burden of proving that the diversion will cause real or substantial injury or damage.<sup>116</sup> Perhaps the Court thought Mississippi would not be able to meet that burden, and thus it denied the State's motion.

More recently, in early 2013, the Oregon Water Resources Department filed its findings of fact and order of determination concluding the administrative phase of the litigation involving the Klamath River Basin, which had begun in the mid-1990s.<sup>117</sup> Only then could the judicial phase begin. The order was largely favorable to the United States, approving numerous federal reserved and state appropriative water rights for several wild and scenic rivers. The order also protected water rights for national wildlife refuges, a national forest, and Indian reservations. Exceptions taken to the order—734 in all—will be litigated individually or in groups in de novo proceedings before the circuit courts. Litigation is not expected to conclude until about 2025.<sup>118</sup>

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<sup>116</sup> *Id.* For the decision in the *Colorado v. New Mexico* case, see <http://supreme.justia.com/us/467/310/case.html>.

<sup>117</sup> *Federal Reserved Water Rights and State Law Claims, Reserved Water Rights and the Supreme Court* (U.S. Dep't of Justice May 12, 2015), <http://www.justice.gov/enrd/federal-reserved-water-rights-and-state-law-claims>.

<sup>118</sup> *Id.*

In June 2011, a three-judge panel of the Eleventh Circuit Court of Appeals overturned the 2009 district court order in what is viewed as a major victory for the State of Georgia and, more specifically, the City of Atlanta.<sup>119</sup> In this dispute, which is part of what is known as the “Tri-States Water Litigation,”<sup>120</sup> the Eleventh Circuit held that the Rivers and Harbors Act of 1946, which authorized the construction of Lake Lanier, “clearly indicates that water supply was an authorized purpose of the Buford Project.”<sup>121</sup> The court remanded to the Corps to reconsider its authority to make water supply determinations, giving the Corps one year to complete the analysis and come up with a “well-reasoned, definitive, and final judgment as to its authority under the RHA and the WSA.”<sup>122</sup>

## **B. Interstate Compacts**

The federal government has also attempted to help resolve interstate water disputes through the implementation of interstate compacts.<sup>123</sup> Interstate compacts are,

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<sup>119</sup> See Megan Baroni, *Lessons from the “Tri-State” Water War* (Am. Bar Ass’n State & Local Law News, vol. 35, no.2, Winter 2012), [http://www.americanbar.org/publications/state\\_local\\_law\\_news/2011\\_12/winter\\_2012/tri-state\\_water\\_war.html](http://www.americanbar.org/publications/state_local_law_news/2011_12/winter_2012/tri-state_water_war.html).

<sup>120</sup> *In re Tri-State Water Rights Litigation*, 639 F. Supp. 2d 1308 (M.D. Fla. 2009), available at <https://casetext.com/case/in-re-tri-state-water-rights-litigation-2> or <http://media.ca11.uscourts.gov/opinions/pub/files/200914657.pdf>.

<sup>121</sup> Baroni, *supra* n.119 (citing *In re MDL-1824 Tri-State Water Rights Litigation*, 644 F.3d at 1193).

<sup>122</sup> *Id.* (citing MDL-1824 at 1205). For further discussion of interstate water conflicts, see *Water Wars: Who Controls the Flow?*, Minn. Pub. Radio, June 15, 2013, available at <http://www.npr.org/2013/06/15/192034094/rivers-run-through-controversies-over-who-owns-the-water>.

<sup>123</sup> See generally Adler, *supra* n.5, 29 Stan. Envtl. L.J. 1 *et seq.*

some say, the preferred method of allocating interstate water resources.<sup>124</sup> A compact is both a federal law and a contract among the signatory states. Congressional ratification is necessary before a compact becomes a law and an enforceable agreement.<sup>125</sup> Interstate water compacts may address a variety of issues, including allocation, pollution and flood control, project development, aquatic biodiversity protection, and basin planning.<sup>126</sup> A Model Interstate Water Compact has been proposed that is intended to serve as a guide and to address the myriad challenges and issues faced by individual states, tribal nations, and the federal government in administering trans-boundary water resources.<sup>127</sup>

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<sup>124</sup> Tarlock, *supra* n.2, *Law of Water Rights & Resources* § 10:24.

<sup>125</sup> *Id.* (citing [Texas v. New Mexico, 462 U.S. 554 \(1983\)](#)).

<sup>126</sup> *Id.* § 5.88.

