

# [***CASE NOTE: BLOOD, SWEAT, AND YEARS: THE COLORADO RIVER COOPERATIVE AGREEMENT ALLOCATES LIMITED WATER SUPPLIES***](https://advance.lexis.com/api/document?collection=analytical-materials&id=urn:contentItem:597S-PR20-00SW-507T-00000-00&context=1516831)

Spring, 2013

**Reporter**

16 U. Denv. Water L. Rev. 445 \*

**Length:** 6983 words

**Author:** ADAM THIESSEN\* \*\*

\* The author would like to thank Joseph Norris of the University of Denver Water Law Review for his guidance and continued efforts in improving the quality of this Note. The author would also like to thank Patricia Wells of Denver Water and Jason Turner of the ***Colorado*** ***River*** Water Conservation District for graciously agreeing to review and comment on this Note before publication.

\*\* For a thorough history of Denver Water, the ***Colorado*** ***River*** District, and the history of East Slope-West Slope conflicts in ***Colorado***, see Patricia Nelson Limerick, A Ditch in Time: The City, the West, and Water (Fulcrum Publishing 2012) and George Sibley, Water Wranglers: The 75-Year History of the ***Colorado*** ***River*** District: A Story About the Embattled ***Colorado*** ***River*** and the Growth of the West (***Colo.*** ***River*** Dist. 2012), which are reviewed in detail by Sarah J. McGrath and Anthony Perko, respectively, in the Book Notes Section of this Volume 16, Issue 2 of the University of Denver Water Law Review.

**Text**

**[\*446]**

[*I*](https://advance.lexis.com/api/document?collection=statutes-legislation&id=urn:contentItem:8T9R-T2X2-D6RV-H374-00000-00&context=1516831). INTRODUCTION: CONFLICTING USE REQUIREMENTS IN ***COLORADO***

The ***Colorado*** ***River*** supplies water to ***Colorado*** and countless other communities throughout Wyoming, Utah, Arizona, Nevada, and California, eventually reaching the Pacific Ocean by way of the Gulf of California. [[1]](#footnote-2)1 Population centers depending on and competing for use of water in this great ***River*** inevitably encounter conflicts. [[2]](#footnote-3)2 This Note will explore conflicting water uses in ***Colorado*** and a newly adopted agreement addressing these major issues: the ***Colorado*** ***River*** Cooperative Agreement ("Agreement").

Thirty-five West Slope entities and Denver Water have invested blood, sweat, and years into the ultimate realization of the Agreement. [[3]](#footnote-4)3 The fifty-one page agreement distills years of collaboration and compromise into three major propositions: "(1) Resolution of historic conflicts and a holistic approach to resolving ***Colorado*** water disputes, (2) Cooperative, long-term efforts to improve the health of the ***Colorado*** ***River*** mainstem and its tributaries, [and] (3) Additional water supply for those who live, work and play on the West Slope and for customers of Denver Water." [[4]](#footnote-5)4 The goal of the Agreement is not only to create a "secure and sustainable water future," but also to ensure survival of the state's water future. [[5]](#footnote-6)5

A. A Historical Perspective on Water Use Conflicts

Spanish and Mexican explorers were among the first to inhabit ***Colorado***. [[6]](#footnote-7)6 By 1861, settlers had formed the territory of ***Colorado*** and its prior appropriation system for water rights. [[7]](#footnote-8)7 The federal government enacted the Homestead Act in 1862, promoting settlement in the region. [[8]](#footnote-9)8 Miners and Mormons joined in settling the expansive West, and Benjamin Eaton was one of the first to begin constructing diversion structures to transport water to dry parcels of land **[\*447]** around the early city of Greeley, ***Colorado***. [[9]](#footnote-10)9 Increasing population and more complex water development projects rendered existing water administration systems inadequate. [[10]](#footnote-11)10 As water demands increased, communities, agriculture, and industry began disputing which water uses should be favored and therefore entitled to superior rights. [[11]](#footnote-12)11 Later interstate compacts, equitable apportionment decrees, and congressional apportionment responded by divvying up limited supplies of water between the Western States. [[12]](#footnote-13)12 Through the long and rich history of ***Colorado*** water law, entrepreneurs like Benjamin Eaton helped to shape today's system of water laws, the modern doctrine of prior appropriation. [[13]](#footnote-14)13

***Colorado***'s water development history also includes a number of notable landmarks, which helped shape the issues that face water managers today. In 1859, Auraria and Cherry Creek Water Company incorporated in order to bring water to Cherry Creek towns through a ditch system. [[14]](#footnote-15)14 One year later, construction began on the City Ditch to bring water from the South Platte ***River*** into Denver. [[15]](#footnote-16)15 As more diversion structures were built along the Front Range from 1870 through the mid-1890s, Denver City Water Company took control of the water supply in the Denver area and began developing artesian wells as another important water supply. [[16]](#footnote-17)16 The discovery of pressure losses, however, in the mid-1890's initiated a long investigation of and push towards extensive statewide groundwater regulation. [[17]](#footnote-18)17

But these first few drops of rain warned of a downpour, and clouds quickly rolled in. ***Colorado***'s population of approximately 500,000 in 1900 quickly **[\*448]** jumped to nearly 800,000 a decade later. [[18]](#footnote-19)18 The steep increase in population required water planners to store and treat large amounts of water in the newly completed Platte Canyon and Cheesman Reservoirs. [[19]](#footnote-20)19 Finally, in 1918, the voters of Denver adopted a new Charter allowing the mayor to appoint the City's first Board of Water Commissioners. [[20]](#footnote-21)20 The Denver Board of Water Commissioners purchased a privately owned water monopoly, Union Water Company, for the purpose of converting it into a public utility service for the city. [[21]](#footnote-22)21

