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TRUSTING THE PUBLIC: RESHAPING COLORADO WATER LAW IN THE FACE OF CHANGING PUBLIC VALUES

LISA GREENBERG*

Abstract: Water is a precious resource. Throughout Colorado, water has historically been allocated according to the rule of prior appropriation, where the principal method of allocation is “first in time, first in right.” As Colorado changes over time, the rule’s inflexible application has resulted in economically inefficient and environmentally detrimental consequences. This is exemplified in the unreliable water distribution of the Windy Gap Project, and the projected detrimental environmental consequences of the Windy Gap Firming Project. Thus, Colorado water law must change to protect the overuse and misuse of such a scarce resource. Despite explicit renunciation of both the public trust and public interest doctrines, Colorado water law must evolve to incorporate the protective values and ideals inherent in those principles. To do so, Colorado should create a public interest system that outlines specific values of importance to the community. Then, the state should use those values to establish a comprehensive public trust that can be integrated with the current prior appropriation system.

In an age when man . . . is blind even to his most essential needs for survival, water along with other resources has become the victim of his indifference.

—Rachel Carson1

INTRODUCTION

When you turn on the tap, or the shower, or the washing machine, out comes water. For many people, there is no consideration about where the water comes from or how much they can use. Unfortunately, the abundance of water is a major misconception.2 In the near future,

1 RACHEL CARSON, SILENT SPRING 39 (40th anniversary ed. 2002).
water will likely become a highly sought after and fought over resource.\(^3\) One author even argues that while the wars of the 20th century were fought over oil, the wars of the 21st century will be fought over water.\(^4\)

In the barren American Southwest, communities thrive on the water from the Colorado River and its tributaries.\(^5\) The thirteen hundred mile long river winds through Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, and California, seven of the driest states in the country.\(^6\) A network of dams, aqueducts, reservoirs, and pumping stations tame the river, diverting the water to its intended use.\(^7\) Recent high levels of water consumption, population growth, and drought, however, have strained the Colorado River’s water supply.\(^8\) Already, demand for water among communities along the Colorado River exceeds the water supply.\(^9\) For the last decade, upstream communities

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\(^4\) *Will the Next War Be Fought over Water?*, supra note 3.


\(^7\) *See Robert W. Adler, RESTORING COLORADO RIVER ECOSYSTEMS: A TROUBLED SENSE OF IMMENSITY 4* (2007); Glennon, * supra* note 6, at 20–21.

\(^8\) Hennessy, * supra* note 5. Between 1960 and 1990 domestic uses of water in the West more than doubled and the region’s population grew seventy-five percent. Gregory J. Hobbs, Jr., *COLORADO WATER LAW: AN HISTORICAL OVERVIEW*, 1 U. DENV. WATER L. REV. 1, 16 (1997). In 2007 an ongoing drought in the Southwest brought the Colorado River to its lowest levels since recorded measurements began. Gertner, * supra* note 6. Other projections showed that in 2007 Lake Mead, the primary reservoir for Las Vegas, and Lake Powell in southern Utah held half of their capacity and were likely never to be full again. *See id.*

have emptied the Colorado River before it reaches its endpoint in the Sea of Cortez. Authorities expect that by 2030, populations dependent on the River will increase fifty-three percent over their 2000 numbers. As a result, cities and towns across the Southwest have employed a variety of water-saving measures to avert immediate massive water-shortages. Such actions, however, will not solve the water-shortage problem in the long-term.

In Colorado the water scarcity problem is compounded by the state’s strict adherence to the one hundred-year-old “first in time, first in right” prior appropriation system. Until Colorado significantly alters the rule to take into account new environmental concerns, changed circumstances, and different economic demands, the problems of water scarcity in Colorado will continue to worsen. One example of the consequences of strict adherence to prior appropriation is the Windy Gap diversion, the name given to water diverted from near the Windy Gap geologic formation in the Colorado Rockies. Under the prior appropriation system, the continued diversion of water from Windy Gap results in both economic inefficiency and significant environmental devastation.