<sup>127</sup> See Utton Transboundary Resources Center Model Interstate Water Compact, *available at* [http://uttoncenter.unm.edu/pdfs/Model\\_Compact\\_NRJ\\_Final.pdf](http://uttoncenter.unm.edu/pdfs/Model_Compact_NRJ_Final.pdf).



Many interstate water issues have been addressed by interstate compacts.<sup>128</sup>

The Alabama-Coosa-Tallapoosa (ACT) River Basin Compact, for example, apportions the waters of the ACT drainage basin in Georgia and Alabama and creates a commission to promote interstate comity, remove causes of present and future controversies, equitably apportion the surface waters of the ACT, engage in water planning, and develop and share common databases while protecting the water quality, ecology, and biodiversity of the basin.<sup>129</sup>

Interstate compacts can make life more difficult for urban water supplies.

#### Thirsty Cities

The absence of an interstate compact may put municipal supplies at risk, as the Atlanta metro area learned during a recent multi-year drought. That area depends primarily on water stored in Lake Lanier, a U.S. Army Corps of Engineers reservoir. The reservoir is part of the Apalachicola, Chatahoochee-Flint Rivers Basin shared by Alabama, Georgia, and Florida. The three states have been unable to agree on an apportionment, but water has been released from the reservoir to satisfy downstream demands. When Atlanta was in the midst of a drought, the federal government brokered a settlement among the Corps of Engineers, the State of Georgia, water suppliers, and several downstream utilities to shift 248,858 acre feet of Lake Lanier water to supply the Atlanta metro area. Higher water prices would be used to compensate the utilities for lost generation capacity.

However, Corps of Engineers reservoirs are subject to strict operating regimes, and the agency has limited discretion to implement release patterns that are substantially different from original plans, even in response to new demands or changed conditions. The settlement was challenged in *Southeastern Federal Power Customers v. Geren*, 514 F.3d 1316 (D.C. Cir. 2008). The court held that the settlement violated the Water Supply Act, 43 U.S.C. § 390b(d), because major reservoir operational changes require Congressional approval, and because the reallocation constituted over twenty-two percent of the reservoir's storage capacity, which would be the second largest Corps reallocation taken without Congressional approval, and might increase to thirty-five percent in light of projected growth.

The 2008 Great Lakes-St. Lawrence River Basin Compact<sup>130</sup> makes it very difficult to

<sup>128</sup> For a list and description of many interstate compacts, see United States Fish and Wildlife Service, *Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service*, <http://www.fws.gov/laws/lawsdigest/compact.html#list>. See also Oregon State University, College of Science, *Program in Water Conflict Management and Transformation*, <http://ocid.nacse.org/tfdd/domesticCompacts.php>. A list of compacts is also reproduced in the Appendix.

<sup>129</sup> U.S. Fish and Wildlife Service, *Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service*, <http://www.fws.gov/laws/lawsdigest/compact.html#list>.

divert water outside the Great Lakes Basin. Even small communities that straddle the divide between the Great Lakes and other drainages, which often includes a small part of a state, must meet a high standard to gain access to water located only a few miles away. They must show that other sources of water are not feasible and that conservation efforts will not meet projected demands.

Table 3 below lists representative interstate water compacts of various types and includes hyperlinks to further background information about each one.

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<sup>130</sup> [P.L. 110-342 \(2008\)](#).

**Table 3. Interstate Water Compacts<sup>131</sup>**

Name	Issue	Formation Date	Number of member jurisdictions
<a href="#">Alabama-Coosa-Tallapoosa River Basin Compact</a>	Water apportionment	1997	2
<a href="#">Animas - La Plata Project Compact</a>	Water apportionment	1969	2
<a href="#">Apalachicola-Chattahoochee-Flint River Basin Compact</a>	Water apportionment	1997	3
<a href="#">Arkansas River Basin Compact of 1970</a>	Water apportionment	1970	2
<a href="#">Arkansas River Compact of 1949</a>	Water apportionment	1949	2
<a href="#">Arkansas River Compact of 1965</a>	Water apportionment	1965	2
<a href="#">Bay State-Ocean State Compact</a>	Natural resource management	2005	2
<a href="#">Belle Fourche River Compact</a>	Water apportionment	1943	2
<a href="#">Big Blue River Compact</a>	Water apportionment	1971	2
<a href="#">Breaks Interstate Park Compact</a>	Natural resource management	1994	2
<a href="#">Canadian River Compact</a>	Water apportionment		3
<a href="#">Chesapeake Bay Commission Agreement</a>	Natural resource management	1980	3
<a href="#">Colorado River Compact</a>	Water apportionment	1922	7
<a href="#">Columbia River Compact</a>	Natural resource management	1918	2
<a href="#">Columbia River Gorge Compact</a>	Natural resource management	1987	2
<a href="#">Connecticut River Atlantic Salmon Compact</a>	Natural resource management		4