As early as 1921, Denver Water, through George Bull and a group of engineers, began developing the concept of a major transmountain diversion of water from the Fraser and Williams Fork ***Rivers*** for use on the Front Range. [[22]](#footnote-23)22 Denver Water continued to pursue other large diversion projects to satisfy its growing demand for water. Eventually, negotiation between seven Western States led to the signing of the ***Colorado*** ***River*** Compact in 1922, which divided the ***Colorado*** ***River*** into Upper and Lower basins at Lees Ferry, Arizona. [[23]](#footnote-24)23 The rapid pace of development and population expansion along the Front Range prompted Denver Water to complete construction of transbasin diversions through the Moffat Water Tunnel in 1936 and the Montezuma Tunnel in 1962. [[24]](#footnote-25)24 During the sustained drought conditions of the 1950's, Denver Water's completion of the Dillon Reservoir in 1963 again doubled its storage capacity. [[25]](#footnote-26)25

Technological advancements and the proliferation of federal environmental regulation throughout the 1970's and 1980's had a dramatic influence on water supply and development in ***Colorado***. Techniques such as low-water use landscaping and water-efficient irrigation helped to improve water efficiency and lower demand across the Front Range, while the enactment of the National Environmental Policy Act, the Clean Water Act, the Endangered Species Act (and a number of other federal environmental statutes) curbed the ability of entities like Denver Water to fund new large scale water supply projects. [[26]](#footnote-27)26

**[\*449]** In more recent history, 2002 brought one of the worst droughts in ***Colorado*** history, forcing mandatory water restrictions in many communities throughout the state and seeing reservoirs drop to perilously low levels. [[27]](#footnote-28)27 In 2007, during John Hickenlooper's terms as Mayor of Denver, disputes between the West Slope and Denver Water came to a head; both ultimately decided to begin mediation in an attempt to resolve the longstanding disputes. [[28]](#footnote-29)28 Despite the long history of bitter conflict between the two entities, in April 2011, parties from across the state announced a new cooperative approach to managing the limited supply of ***Colorado*** ***River*** water within the state. [[29]](#footnote-30)29

B. Why ***Colorado*** Needed the Cooperative Agreement

The Continental Divide runs north-to-south in ***Colorado***, separating it into two distinct regions, with each having fundamentally different economies and different water demands. [[30]](#footnote-31)30 West of the divide, mountainous terrain receives a majority of ***Colorado***'s precipitation and holds the headwaters of the ***Colorado*** ***River***. [[31]](#footnote-32)31 On the West Slope, recreation and agriculture are the primary demands on water use, implicating activities such as fishing, rafting, sailing, skiing, growing crops, and caring for livestock. [[32]](#footnote-33)32 The arid Front Range, on the other hand, is home to the majority of ***Colorado***'s population. [[33]](#footnote-34)33 While agriculture is the primary consumptive use of water on the Front Range as well, increasing urban populations in the region have demanded new water projects and transfers of water from agricultural to municipal use. [[34]](#footnote-35)34 In much of ***Colorado***, on both sides of the Divide, there is ultimately more demand than supply of the limited resource. [[35]](#footnote-36)35 The relative market value of different water uses will often drive selection of which beneficial uses of water finally win out. [[36]](#footnote-37)36 However, **[\*450]** water markets in the state do not always accurately reflect all water users' preferences for which water uses are developed. [[37]](#footnote-38)37

The ***Colorado*** ***River*** Compact and various other water sharing agreements make allocating enough water for the many beneficial uses within the state a difficult task. Any decision to transfer water out of its basin of origin has immediate impacts on all downstream users in the same water basin. Western communities cannot always survive on the natural blessings of the land; there are too many people and not nearly enough water to satisfy all demands. [[38]](#footnote-39)38 With thousands of livelihoods depending so heavily on this resource, there have been constant battles. [[39]](#footnote-40)39 Thankfully, adverse interests have come together in an attempt to "govern future water project construction and management of ***Colorado*** ***River*** Basin water and [establish] a new process for dealing with long-standing disputes between east and west slope interests." [[40]](#footnote-41)40

Along the Front Range, stresses of population expansion and climate change have required municipalities like Denver Water to rethink their water supply planning strategies. Climate change is occurring, the earth is warming, and the increased temperatures will directly affect ***Colorado***'s water supply. [[41]](#footnote-42)41 Warmer temperatures increase evaporation rates and make less water available for human use, while causing seasonal shifts in precipitation that have large impacts on agricultural uses. [[42]](#footnote-43)42 Climate change will continue to alter the water cycle in ***Colorado*** well into the future, which necessitates bringing parties from throughout the state together more frequently to evaluate the ongoing management of the ***Colorado*** ***River***.

Although the ***Colorado*** ***River*** originates in ***Colorado***, it ends in Mexico. [[43]](#footnote-44)43 There is stiff competition for the right to use ***Colorado*** ***River*** water all along its descent into the Gulf of California. [[44]](#footnote-45)44 Numerous towns, districts, ski areas, and a variety of other West Slope interests have made use of the water and are reluctant to relinquish their historical or future uses. [[45]](#footnote-46)45 Communities throughout ***Colorado*** must continue to invest in more reliable sources of water, better conservation methods, and improved water quality technologies. Realizing the **[\*451]** value of this resource and the need for more statewide cooperation in its administration, Denver Water and a number of West Slope entities negotiated a groundbreaking agreement to govern the future use of ***Colorado*** ***River*** water.