Colorado, however, does not need to reinvent the wheel. Several states have dealt with the problems inherent in prior appropriation by

13 See Cohen, supra note 9.
15 See infra notes 189–249 and accompanying text.
16 See infra notes 163–174 and accompanying text.
17 See infra notes 231–249 and accompanying text.
integrating aspects of the public interest or public trust doctrines into their legal frameworks for water rights allocation.\textsuperscript{18} Though Colorado courts have expressly disclaimed both,\textsuperscript{19} the protective nature of the doctrines makes them particularly suited to reform the prior appropriation system.\textsuperscript{20} In the case of Windy Gap, creation of a public interest system would encourage economic efficiency and environmental protection, and the public trust would allow integration of those values while protecting vested prior appropriation rights.\textsuperscript{21}

Part I of this Note discusses the prior appropriation doctrine, its history, and the application of the rule in Colorado.\textsuperscript{22} Part II explores two other approaches to water law: the public interest and public trust doctrines, and their applications in New Mexico and California.\textsuperscript{23} Part III explains the Windy Gap project in Colorado.\textsuperscript{24} Finally, Part IV of this Note analyzes how changing conditions in Colorado have outdated strict application of the prior appropriation principle.\textsuperscript{25} Using the Windy Gap example, Part IV discusses the negative economic and environmental costs associated with the prior appropriation system.\textsuperscript{26} To solve these problems, this Note suggests that Colorado should first create a comprehensive body of public interest law outlining public interest values.\textsuperscript{27} That body of law can then be integrated into a public trust, defining its scope, and providing protection to water as a resource while also guarding vested rights.\textsuperscript{28}

I. PRIOR APPROPRIATION: THE COLORADO DOCTRINE

The doctrine of prior appropriation is the primary method for allocation of water in western states, including Colorado.\textsuperscript{29} It is best

\textsuperscript{18} See infra notes 85–89, 136–137 and accompanying text.
\textsuperscript{19} Aspen Wilderness Workshop, Inc. v. Hines Highlands Ltd. P’ship, 929 P.2d 718, 725 (Colo. 1996) (rejecting the public interest doctrine in Colorado); People v. Emmert, 597 P.2d 1025, 1028 (Colo. 1979) (rejecting the public trust doctrine in Colorado); see infra notes 90–94, 130–134 and accompanying text.
\textsuperscript{20} See infra notes 80–83 and accompanying text.
\textsuperscript{21} See infra notes 266–309 and accompanying text.
\textsuperscript{22} See infra notes 29–79 and accompanying text.
\textsuperscript{23} See infra notes 80–153 and accompanying text.
\textsuperscript{24} See infra notes 154–178 and accompanying text.
\textsuperscript{25} See infra notes 189–249 and accompanying text.
\textsuperscript{26} See infra notes 179–249 and accompanying text.
\textsuperscript{27} See infra notes 266–286 and accompanying text.
\textsuperscript{28} See infra notes 287–309 and accompanying text.
\textsuperscript{29} Glennon, supra note 6, at 16; Wells A. Hutchins, Water Rights Laws in the Nineteen Western States 170–71 (1971); Vranesh, supra note 14, at 3.
known by the phrase “first in time, first in right.” Colorado’s founders fixed this right in the Colorado Constitution, stating, “[t]he right to divert the unappropriated waters of any natural stream to beneficial uses shall never be denied.” Colorado adopted the rule to protect those people, typically miners and farmers, who put their time, energy, and economic investment into diverting water. Colorado adheres strictly to the prior appropriation rule.

A. Construction of the Prior Appropriation Doctrine: The Rule and Its History

The prior appropriation doctrine allows a person to divert a quantity of water from a source so long as he or she applies it to a beneficial use. That person, the “senior diverter,” then has the right to continue to use that quantity of water for the designated use. A second person, at a later date, may also divert water from the source for a beneficial use, but only up to what was left over from the first person. The rights of the first user limit the second user’s rights such that the junior diverter may not take water in any way that would harm the water rights of senior diverters. Among multiple diverters, water is apportioned according to the date of diversion with priority given to the earlier diversions. Because water is apportioned based on the date of diversion, in low water-flow years senior rights holders may receive their water to the exclusion of junior rights holders.