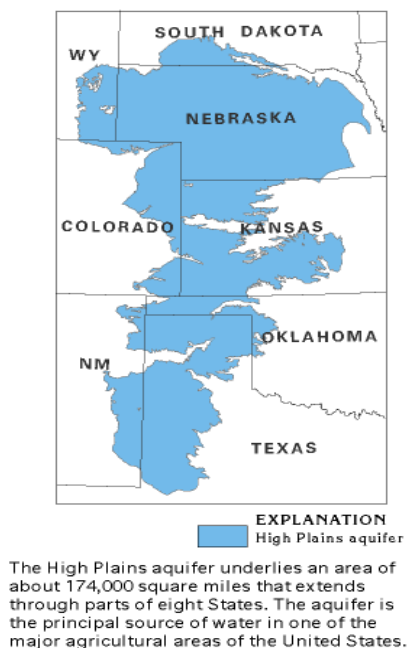
<sup>131</sup> Source: Ballotpedia, *Chart of Interstate Compacts*, [http://ballotpedia.org/Chart\\_of\\_interstate\\_compacts](http://ballotpedia.org/Chart_of_interstate_compacts).

Name	Issue	Formation Date	Number of member jurisdictions
<a href="#">Connecticut River Valley Flood Control Compact</a>	Water resources and flood control	1953	4
<a href="#">Costilla Creek Compact</a>	Water apportionment	1946	2
<a href="#">Delaware River Basin Compact</a>	Natural resource management	1961	
<a href="#">Great Lakes Basin Compact</a>	Natural resource management	1955	8
<a href="#">Gulf States Marine Fisheries Compact</a>	Natural resources management		5
<a href="#">Jennings Randolph Lake Project Compact</a>	Natural resource management	1996	2
<a href="#">Kansas-Missouri Flood Prevention and Control Compact</a>	Water Resources and Flood Control		2
<a href="#">Klamath River Compact</a>	Water apportionment		2
<a href="#">La Plata River Compact</a>	Water apportionment	1925	2
<a href="#">Merrimack River Flood Control Compact</a>	Water resources and flood control		2
<a href="#">New England Interstate Water Pollution Control Compact</a>	Water pollution control	1947	7
<a href="#">New Hampshire-Massachusetts Interstate Sewage and Waste Disposal Compact</a>	Waste	1981	2
<a href="#">New Hampshire-Vermont Interstate Public Water Supply Compact</a>	Water supply		2
<a href="#">New Hampshire-Vermont Interstate Sewage and Waste Disposal Facilities Compact</a>	Waste		2
<a href="#">Ohio River Valley Water Sanitation Compact</a>	Water resources	1948	8
<a href="#">Pacific Marine Fisheries Compact</a>	Fisheries	1947	5
<a href="#">Pacific Ocean Resources Compact</a>	Natural resources management		5

Name	Issue	Formation Date	Number of member jurisdictions
<a href="#">Palisades Interstate Park Compact</a>	Natural resources management	1937	2
<a href="#">Pecos River Compact</a>	Water apportionment	1948	2
<a href="#">Potomac River Compact of 1958</a>	Natural resource management	1962	2
<a href="#">Potomac Valley Compact</a>	Water resource management	1940	5
<a href="#">Pymatuning Lake Compact</a>	Water resources	1994	2
<a href="#">Red River Compact</a>	Water resource management	1978	4
<a href="#">Red River of the North Compact</a>	Water pollution control	1938	3
<a href="#">Republican River Compact</a>	Water apportionment	December 31, 1942	3
<a href="#">Rio Grande Interstate Compact</a>	Water apportionment	1938	3
<a href="#">Sabine River Compact</a>	Water apportionment		
<a href="#">Snake River Compact</a>	Water apportionment	1949	2
<a href="#">South Platte River Compact</a>	Water apportionment	1923	2
<a href="#">Southern States Energy Compact</a>	Natural resource management	1962	18
<a href="#">Susquehanna River Basin Compact</a>	Natural resource management; Flood control	1970	3
<a href="#">Tahoe Regional Planning Compact</a>	Natural resource management	1969	2
<a href="#">Tennessee River Basin Water Pollution Control Compact</a>		1958	
<a href="#">Thames River Valley Flood Control Compact</a>	Water apportionment		2
<a href="#">Tri-State Sanitation Compact</a>	Waste management	1935	3