[*II*](https://advance.lexis.com/api/document?collection=statutes-legislation&id=urn:contentItem:8T9R-T352-D6RV-H379-00000-00&context=1516831). SUMMARY OF THE ***COLORADO*** ***RIVER*** COOPERATIVE AGREEMENT

The ***Colorado*** ***River*** Cooperative Agreement has the participation of Denver Water and forty-two West Slope entities, either as signatories to, or recipients of, benefits from the Agreement. [[46]](#footnote-47)46 Denver Water is the primary party providing funding and infrastructure support for improvement of water storage, quality, and conservation projects on the West Slope. [[47]](#footnote-48)47 In return for Denver Water's contributions, the Agreement creates consensus among the parties that the proposed enlargement of the Gross Reservoir should move forward, which will provide additional storage capacity for Denver Water. [[48]](#footnote-49)48 The Agreement ensures water supply and quality, continued environmental benefits, and protection of recreational uses for many West Slope entities while simultaneously "beginning a long-term partnership between Denver Water and the West Slope." [[49]](#footnote-50)49

The rights and obligations set forth in the Agreement become effective "the first business day at least seven days after the last Signatory has signed [the] Agreement." [[50]](#footnote-51)50 When fully implemented, the Agreement will provide a number of benefits to parties across ***Colorado***. It safeguards against future disputes over water projects by obligating all signatories to negotiate and cooperate rather than resort to litigation. [[51]](#footnote-52)51 The majority of the Agreement relates to specific regional water projects and service areas. The following sections discuss several notable provisions of the Agreement.

A. Denver Water's Obligations and Limitations

The first section of the Agreement prevents Denver Water from expanding its existing service area and limits the provision of water outside of that service area. [[52]](#footnote-53)52 One major exception to this limitation is the WISE Partnership Agreement. [[53]](#footnote-54)53 Under the Agreement, recipients of WISE project water are **[\*452]** required to pay to the West Slope a 12.5% charge on all water provided by Denver Water, and implement a reuse or successive use and conservation plan in order to minimize the demand for water outside of Denver Water service area. [[54]](#footnote-55)54 The Agreement, however, does allow Denver Water to lease water outside its service area as a temporary "spot sale," provided the water is available on an intermittent basis and the delivery does not exceed fourteen consecutive days. [[55]](#footnote-56)55 Longer temporary leases, for periods of up to five-years, are also available to Denver Water under the Agreement, subject to certain limitations. [[56]](#footnote-57)56 In both circumstances, recipients of the water must pay a 15% surcharge to the West Slope. Overall, Article I of the Agreement limits Denver Water's delivery of water outside its service area to roughly 72,000 acre-feet, with several enumerated exceptions. [[57]](#footnote-58)57

Next, Denver Water agreed to bolster its conservation and reuse of water in Article II of the Agreement. [[58]](#footnote-59)58 The Agreement confirms Denver Water's commitment to reuse Blue ***River*** water, complete construction of a 17,500 acre-foot per year recycled-water treatment facility, and complete its plan for a 30,000 acre-foot gravel pit storage project. [[59]](#footnote-60)59 These projects, along with Denver Water's commitment to implement the 2006 Denver Water Board-mandated accelerated conservation program, ensure that Denver Water is committed to responsible use of its imported water. [[60]](#footnote-61)60

Denver Water also agreed to a number of other commitments, which Article III of the Agreement separates into geographic regions. [[61]](#footnote-62)61 Denver Water agreed to make a good faith effort to identify and abandon unnecessary conditional water rights on the West Slope. [[62]](#footnote-63)62 Denver Water is also obligated to provide "replacement water to other senior downstream water rights as necessary to ensure that West Slope recipients of the water provided by Denver Water … may use the water." [[63]](#footnote-64)63 The Agreement also specifies that Denver Water's $ 25 million monetary commitment to West Slope supply and water quality projects is subject to escalation four years after the effective date of the Agreement. [[64]](#footnote-65)64 **[\*453]** The following sections discuss some of the additional details of Denver Water's obligations and other Agreement provisions.

B. Summit County

In Summit County, ***Colorado***, the Agreement requires Denver Water to contribute $ 11 million for various purposes. [[65]](#footnote-66)65 Denver Water will deposit $ 1 million of the total amount to a wastewater treatment plant fund administered by Summit County to offset the impacts of lower or reduced outflows from Dillon Reservoir. [[66]](#footnote-67)66 Denver Water will deposit another $ 1 million, to be used as 50% matching funds for environmental enhancement projects in Summit County; in addition, Summit County and the towns of Dillon, Silverthorne, Frisco, and Breckenridge will receive the remaining $ 9 million in equal shares. [[67]](#footnote-68)67 Beyond monetary considerations, the Agreement requires Denver Water to provide an additional 1,743 acre-feet of water per year from Dillon Reservoir storage for use by various Summit County entities. [[68]](#footnote-69)68 In addition, Denver water must use its best efforts to maintain water levels in Dillon Reservoir at or above 9,012 feet in elevation during the summer months, to meet Summit County's recreational and aesthetic needs. [[69]](#footnote-70)69 The Agreement also provides that Denver Water will waive its right to reduce bypass flows at Dillon Reservoir unless it has banned residential lawn watering within its service area. [[70]](#footnote-71)70