Prior appropriation is the basis of western water law because it guarantees water rights to those who invest the energy and capital to access and use the water. The development of the prior appropriation system in the mid-1800s reflected the challenges faced by early settlers. Gold miners’ distance from “civilized” settlements, the arid

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30 Glennon, supra note 6, at 16.
31 Colo. Const. art. XVI, § 6; see also Coffin v. Left Hand Ditch Co., 6 Colo. 443, 447 (1882) (recognizing that Colorado codified this doctrine in its constitution).
32 Glennon, supra note 6, at 16.
33 Abeln, supra note 14.
36 Glennon, supra note 6, at 16.
37 See Sax, supra note 34.
38 Navajo Dev. Co., 655 P.2d at 1377; Coffin, 6 Colo. at 446; Sax, supra note 34; Vranesh, supra note 14, at 1.
39 Glennon, supra note 6, at 16.
40 Id.
41 Id.; see Vranesh, supra note 14, at 3–7.
western landscape, and the necessity of water in working a mining claim led to the development of the prior appropriation system.\textsuperscript{42} The doctrine, a simple way to divide water rights, soon spread to agricultural areas in the Desert Southwest.\textsuperscript{43} The prior appropriation doctrine encouraged economic growth and development in the Frontier West by securing continued water rights for people who invested in accessing and using the water to make the land productive.\textsuperscript{44}

The requirement that water diversions under prior appropriation must be applied to beneficial uses also reflects the goal of encouraging productivity.\textsuperscript{45} The beneficial use requirement was originally intended to stop attempts to hold water rights for speculative purposes and to encourage expedient use of all water resources.\textsuperscript{46} To accomplish these goals, the beneficial use constraint necessitates that appropriated water be used for specific activities that the law recognizes and protects.\textsuperscript{47}

Though states determine what uses of water are “beneficial,” many, including Colorado, have not provided a comprehensive definition of what constitutes such a use.\textsuperscript{48} The Colorado Constitution recognizes

\textsuperscript{42} Glennon, supra note 6, at 15–16; Vranesh, supra note 14, at 5, 7; see also Irwin v. Phillips, 5 Cal. 140, 146–47 (1855) (finding that state mining law adopts the prior appropriation doctrine).

\textsuperscript{43} Glennon, supra note 6, at 16; A. Dan Tarlock, The Future of Prior Appropriation in the New West, 41 Nat. Resources J. 769, 770 (2001). Like the miners, farmers had to divert water from rivers and streams to sustain their livelihood. Coffin, 6 Colo. at 446; Armstrong v. Larimer Cnty. Ditch Co., 27 P. 235, 237 (Colo. App. 1891). Moving large quantities of water long distances, however, required a major physical effort and a large investment. Glennon, supra note 6, at 16. Farmers adopted the prior appropriation system because they were reluctant to undertake such big projects “without assurance that they would be rewarded by a consistent and reliable supply of water.” Id.

\textsuperscript{44} Glennon, supra note 6, at 16; see Coffin, 6 Colo. at 446.

\textsuperscript{45} See Colo. Const. art. XVI, § 6; Windsor Reservoir & Canal Co. v. Lake Supply Ditch Co., 98 P. 729, 731 (Colo. 1908); Combs v. Agric. Ditch Co., 28 P. 966, 967–68 (Colo. 1892) (noting that the beneficial use requirement was intended to discourage water speculation and encourage quick use of water resources); Vranesh, supra note 14, at 43.

\textsuperscript{46} See Combs, 28 P. at 967–68.

\textsuperscript{47} See Colo. Const. art. XVI, § 6; Empire Water & Power Co. v. Cascade Town Co., 205 F. 123, 128 (8th Cir. 1913) (holding that the list of beneficial uses stated in the Colorado Constitution should not be strictly construed).

\textsuperscript{48} See Colo. Const. art. XVI, § 6; Idaho Const. art. XV, § 3; Neb. Const. art. XV, § 6; United States v. Alpine Land & Reservoir Co., 697 F.2d 831, 855 (9th Cir. 1983) (deciding that “beneficial use expresses a dynamic concept, which is a ‘variable according to conditions,’ and therefore over time” (citations omitted)); City & Cnty. of Denver v. Sheriffs, 96 P.2d 836, 842 (Colo. 1939) (finding that “beneficial use” is not defined in Colorado’s Constitution and that what constitutes a beneficial use depends on the facts of each case); State v. Idaho Dep’t of Water Admin., 530 P.2d 924, 930–31 (Idaho 1974) (finding that “beneficial use” has never been judicially or statutorily defined, and that its definition “must necessarily change with changing conditions”).
certain types of uses which are inherently beneficial, but does not explain the term “beneficial use.” The Colorado Water Right Determination and Administration Act of 1969 (“CWRDA”) eventually defined the term:

“Beneficial use” is the use of that amount of water that is reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the appropriation is lawfully made and, without limiting the generality of the foregoing, includes the impoundment of water for recreational purposes, including fishery or wildlife . . . .