Name	Issue	Formation Date	Number of member jurisdictions
<a href="#">Upper Colorado River Basin Compact</a>	Water apportionment	1948	5
<a href="#">Upper Niobrara River Compact</a>	Water apportionment	1962	2
<a href="#">Wabash Valley Compact</a>	Natural resource management		2
<a href="#">Wheeling Creek Watershed Protection and Flood Prevention Compact</a>	Flood prevention	1967	2
<a href="#">Yellowstone River Compact</a>	Interstate water apportionment	1951	3

**Figure 6. Map of High Plains Aquifer**



During the last several years, a conflict developed with regard to the waters in the High Plains Aquifer, which is the largest aquifer in the continental United States and a critical source of water for industry and agriculture alike.<sup>132</sup> The aquifer underlies parts of eight different states, and is therefore governed by eight different, and sometimes inconsistent, groundwater regimes.

Figure 6 shows the extensive reach of the High Plains Aquifer.<sup>133</sup>

<sup>132</sup> See Rex A. Mann, Note, *A Horizontal Federalism Solution to the Management of Interstate Aquifers: Considering an Interstate Compact for the High Plains Aquifer*, 88 Tex. L. Rev. 391 (2009).

<sup>133</sup> Source: U.S. Dep't of the Interior, U.S. Geological Survey, [http://water.usgs.gov/oqw/aquiferbasics/ext\\_hpaq.html](http://water.usgs.gov/oqw/aquiferbasics/ext_hpaq.html).

Although compacts are commonly used for managing other types of interstate water resources, they are generally not applied to interstate aquifers.<sup>134</sup> Commentators have advocated the modification of eastern-style river basin compacts to apply to interstate aquifers, thereby providing a set of ground rules to help resolve disputes among the states as to aquifer-related water resource allocation issues. An interstate compact could help promote equitable and sustainable use of aquifers and provide a consistent governance mechanism.<sup>135</sup>

Some states use less formal mechanisms to cooperate among themselves, such as agreements that fall short of full-blown, binding compacts. When they cannot agree, however, the states may need to turn to the courts to resolve their competing claims. Water rights adjudication is similar to a quiet title action.<sup>136</sup> That is, the court does not create new rights, but simply clarifies the rights that already exist.<sup>137</sup> A better solution is to clarify rights up front without the need for litigation, through clear language in deeds and agreements and good counsel at the outset.

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<sup>134</sup> Mann, *supra* n.132, 88 Tex. L. Rev. at 391-92.

<sup>135</sup> *Id.* at 393 *et seq.*

<sup>136</sup> Tarlock, *supra* n.2, *Law of Water Rights & Resources* § 10:24.

<sup>137</sup> *Id.* § 7.2.



## **VIII. Conclusion**

Due a combination of widely distributed sources of supply and the construction of dams and reservoirs, water availability has never placed a serious constraint on urban development. Purchasers of residential and commercial real estate have always had, and continue to have, a reasonable expectation that they can turn on a tap or valve and use whatever amount of water they need. Purchasers of real estate in rural areas not served by a water provider have always been able to drill domestic wells with minimum regulatory oversight. This reasonable expectation of water availability will continue into the future, but developers and public and private water providers will have to work harder to fulfill it. The reasons for this shift include:

- Global climate change and the prospect of more prolonged droughts will impose new duties on providers to ensure that drought-proof supplies are available. New development may be delayed or denied until this assurance is firm.



- Urban water suppliers will face increased competition from the federal and state governments to dedicate more water to instream, environmental uses. The result will be increased litigation over the initiation of new rights for urban development.
- The availability of non-consumptive recreational and access rights and the possibility of competing public rights will become an increasingly important component of waterfront development.
- In all areas of the country, there will be increasing pressure for conservation, which will require the installation of more water-efficient use technology in new development. There will also be pressure to move from average to marginal cost pricing for water.

Members of the real estate profession would be well advised to keep abreast of the many developments in water-related rules, regulations, and philosophies. The more familiar REALTORS® are with the laws regarding obtaining, altering, and transferring water rights, the better they can serve their clients.