C. Eagle County

In Eagle County, Denver Water must receive prior approval of the Eagle County Commissioners, the ***River*** District, Eagle Park Reservoir ***Co***., Eagle ***River*** Water & Sanitation Dist., and the Upper Eagle Regional Water Authority before pursuing any new acquisitions of water in the Eagle ***River*** Basin. [[71]](#footnote-72)71 In addition, the Agreement ultimately prohibits Denver Water from opposing any future interconnection between Clinton Reservoir and Eagle Park Reservoir as long as water booked over to Denver in Clinton Reservoir under the 1992 Clinton Agreement remains in that reservoir. [[72]](#footnote-73)72

**[\*454]**

D. Grand County and the Fraser, Williams Fork, and Upper ***Colorado*** ***River*** Basins

Under several other Agreement provisions, Denver Water will distribute another $ 11 million to Grand County water projects in the following manner: (i) $ 2 million for measures improving water quality, including increasing wastewater treatment plant capacity; (ii) $ 2 million for improving aquatic habitat in ***rivers***; (iii) $ 50,000 for construction of a sediment catch-basin above Denver Water's diversion structures on the Fraser ***River***; (iv) $ 2 million for future environmental enhancements in the area; (v) $ 1 million for the Windy Gap Pumping Fund; and (vi) the remaining $ 3.95 million to offset costs of Grand County supply projects. [[73]](#footnote-74)73 Denver Water will also provide 1,000 acre-feet of water annually from the Fraser ***River*** Collection System ("Fraser System") and up to 1,000 acre-feet each year in Williams Fork Reservoir to Grand County for environmental purposes and any incidental recreational benefit. [[74]](#footnote-75)74 Similar to the provisions governing Dillon Reservoir in Summit County, Denver Water also waives its right to reduce bypass flows from the Fraser System unless it has banned residential lawn watering. [[75]](#footnote-76)75 Finally, after Denver Water receives all necessary permits for its Gross Reservoir enlargement, it will provide an additional 375 acre-feet of water to Grand County water users for municipal and ski area use. [[76]](#footnote-77)76

In addition to the financial and water contributions to Grand County entities, the Agreement also includes several other obligations for Denver Water. Most important is the agreement between Denver Water, Grand County, Middle Park Water Conservancy District, and the ***Colorado*** ***River*** Water Conservation District to implement the Learning by Doing Cooperative Effort, which is intended to protect and restore the aquatic environment in Grand County. [[77]](#footnote-78)77 The Agreement allows the Grand County Mutual Ditch & Reservoir ***Co***. to move water acquired through its purchase of Vail Ditch shares through Denver Water's Fraser System. [[78]](#footnote-79)78 The Agreement also prohibits Denver Water from opposing a proposed recreational in-channel diversion on the ***Colorado*** ***River*** below Gore Canyon. [[79]](#footnote-80)79

E. Green Mountain Reservoir Administration

Article V of the Agreement appropriately considers administration of the Bureau of Reclamation's Green Mountain Reservoir, which has created conflict **[\*455]** among West Slope and Front Range entities since 1954. [[80]](#footnote-81)80 The Agreement seeks to resolve Green Mountain Reservoir disputes because it "will provide significant benefits for water users on both the east and west slopes of ***Colorado***, including maximizing beneficial use of the waters of the state, reducing litigation costs, and providing clarity as to water rights administration." [[81]](#footnote-82)81 The Agreement specifically recognized the Green Mountain Reservoir Administrative Protocol which clarifies: (i) the fill schedule for Green Mountain Reservoir; (ii) definition and administration of the fill season; (iii) administration of water rights during the fill season; and (iv) operation of the Green Mountain Reservoir in response to downstream calls. [[82]](#footnote-83)82 Additionally, the Agreement makes as much water as possible available for upstream use by defining replacement obligations and "addressing the relative priority of the Green Mountain Water Rights, the Cities' [Denver and ***Colorado*** Springs] water rights, and the Climax's C.A. 1710 rights." [[83]](#footnote-84)83

F. The Shoshone Call

The Public Service Company of ***Colorado*** owns and operates the Shoshone Power Plant on the mainstem of the ***Colorado*** ***River*** in Glenwood Canyon. [[84]](#footnote-85)84 When the Plant is operating, it can command the entire flow of the ***river*** by exercising senior rights against upstream junior users. [[85]](#footnote-86)85 The Shoshone Call is the amount of water called upon by the Plant to produce hydroelectric energy and effectively determines the flow of the ***Colorado*** ***River*** during much of the year. [[86]](#footnote-87)86 In order to mitigate any potential adverse impacts of an outage at the Shoshone Plant, the Agreement provides that "Signatories agree to implement the operational procedures described in … the "Shoshone Outage Protocol.'" [[87]](#footnote-88)87 Ultimately, the goal is "to achieve permanent management of the flow of the ***Colorado*** ***River*** so that the flow mimics the Shoshone Call Flows." [[88]](#footnote-89)88

Please note this is not a complete discussion of all Agreement provisions, but rather a discussion of the most financially and politically significant provisions. There are many other detailed provisions relating to water rights pending statewide, permit decisions, and other matters. The reader is strongly encouraged to read the full text of the Agreement for a complete and detailed perspective of all rights and responsibilities involved. [[89]](#footnote-90)89