Such a broad definition, however, is problematic because it does not help limit the variety of possible uses. Thus, courts have had difficulty delineating the boundaries of what constitutes a “beneficial use.”

Furthermore, without a statutory definition of the term “waste,” the definition of “beneficial use” in Colorado remains imprecise. One definition of waste invites the idea of water squandered through excessive use. However, courts have interpreted waste in a different fash-

49 See Colo. Const. art. XVI, § 6 (recognizing domestic, agricultural, and manufacturing uses as beneficial); Sheriff, 96 P.2d at 842.
52 See Vranesh, supra note 14, at 44. The CWRDA definition of beneficial use expands the traditional beneficial uses identified in the Colorado Constitution. Compare Colo. Const. art. XVI, § 6 (recognizing domestic, agricultural, and manufacturing uses as beneficial), with Colo. Rev. Stat. § 37-92-103(4) (including “the impoundment of water for recreational purposes . . . fishery or wildlife” as beneficial).
53 See Vranesh, supra note 14, at 44-45; see, e.g., City of Thornton v. City of Fort Collins, 830 P.2d 915, 930–31 (Colo. 1992) (finding that an instream diversion of water could be a beneficial use); Three Bells Ranch Assocs. v. Cache la Poudre Water Users Ass’n, 758 P.2d 164, 173 (Colo. 1988) (allowing ponds for recreation as a beneficial use); City & Cnty. of Denver v. Brown, 138 P. 44, 49–50 (Colo. 1913) (finding that irrigation of trees and grasses within city parks is a beneficial use); see also Christine A. Klein, The Constitutional Mythology of Western Water Law, 14 Va. Envtl. L.J. 343, 349 (1995) (arguing that swimming pools, fountains, and skating rinks are also probably beneficial uses).
ion—any water left in the streambed is considered wasted. Some commentators have also described waste as “forfeiture.” Under that definition, diverters could legally lose their rights to any portion of their water that they fail to divert in a given year.

B. Colorado’s Strict Application of the Prior Appropriation Rule

The common law prior appropriation doctrine controlled Colorado water law even before Colorado entered the Union. In 1876 the Colorado Constitution codified the principle, entrenching it as the primary doctrine governing surface water appropriations. Six years later the Colorado Supreme Court solidified the doctrine’s role in Colorado law, holding that “in the absence of express statutes to the contrary, the first appropriator of water from a natural stream for a beneficial purpose has . . . a prior right thereto, to the extent of such appropriation.” Colorado’s lead in the early development and application of prior appropriation earned the rule the nickname “The Colorado Doctrine.”

Colorado courts typically apply the prior appropriation doctrine strictly—allocating water rights based on a first-come, first-served basis


57 Neuman, supra note 55, at 928 n.53. I have chosen to use the word “waste” throughout this Note to describe water left in the waterway.

58 Harrison C. Dunning, The “Physical Solution” in Western Water Law, 57 U. Colo. L. Rev. 445, 454 (1986). Although the requirement for water to be used for a beneficial use exists to lessen the waste of water, the “use it or lose it” consequence often means that much water is wasted regardless. Id. at 447.

59 See An Act Granting the Right of Way to Ditch and Canal Owners over the Public Lands, and for Other Purposes, ch. 262, § 9, 14 Stat. 251, 253 (1866), repealed by Federal Land Policy and Management Act of 1976, Pub. L. No. 94-579, § 706, 90 Stat. 2743, 2793 (codified at 43 U.S.C. §§ 1761–1771 (2006)) (stating that “whenever, by priority of possession, rights to the use of water . . . have vested and accrued, and the same are recognized and acknowledged . . . the possessors and owners of such vested rights shall be maintained and protected in the same”); Coffin, 6 Colo. at 446 (noting that priority of appropriation “and the obligation to protect it, existed prior to legislation”).