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## Appendix: Interstate Compacts<sup>138</sup>

### Interstate Water Allocation Compacts

- [Arkansas River Compact of 1949 \(Kansas & Colorado\) \(PDF\)](#)
- [Arkansas River Compact of 1965 \(Kansas & Oklahoma\) \(PDF\)](#)
- [Arkansas River Basin Compact of 1970 \(Arkansas & Oklahoma\) - as codified in Oklahoma law](#)
- [Bear River Compact of 1978 \(Idaho, Wyoming & Utah\) \(PDF\) - as codified in Wyoming law](#)
- [Belle Fourche River Compact of 1943 \(South Dakota & Utah\) - as codified in South Dakota law](#)
- [Colorado River Compact of 1922 \(Arizona, California, Colorado, Nevada, New Mexico, Utah & Wyoming\) \(PDF\)](#)
- [Costilla Creek Compact of 1944 \(Colorado & New Mexico\) \(as amended in 1963\) \(PDF\)](#)
- [Delaware River Basin Compact of 1961 \(Delaware, New Jersey, New York, Pennsylvania, USA\) \(PDF\)](#)
- [Kansas-Nebraska Big Blue River Compact of 1971 \(Kansas & Nebraska\) \(PDF\)](#)
- [Klamath River Basin Compact of 1957 \(California & Oregon\) - as codified in Oregon law](#)
- [La Plata River Compact of 1922 \(Colorado & New Mexico\) \(PDF\)](#)
- [Pecos River Compact of 1948 \(New Mexico & Texas\) \(PDF\)](#)
- [Red River Compact of 1978 \(Arkansas, Louisiana, Oklahoma & Texas\) - as codified in Oklahoma law](#)
- [Republican River Compact of 1942 \(Colorado, Kansas & Nebraska\) - website of the Republican River Compact Administration \(PDF\)](#)
- [Rio Grande Interstate Compact of 1938 \(Colorado, New Mexico & Texas\) \(PDF\)](#)
- [Sabine River Compact of 1953 \(Louisiana & Texas\)](#)
- [Snake River Compact of 1949 \(Idaho & Wyoming\) - as codified in Wyoming law](#)
- [South Platte River Compact of 1923 \(Colorado & Nebraska\) - as codified in Colorado law](#)
- [Susquehanna River Basin Compact of 1970 \(Maryland, New York & Pennsylvania\) \(PDF\)](#)
- [Upper Colorado River Basin Compact of 1948 \(Arizona, Colorado, New Mexico, Utah & Wyoming\) \(PDF\)](#)
- [Upper Niobrara River Compact of 1962 \(Nebraska & Wyoming\)](#)

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<sup>138</sup> Sources: [http://www.internationalwaterlaw.org/documents/interstate\\_us.html](http://www.internationalwaterlaw.org/documents/interstate_us.html);  
<http://www.fws.gov/laws/lawsdigest/compact.html>;  
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- [Yellowstone River Compact of 1950 \(Montana, North Dakota & Wyoming\) \(PDF\)](#)

#### • Interstate Water Pollution Control Compacts

- [Louisiana-Mississippi Tangipahoa River Waterway Compact of 1988 \(Louisiana & Mississippi\)](#)
- [Mississippi River Interstate Pollution Phase-Out Compact \(Arkansas, Illinois, Iowa, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Tennessee, Wisconsin, & USA\)](#)
- [New England Interstate Water Pollution Control Compact of 1947 \(Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island & Vermont\) \(PDF\)](#)
- [Ohio River Valley Water Sanitation Compact of 1948 \(Indiana, West Virginia, Ohio, New York, Illinois, Kentucky, Pennsylvania & Virginia\) \(PDF\)](#)
- [Potomac Valley Compact of 1970 \(District of Columbia, Maryland, Pennsylvania & West Virginia\)](#)

#### • Interstate Flood Control Compacts

- [Connecticut River Valley Flood Control Compact of 1953 \(Connecticut, Massachusetts, New Hampshire & Vermont\) \(PDF\)](#)
- [Kansas-Missouri Flood Prevention and Control Compact \(Kansas & Missouri\)](#)
- [Thames River Valley Flood Control Compact \(Connecticut & Massachusetts\)](#)
- [Wheeling Creek Watershed Protection And Flood Prevention Compact of 1967 \(Pennsylvania & West Virginia\)](#)

#### • Interstate Water Management Compacts

- [Great Lakes Basin Compact of 1955 \(Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania & Wisconsin\)](#)
- [Great Lakes Basin Compact of 1955 \(Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania & Wisconsin\) \(PDF\)](#) - see background of the Compact [here](#)