**[\*456]**

[*III*](https://advance.lexis.com/api/document?collection=statutes-legislation&id=urn:contentItem:8T9R-T372-8T6X-731R-00000-00&context=1516831). THE FUTURE APPROPRIATION OF ***COLORADO***'S WATER

What does the Agreement mean for the future of ***Colorado*** water administration? Most importantly, the Agreement ensures cooperative development and protection of water as a severely limited natural resource in ***Colorado***. [[90]](#footnote-91)90 Developers and planners, unfortunately, cannot create more water. They can, however, develop techniques to preserve the supply and ensure the most is made of each precious drop of the lifeblood. As Governor John Hickenlooper said best, "the collaborative spirit is alive and well in ***Colorado***." [[91]](#footnote-92)91

As the largest single municipal water provider in the state, Denver Water is also forming mutually beneficial relationships with other water entities in the state. The monetary contributions by Denver Water will assist West Slope communities in offsetting the costs of a number of large, costly water projects and transbasin diversions. Denver Water had and continues to have the incentive to improve statewide water supplies not only for itself in the future, but also for the survival of neighboring communities, fellow Coloradans, and cherished ecosystems.

[*IV*](https://advance.lexis.com/api/document?collection=statutes-legislation&id=urn:contentItem:8T9R-T3H2-D6RV-H37G-00000-00&context=1516831). CONCLUSION

The ***Colorado*** ***River*** Cooperative Agreement is a fantastic example of feuding factions joining forces in efforts to protect their water supply and ensure the survival of diverse livelihoods within the state. The phrase "violence begets violence" [[92]](#footnote-93)92 - utilized by such visionaries as Dr. Martin Luther King, Jr. [[93]](#footnote-94)93 - still rings true. Fighting over water rights will only ensure that aggrieved parties will continue to fight. When interested parties come together to work toward a common goal, the combined efforts will ultimately lead to the best possible resolutions for today's water planning issues.