60 See COLO. CONST. art. XVI, § 6.

61 Coffin, 6 Colo. at 447.

provided the water is put to a beneficial use. In *Santa Fe Trail Ranches Property Owners Ass’n v. Simpson*, the Colorado Supreme Court limited the rule’s flexibility by finding that prior appropriation rights extended only to the original-decreed use of that water. In this case, in the early 1900s a water division had specifically designated the original water rights for domestic and manufacturing uses. Despite these specified uses, from 1966 to 1985 the diverter leased the water rights to a ditch company that used the water for irrigation. In the late 1990s, Santa Fe Ranches sought officially to change the use of the water right from manufacturing to municipal uses in order to supply water to a subdivision in southern Colorado. The court determined that, “the right to change a . . . type, place, or time of use, is limited . . . by the appropriation’s historic use.” Therefore, the amount of water Santa Fe Ranches could transfer to use for municipal and other purposes depended “upon the historic . . . use of the appropriation for its decreed purpose.”

In *Empire Lodge Homeowners’ Ass’n v. Moyer* the Colorado Supreme Court also applied the prior appropriation doctrine strictly, enjoining upstream appropriators from making out-of-priority diversions to fill two ponds. Empire Lodge, a homeowners’ association, had an original diversion right that did not include appropriation for the two ponds. Although Empire Lodge could have submitted a plan for augmentation of the original diversion, thus allowing an out-of-priority diversion, the homeowners’ association did not enter such a plan. Thus, holding fast to the original prior appropriation doctrine, the court reaffirmed that

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64 990 P.2d 46, 49 (Colo. 1999).
65 *Id.* at 49–50.
66 *Id.* at 50.
67 *Id.*
68 *Id.* at 54.
69 *Id.* at 59. The court recognized the argument that because there was no official change to the original decreed water rights uses, the water may be considered unused and therefore the owners right to the water may no longer exist. *Id.* at 57.
70 39 P.3d 1139, 1143–44 (Colo. 2001). The ponds were being used for fishing and recreation at a subdivision. *Id.* at 1143.
71 *Id.* at 1144.
72 COLO. REV. STAT. § 37-92-302 (2011); *Moyer*, 39 P.3d at 1150; see also Williams v. Midway Ranches Prop. Owners Ass’n, 938 P.2d 515, 522 (Colo. 1997) (safeguarding the protection of senior water rights by authorizing out-of-priority diversions so long as the decreed water rights receive a replacement water supply that offsets the out-of-priority depletions).
73 *Moyer*, 39 P.3d at 1145.
water rights must be administered based on their priority, and upheld an injunction prohibiting the out-of-priority diversion.\textsuperscript{74}

Despite historical application of the prior appropriation rule for physical diversions, recent statutory changes and court decisions have expanded the traditional doctrine.\textsuperscript{75} In 1973 the Colorado legislature passed an instream flow statute authorizing the Colorado Water Conservation Board “to appropriate . . . such waters of natural streams and lakes as the board determines may be required for minimum stream flows . . . to preserve the natural environment to a reasonable degree.”\textsuperscript{76} The instream flow statute allows the Colorado Water Conservation Board to keep water it owns within a streambed without losing its right to the water.\textsuperscript{77} Furthermore, in 1992 the Colorado Supreme Court interpreted a “diversion” to include water within a natural water course, and not just water physically taken out of a stream.\textsuperscript{78} These instream applications run counter to the typical tenants of prior appropriation and allow parties to hold water rights within a stream without the typical physical diversion.\textsuperscript{79}

\textbf{II. Approaches to Preserving Water: The Public Interest and Public Trust}

In contrast to the prior appropriation doctrine, many states deal with water as a precious resource by providing the state and its government agencies with authority to protect its use.\textsuperscript{80} The public interest

\textsuperscript{74} See id. at 1148, 1160 (finding that priority “is the most important stick in the water rights bundle”).

\textsuperscript{75} Colo. Rev. Stat. § 37-92-102(3) (2011) (authorizing the Colorado Water Conservation Board to appropriate water so as to maintain minimum stream flows); City of Thornton, 830 P.2d at 930 (interpreting dams and other instream diversions to be valid appropriations).

\textsuperscript{76} Colo. Rev. Stat. § 37-92-102(3); Reed D. Benson, “Adequate Progress,” or Rivers Left Behind? Developments in Colorado and Wyoming Instream Flow Laws Since 2000, 36 ENVTL. L. 1283, 1286 (2006). However, the term “a reasonable degree” is undefined. Id. at 1287.


\textsuperscript{78} City of Thornton, 830 P.2d at 930; see also Bd. of Cnty. Comm’rs of Arapahoe v. Upper Gunnison River Water Conservancy Dist., 838 P. 2d 840, 854 (Colo. 1992) (interpreting a “diversion” to include water that remains within the watercourse so long as it is put to a beneficial use).

\textsuperscript{79} Compare supra notes 34–39 and accompanying text (describing the rules of prior appropriation), with Colo. Rev. Stat. § 37-92-102(3) (allowing the Colorado Water Conservation Board to appropriate water to preserve instream flows), and City of Thornton, 830 P.2d at 930 (interpreting a diversion to include water within a watercourse).

\textsuperscript{80} Ala. Const. art. I, § 24 (creating a public trust); Alaska Const. art. VIII, §§ 3, 13, 14 (creating a public trust); Cal. Const. art. X, § 3, 4 (creating a public trust); Ariz. Rev.
doctrine statutorily requires the agency granting water rights to determine if such a grant would harm the public interest. Under the public trust doctrine, a body of both statutory and common law, the state holds title to certain waters in trust for public purposes, thus protecting the waters from private ownership.

A. The Public Interest Doctrine

1. The Rule

Sixteen of the eighteen western continental states have enacted statutes that require public interest review for new water appropriations. Under public interest review, prior to an appropriation a designated body must determine whether granting a water permit will harm the public interest. Among the states that have adopted public interest review, statutes defining the “public interest” vary. Some state statutes define “public interest” by identifying concrete values important for public interest consideration. For example, Oregon specifies that public interest concerns should include “public recreation, protection of commercial and game fishing and wildlife . . . or any other beneficial use to which the water may be applied for which it may have a special value to the public.” In contrast, Alaska’s public interest review remains open-ended, requiring the issuing agency to weigh the proposed appropriation’s effects on harm to other people, economic activity, fish

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84 Grant, supra note 81. Oklahoma removed public interest review from its system in 1963, and Colorado does not have public interest review. Id. at 486 n.1.
85 Abeln, supra note 14, at 533; Grant, supra note 81.
87 See, e.g., Ariz. Rev. Stat. Ann. § 45-401 (identifying groundwater protection as important); Wash. Rev. Code § 90.54.010 (identifying natural resources and public health as important).
and game resources, public health, navigable and public waters, and other uses of the water.  

Despite recognition of the state legislature’s intent to protect public interest concerns, Colorado courts avoid implementing such considerations by framing the public interest as a legislative or public policy question. Though some Colorado courts have embraced public interest considerations in their decisions, the lack of statutory authority on the subject means courts are not required to consider public interest factors when adjudicating water rights. As a result, some Colorado courts have rejected a public interest review of water rights, contention that such an analysis “conflicts with the doctrine of prior appropriation.”

Public interest laws fall under two possible models—a “maximum benefits” model and an “other laws” model. Under the maximum benefits model, when deciding between possible uses, issuing agencies—and courts—must choose the use that maximizes the utility of the water. Typically, deciding what uses provide the maximum benefit involves identifying and applying unwritten public policy, an inherently open-ended question. Several western states adopted this type of public interest review because it could be used to ensure that an appropriation maximized the economic benefits to a community. This flexible

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89 Alaska Stat. § 46.15.080.
90 Colo. Rev. Stat. § 37-92-102(3) (2011) (vesting the Colorado Water Conservation Board with exclusive authority to maintain minimum streams flows to maintain the natural environment); Abeln, supra note 14, at 534–35 (describing the public interest in Colorado water law).
91 R.J.A., Inc. v. Water Users Ass’n, 690 P.2d 823, 828 (Colo. 1984); Abeln, supra note 14, at 537.
92 Wadsworth v. Kuiper, 562 P.2d 1114, 1116–17 (Colo. 1977) (finding that the Colorado Constitution implies “a vital interest in preserving the water resources of this state” and “mandates the protection of the public interest in water”); Gregory J. Hobbs, Jr. & Bennett W. Raley, Water Rights Protection in Water Quality Law, 60 U. Colo. L. Rev. 841, 875–78 (1989) (suggesting that the Colorado courts’ application of the prior appropriation doctrine itself actually furthers the public interest).
93 Abeln, supra note 14, at 537–38.
95 Grant, supra note 81, at 488.
96 Id.
97 Id. at 488–49.
98 See Commonwealth Power Co. v. State Bd. of Irrigation, Highways & Drainage, 143 N.W. 937, 938–39 (Neb. 1913) (noting that the purpose of public interest review is to further economic development of the state through the use of its waters); Young & Norton v. Hinderlinder, 110 P. 1045, 1050 (N.M. 1910) (discussing at length the economic implications to the public interest from allowing one appropriation to proceed at the expense of
model allows courts to consider interests beyond the purely economic ones.\textsuperscript{99}