University of Denver Water Law Review

Copyright (c) 2013 University of Denver Sturm College of Law

University of Denver Water Law Review

**End of Document**

1. 1 Susan J. Buck, Gregory W. Gleason, & Mitchel S. Jofuku, "The Institutional Imperative": Resolving Transboundary Water Conflict in Arid Agricultural Regions of the United States and The Commonwealth of Independent States, 33 Nat. Resources J. 595, 610 (1993). [↑](#footnote-ref-2)
2. 2 E.g,. [*Arizona Power Auth., 28 F.P.C. 769, 782 (Ariz. Power Auth. 1962)*](https://advance.lexis.com/api/document?collection=administrative-materials&id=urn:contentItem:3SJM-7Y90-002B-C17V-00000-00&context=1516831) (order granting limited intervention out of time). [↑](#footnote-ref-3)
3. 3 Bruce Finley, Historic water pact counts on cooperation, conservation and reuse, Denver Post, Apr. 28, 2011. [↑](#footnote-ref-4)
4. 4 ***Colorado*** ***River*** Cooperative Agreement: Path to a Secure Water Future (May 15, 2012), [*http://www.crwcd.org/media/uploads/CRCA\_Press\_kit*](http://www.crwcd.org/media/uploads/CRCA_Press_kit) \_Two\_Pager\_5-12\_.pdf. [↑](#footnote-ref-5)
5. 5 The Agreement contains fifty-one pages but incorporates hundreds of additional pages of attachments including maps, diagrams, specifications, and terms and conditions. Id. [↑](#footnote-ref-6)
6. 6 Norman K. Johnson & Charles T. DuMars, A Survey of the Evolution of Western Water Law in Response to Changing Economic and Public Interest Demands, 29 Nat. Resources J. 347, 349 (1989). [↑](#footnote-ref-7)
7. 7 Justice Gregory J. Hobbs, Jr., ***Colorado*** Water Law: An Historic Overview, 1 U. Denv. Water L. Rev. 1, 5, 17 (1997). [↑](#footnote-ref-8)
8. 8 Id. at 5. [↑](#footnote-ref-9)
9. 9 Id.; Johnson & DuMars, supra note 6, at 349. [↑](#footnote-ref-10)
10. 10 See Johnson & DuMars, supra note 6, at 351. [↑](#footnote-ref-11)
11. 11 Carolyn F. Burr, Rebecca W. Watson, & Chelsea Huffman, Water: The Fuel for ***Colorado*** Energy, [*15 U. Denv. Water L. Rev. 275, 326 (2012);*](https://advance.lexis.com/api/document?collection=analytical-materials&id=urn:contentItem:56C0-52M0-00SW-5033-00000-00&context=1516831) see generally, [*City of Thornton v. Bijou Irr.* ***Co****., 926 P.2d 1 (****Colo.*** *1996)*](https://advance.lexis.com/api/document?collection=cases&id=urn:contentItem:3RX3-YVT0-003D-916Y-00000-00&context=1516831) (dispute over importation of transmountain water and requisite intent to reuse the water at time of original appropriation); [*Upper Black Squirrel Creek Ground Water Mgmt. Dist. v. Gross, 993 P.2d 1177 (****Colo.*** *2000)*](https://advance.lexis.com/api/document?collection=cases&id=urn:contentItem:3YMN-C580-0039-431V-00000-00&context=1516831) (whether ground water management district had jurisdiction to enforce well priority); [*Chatfield East Well* ***Co****., Ltd. v. Chatfield East Prop. Owners Ass'n, 956 P.2d 1260 (****Colo.*** *1998)*](https://advance.lexis.com/api/document?collection=cases&id=urn:contentItem:3SHS-22G0-0039-444T-00000-00&context=1516831) (developer did not have ownership interest in water beneath subdivision, or inchoate statutory right to extract and use aquifer water). [↑](#footnote-ref-12)
12. 12 Johnson & DuMars, supra note 6, at 352. [↑](#footnote-ref-13)
13. 13 Id. at 351. "Under the prior appropriation doctrine … water rights are acquired by diverting water and applying it for a beneficial purpose. A distinctive feature of the prior appropriation doctrine is the rule of priority, under which the relative rights of water users are ranked in the order of their seniority." [***Colorado*** *v. New Mexico, 459 U.S. 176, 196 n.4 (1982)*](https://advance.lexis.com/api/document?collection=cases&id=urn:contentItem:3S4X-57V0-003B-S1W7-00000-00&context=1516831) (citing 1 R. Clark, Waters and Water Rights (1967)). [↑](#footnote-ref-14)
14. 14 Clyde Lyndon King, The History of the Government of Denver: With Special Reference to its Relations With Public Service Corporations 64-65 (Fisher Book ***Co***. 1911). [↑](#footnote-ref-15)
15. 15 Denver Bd. of Water Comm'rs, Water for Tomorrow: The History, Results, Projections and Update of the Integrated Resource Plan 3 (2002), available at [*http://www.cakex.org/sites/default/files/documents/Denver%*](http://www.cakex.org/sites/default/files/documents/Denver%) 20Water.pdf. [↑](#footnote-ref-16)
16. 16 Ralf Topper & Bob Raynolds, ***Colorado*** Found. for Water Educ., The Citizen's Guide to Denver Basin Groundwater 13 (2007). [↑](#footnote-ref-17)
17. 17 Id. [↑](#footnote-ref-18)
18. 18 U.S. Census Bureau, Population of Counties by Dicennial Census: 1900 to 1990 (Mar. 27, 1995), [*http://www.census.gov/population/cencounts/co190090.txt*](http://www.census.gov/population/cencounts/co190090.txt) (compiled and edited by Richard L. Forstall). [↑](#footnote-ref-19)
19. 19 ***Water for Tomorrow, supra*** note 15, at 3. [↑](#footnote-ref-20)
20. 20 Hobbs, supra note 7, at 15. [↑](#footnote-ref-21)
21. 21 ***Water for Tomorrow, supra*** note 15, at 3 (private operation of water systems in Denver from 1868 to 1918 was "characterized by in-fighting, price gouging and unsavory competitive practices"). [↑](#footnote-ref-22)
22. 22 Charles C. Fisk, The Metro Denver Water Story: A Memoir 89 (on file with ***Colorado*** State University Morgan Library) available at [*http://digitool.library.colostate.edu/*](http://digitool.library.colostate.edu/) R/?func=dbin-jump-full&object\_id=5649&local\_base=GEN01. [↑](#footnote-ref-23)