Under the “other laws” model of public interest review, agencies and courts must consider explicit statutory or constitutional policies prior to allowing an appropriation.\textsuperscript{100} They must evaluate the written statutory policies of the state where the appropriation would take place and are required to grant proposed appropriations in accordance with those policies.\textsuperscript{101} For example, in Texas the water appropriation laws were passed after a constitutional provision declared preservation and conservation of the waters of the state to be a public interest objective.\textsuperscript{102} Thus, in Clark \textit{v. Briscoe Irrigation Co.} the Texas Court of Civil Appeals found that the water appropriation laws must be construed in light of the constitutional amendment’s explicit water conservation and protection objectives.\textsuperscript{103}

2. Application of the Public Interest Doctrine in New Mexico

New Mexico case decisions exemplify the flexibility that public interest review affords the state in making determinations about whether an appropriation is in the public interest.\textsuperscript{104} New Mexico first adopted public interest review for water appropriations in 1907 when the legislature gave the state’s territorial engineer the power to deny applications that were contrary to the public interest.\textsuperscript{105} The broad considerations employed by public interest review give courts significant discretion in

\begin{itemize}
  \item Grant, \textit{supra} note 81, at 492 (stating that “[t]he maximum-benefits model of public interest review was well-suited to the single-minded ethic [in the West] favoring maximum economic development”).
  \item Grant, \textit{supra} note 81, at 490.
  \item \textit{Id.} at 489.
  \item \textit{Id.}
  \item Tex. Const. art. XVI, § 59(a); Clark \textit{v. Briscoe Irrigation Co.}, 200 S.W.2d 674, 680 (Tex. Civ. App. 1947).
  \item 200 S.W.2d at 680, 682; Grant, \textit{supra} note 81, at 494 (finding that “[b]y relying on the constitutional and statutory policy provisions and making no mention of unwritten public policy, the court seemed implicitly to embrace the other-laws model of public interest review”).
  \item See City of El Paso \textit{v. Reynolds}, 597 F. Supp. 694, 700 (D.N.M. 1984) (noting that the public interest is “a broad term including health and safety, recreational, aesthetic, environmental and economic interests”); Grant, \textit{supra} note 81, at 499–500.
  \item See \textit{Young & Norton}, 110 P. at 1048.
\end{itemize}
considering which public policies to employ. New Mexico courts have considered both economic and cultural effects.

In *Young & Norton v. Hinderlider*, the New Mexico Supreme Court reflected primarily on the economic effects of the public interest review. The *Young & Norton* case concerned conflicting appropriations of water—one for a larger project and one for a smaller project. The court assessed the case on economic grounds, highlighting the dramatic consequences that allowing excessive appropriation from a stream would have on future investment in irrigation projects. Thus, the court found that the smaller project should get the appropriation because the larger project failed the economic test.

In contrast, in one author describes how the New Mexico trial court included economic and cultural effects on a rural New Mexico community in its public interest review. In *In re Sleeper*, the court found that allowing the transfer of water rights to a resort would not be economically beneficial to the community and would destroy the local agrarian culture, which had deep roots among the residents. Sleeper’s approach focused on the public interest as it affected individual communities. In practice, however, New Mexico’s courts have had difficulty ascertaining the geographic and temporal boundaries of the community to be considered in a public interest review. The courts’