23. 23 Hobbs supra note 7, at 17. [↑](#footnote-ref-24)
24. 24 First delivery of water through the Moffat Water Tunnel (also known as the Fraser System) took place in 1936, only one year after construction began. Construction for the Montezuma Tunnel took place from 1946-1962 and Denver Water later changed its name to the Harold D. Roberts Tunnel. Water for Tomorrow, supra note 15, at 3, 40. [↑](#footnote-ref-25)
25. 25 John Henz et al., HDR Inc., Historical Perspectives on ***Colorado*** Drought 2 (2003), [*http://www.hdrweather.com/publications/journals/Coloradodrought*](http://www.hdrweather.com/publications/journals/Coloradodrought) paper2003.pdf;***Water for Tomorrow, supra*** note 15, at 3. [↑](#footnote-ref-26)
26. 26 ***Water for Tomorrow, supra*** note 15, at 6. [↑](#footnote-ref-27)
27. 27 Fisk, supra note 22, at 456-60. [↑](#footnote-ref-28)
28. 28 The ***Colorado*** ***River*** Cooperative Agreement Summary (May 15, 2012), [*http://www.denverwater.org/docs/assets/9CAF994F-FF57-8A3B-21FD604379E74EE1/ColoradoRiverCooperativeAgreementSummary.pdf*](http://www.denverwater.org/docs/assets/9CAF994F-FF57-8A3B-21FD604379E74EE1/ColoradoRiverCooperativeAgreementSummary.pdf) [hereinafter CRCA 6-Page Summary]. [↑](#footnote-ref-29)
29. 29 Finley, supra note 3. [↑](#footnote-ref-30)
30. 30 ***City and Cnty. of Denver v. Northern Colo. Water Conservancy Dist., 276 P.2d 992, 995 (Colo. 1954).*** [↑](#footnote-ref-31)
31. 31 [*Brief for Complainant at 60,* ***Colorado*** *v. Kansas, 320 U.S. 383 (1943).*](https://advance.lexis.com/api/document?collection=cases&id=urn:contentItem:3S4X-3XB0-003B-71TC-00000-00&context=1516831) [↑](#footnote-ref-32)
32. 32 [*Carstens v. Lamm, 543 F. Supp. 68, 97 (D.* ***Colo.*** *1982).*](https://advance.lexis.com/api/document?collection=cases&id=urn:contentItem:3S4N-GWT0-0039-S0D6-00000-00&context=1516831) [↑](#footnote-ref-33)
33. 33 [*In re* ***Colorado*** *Gen. Assembly, 828 P.2d 185, 202 (****Colo.*** *1992);*](https://advance.lexis.com/api/document?collection=cases&id=urn:contentItem:3RX4-0H60-003D-9183-00000-00&context=1516831) see also Brief for the United States in [*Response to the Exceptions of Kansas and* ***Colorado*** *at 8, Kansas v.* ***Colorado****, 514 U.S. 673 (1995).*](https://advance.lexis.com/api/document?collection=cases&id=urn:contentItem:3S3D-0XY0-003B-R3M8-00000-00&context=1516831) [↑](#footnote-ref-34)
34. 34 Municipal and residential uses of water include everything from brushing teeth and watering lawns, to replenishing the human body, fighting fires, and even brewing beer. [*Carstens, 543 F. Supp. at 84.*](https://advance.lexis.com/api/document?collection=cases&id=urn:contentItem:3S4N-GWT0-0039-S0D6-00000-00&context=1516831) [↑](#footnote-ref-35)
35. 35 Burr et al., supra note 11, at 280. For a more complete discussion of the economic analysis of water markets, see Charles W. Howe & Christopher Goemans, Water Transfers and Their Impacts: Lessons from Three ***Colorado*** Water Markets, 39 J. of the Am. Water Res. Ass'n 1055 (2003). [↑](#footnote-ref-36)
36. 36 Howe & Goemans, supra note 35, at 1055. For example, an angler may be able to afford leaving his or her tap running at home while brushing his or her teeth; however, he or she may take to conserving water after realizing that running the water at home is drying up his or her favorite fishing stream. [↑](#footnote-ref-37)
37. 37 Id. at 1056. Inefficiencies in water markets include: imperfect information, unequal bargaining power, etc. [↑](#footnote-ref-38)
38. 38 Burr et al., supra note 11, at 280. [↑](#footnote-ref-39)
39. 39 See supra text accompanying note 11. [↑](#footnote-ref-40)
40. 40 Historic water pact signed between ***Colorado***'s East, West Slope interests, Denver Bus. J. (May 15, 2012), [*http://www.bizjournals.com/denver/news/2012/05/15/historic-water-pact-signed-between.html*](http://www.bizjournals.com/denver/news/2012/05/15/historic-water-pact-signed-between.html). [↑](#footnote-ref-41)
41. 41 See generally Robin Kundis Craig, "Stationary Is Dead" - Long Live Transformation: Five Principles for Climate Change Adaptation Law, [*34 Harv. Envtl. L. Rev. 9 (2010).*](https://advance.lexis.com/api/document?collection=analytical-materials&id=urn:contentItem:4YSR-T6P0-00CW-204D-00000-00&context=1516831) [↑](#footnote-ref-42)
42. 42 Climate change is causing seasonal shifts in precipitation, which is anticipated to shift runoff replenishing reservoirs and streams to the early spring, reducing amount of water available in the summer months. [*Id. at 9 n.38*](https://advance.lexis.com/api/document?collection=analytical-materials&id=urn:contentItem:4YSR-T6P0-00CW-204D-00000-00&context=1516831) (citing P.C.D. Milley et al., Stationary Is Dead: Whither Water Management?, 319 Science 573, 573 (2008)). [↑](#footnote-ref-43)
43. 43 Charles J. Meyers, The ***Colorado*** ***River***, 19 Stan. L. Rev. 1, 1 (1966). [↑](#footnote-ref-44)
44. 44 Id. The ***Colorado*** ***River*** Compact, signed in 1922, governs allocation of ***Colorado*** ***River*** water and, therefore, parties in ***Colorado*** must take into account waters allocated to downstream states in their own allocation agreements for water within the state. [*Bd. of Cnty. Comm'rs of Cnty. of Arapahoe v. Crystal Creek Homeowners Assoc., 14 P.3d 325, 333 (****Colo.*** *2000).*](https://advance.lexis.com/api/document?collection=cases&id=urn:contentItem:41PW-C4S0-0039-403H-00000-00&context=1516831) [↑](#footnote-ref-45)
45. 45 Meyers, supra note 43, at 2-4. [↑](#footnote-ref-46)
46. 46 CRCA 6-Page Summary, supra note 28, at 1-2. [↑](#footnote-ref-47)
47. 47 Id. at 3. [↑](#footnote-ref-48)
48. 48 Id. [↑](#footnote-ref-49)
49. 49 Id. at 2. [↑](#footnote-ref-50)
50. 50 ***Colorado*** ***River*** Cooperative Agreement Cover Page, 1 (May 15, 2012), [*http://www.denverwater.org/docs/assets/31BFA3E6-BC18-15E1-C74D1F13ACA992B5/ColoradoRiverCooperativeAgreement.pdf*](http://www.denverwater.org/docs/assets/31BFA3E6-BC18-15E1-C74D1F13ACA992B5/ColoradoRiverCooperativeAgreement.pdf) [hereinafter CRCA]. As of the date of publication, most of the major signatories had signed the Agreement, although the reader is encouraged to discern the status of the Agreements' signatories at the time of reading. [↑](#footnote-ref-51)
51. 51 Id. at 46. [↑](#footnote-ref-52)
52. 52 Id. at 1. [↑](#footnote-ref-53)
53. 53 Id. at 5-6. WISE, the Water, Infrastructure and Supply Efficiency Agreement is a collaboration between seventeen entities to utilize unused capacity in Aurora Water's Prairie Waters Project, along with seasonal unused water supplies in Denver and Aurora. Tracy Kosloff, A WISE Project for the Denver Metro Area, AWRA ***Colorado*** (Mar. 30, 2010), [*http://awracolorado.havoclite.com/newsletter/water-infrastructure-and-supply-efficiency-wise-project-mar-30-*](http://awracolorado.havoclite.com/newsletter/water-infrastructure-and-supply-efficiency-wise-project-mar-30-) 2010/. [↑](#footnote-ref-54)
54. 54 CRCA, supra note 50, at 5-6. [↑](#footnote-ref-55)
55. 55 Id. at 3. Spot sales of water are also restricted during certain specified holidays, under specific reservoir levels, during listed Dillon Reservoir outflow conditions, and during certain Shoshone call events. Id. at 3-5. [↑](#footnote-ref-56)
56. 56 Id. at 5. [↑](#footnote-ref-57)
57. 57 Id. at 1-7. [↑](#footnote-ref-58)
58. 58 Id. at 8-9. [↑](#footnote-ref-59)
59. 59 Id. at 8. [↑](#footnote-ref-60)
60. 60 The Agreement mandates that Denver Water provide an annual progress report to West Slope Signatories if it decides to substitute any changed conservations measures. Id. at 8-9. [↑](#footnote-ref-61)
61. 61 Denver Water's other commitments include those in the following sections: (A) General; (B) Summit County - Blue ***River***; (C) Clinton Reservoir Agreements; (D) Eagle County; (E) Grand County and Fraser, Williams Fork and Upper ***Colorado*** ***River*** Basins; (F) Grand Valley; and (G) Middle ***Colorado*** ***River***. Id. at 10-27. [↑](#footnote-ref-62)
62. 62 Id. at 10. [↑](#footnote-ref-63)
63. 63 Id. [↑](#footnote-ref-64)
64. 64 West Slope entities will use the monetary contributions to fund water-related projects such as environmental enhancements, improved wastewater treatment facilities, improved pumping, retention ponds, nutrient loading, and improving aquatic habitat. Id. at 11-27. [↑](#footnote-ref-65)
65. 65 Id. at 11. [↑](#footnote-ref-66)
66. 66 Id. [↑](#footnote-ref-67)
67. 67 Id. [↑](#footnote-ref-68)
68. 68 Id. at 12, 14. [↑](#footnote-ref-69)
69. 69 Id. at 13. Successful operation of the Frisco Marina requires a water elevation of 9,012 feet; Summit County and Denver Water can agree to lower this elevation requirement as a result of physical changes to the Marina or the Reservoir. Id. at 4. [↑](#footnote-ref-70)
70. 70 Id. at 15-16. [↑](#footnote-ref-71)
71. 71 Id. at 18. [↑](#footnote-ref-72)
72. 72 Id. at 19. [↑](#footnote-ref-73)
73. 73 Id. at 20-24. [↑](#footnote-ref-74)
74. 74 Denver Water must provide the 1,000 acre-feet of water available for environmental purposes at times and locations requested by Grand County. Id. at 22. [↑](#footnote-ref-75)
75. 75 Id. at 23-24. [↑](#footnote-ref-76)
76. 76 The Agreement allocates 100 acre-feet to Winter Park Recreational Association and divides the remaining 275 acre-feet in equal shares of 68.75 acre-feet among Fraser, Granby, Grand County Water & Sanitation District No.1, and Winter Park Water & Sanitation District. Id. at 25. [↑](#footnote-ref-77)
77. 77 Id. at 21. [↑](#footnote-ref-78)
78. 78 Id. at 26. [↑](#footnote-ref-79)
79. 79 Id. [↑](#footnote-ref-80)
80. 80 Justice Gregory J. Hobbs, Jr., State Water Politics Versus An Independent Judiciary: The ***Colorado*** and Idaho Experiences, [*5 U. Denv. Water L. Rev. 122, 133 (2001).*](https://advance.lexis.com/api/document?collection=analytical-materials&id=urn:contentItem:45B5-0HF0-00SW-506Y-00000-00&context=1516831) [↑](#footnote-ref-81)
81. 81 CRCA, supra note 50, at 33. [↑](#footnote-ref-82)
82. 82 Id. at 33-34. [↑](#footnote-ref-83)
83. 83 Id. at 34. [↑](#footnote-ref-84)
84. 84 Id. at 35. [↑](#footnote-ref-85)
85. 85 The Shoshone senior water right produces hydroelectric power under two water rights: the 1902 Shoshone senior right of 1250 cfs, and the 1929 Shoshone junior rights of 158 cfs. Id. [↑](#footnote-ref-86)
86. 86 Id. [↑](#footnote-ref-87)
87. 87 Id. [↑](#footnote-ref-88)
88. 88 Id. at 38. [↑](#footnote-ref-89)
89. 89 For the full text of the ***Colorado*** ***River*** Cooperative Agreement, see CRCA, supra note 50. [↑](#footnote-ref-90)
90. 90 See ***Denver Bus. J., supra*** note 40. [↑](#footnote-ref-91)
91. 91 Id. [↑](#footnote-ref-92)
92. 92 Matthew 26:52. [↑](#footnote-ref-93)
93. 93 Martin Luther King, Jr., The Current Crisis in Race Relations, New South, March 1, 1958, at 3; see also Martin Luther King, Jr., A Testament of Hope 87 (James M. Washington, 1st ed. 1991). [↑](#footnote-ref-94)