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106 Grant, *supra* note 81, at 490.
107 *Young & Norton*, 110 P. at 1050 (considering the economic effects); Grant, *supra* note 81, at 499–500 (discussing how at least one New Mexico court has incorporated cultural values in public interest review).
108 110 P. at 1050.
109 *Id.* at 1046.
110 *Id.* at 1050.
111 *Id.*
112 Grant, *supra* note 81, at 499–500. Though the court overturned the case on appeal, the appellate court found only that deciding the case on the basis of public interest considerations was invalid. Grant, *supra* note 81, at 500. The court had no need (and did not) address whether cultural values ought to be a part of a public interest review when it is conducted. *Id.*
113 *Id.* at 499–500 (discussing the court’s finding that transferring “water rights, devoted for more than a century to agricultural purposes, in order to construct a playground for those who can pay is a poor trade, indeed” (citation omitted)).
114 *Id.* at 514.
115 Compare Grant, *supra* note 81, at 499–500 (discussing *In re Application of Sleeper’s*, 760 P.2d at 792–93, identification of the resort community as the protected group and dismissing the interests of the larger geographic area), *with City of El Paso*, 597 F. Supp. at 700, 708 (identifying the citizens of New Mexico as the protected group). New Mexico’s undefined public interest standard remains an open question. See Grant supra note 81, at 500. See also *Young & Norton*, 110 P. at 1050 (recognizing current and future residents within temporal boundaries); Grant, *supra* note 81, at 514–16 (recognizing the difficulty in establishing
B. The Public Trust Doctrine

1. The Rule

Unlike the public interest doctrine, the core of the trust concept lies in a state’s ownership of “all of its navigable waterways and the lands lying beneath them ‘as trustee of a public trust for the benefit of the people.’” The trust-like nature of the doctrine instills it with much of its strength. The doctrine holds that the state (the trustee) manages certain resources (the trust principal) and is required to maintain them for use by current and future generations (the beneficiaries). The state, as trustee, has a continuing duty of supervision “over the taking and use of the appropriated water.” Public trust lands may not be bought or sold privately, because doing so would contradict the state’s responsibilities under the trust. Additionally, like a financial trust, the beneficiaries have the ability to enforce the trust terms. Thus, citizens,

geographical and temporal boundaries for public interest review); Richard A. Posner, Animal Rights, 110 YALE L.J. 527, 534 (2000) (reviewing Steven M. Wise, Rattling the Cage: Toward Legal Rights for Animals (2000)) (noting that “nothing in utilitarianism establishes the boundaries of the community whose happiness is to be maximized”). A related but more philosophical question, unaddressed and unanswered by the courts, is whether in maximizing the benefits of a water supply, the goal should be to make a small group of people very happy or make a larger group of people only somewhat happy. Grant, supra note 81, at 515.

116 Colberg, 432 P.2d at 8; see also Ill. Cent. R.R., v. Illinois, 146 U.S. 387, 452 (1892); J.J.N.P. Co. v. State, 655 P.2d 1133, 1136 (Utah 1982). The public trust traces its origins back to Roman models of common property. Sax, supra note 82, at 475. Under the Roman Emperor Justinian, the air, rivers, sea, and seashore were dedicated to the public’s use and could not be privately owned. J. Inst. 2.1.1.

117 See infra notes 118–132 and accompanying text.


120 See Ill. Cent. R.R., 146 U.S. at 452; Sax, supra note 82, at 489 (stating that “the Court determined that the states have special regulatory obligations over shorelands . . . which are inconsistent with large-scale private ownership”).

121 Mono Lake, 658 P.2d at 716 n.11; see Ctr. for Biological Diversity, Inc. v. FPL Grp., Inc., 83 Cal. Rptr. 3d 588, 600–01 (Ct. App. 2008) (finding that the public could sue the
as beneficiaries, have the right to sue the state, as the trustee, for failing to uphold its trust duties.\textsuperscript{122}

Early public trust cases in the United States asserted the state’s authority over navigable and tidal waters, and the land beneath it, for the use of the people.\textsuperscript{123} During the early and mid-1900s, the principal purpose of the trust was for the economic benefit of the citizens of a state.\textsuperscript{124} The public trust allowed states to hold title to navigable waters and tidal lands based on their close economic relationship to commerce, fisheries, and navigation.\textsuperscript{125} For example, in a seminal public trust case,\textit{ Illinois Central Railroad v. Illinois}, the Supreme Court upheld the state’s authority to hold title to all submerged land within its borders and found that the public had the right to fish, navigate, and engage in commerce on those waters.\textsuperscript{126} Furthermore, this public trust right prevented the Illinois legislature from transferring a portion of Chicago lakefront to private ownership.\textsuperscript{127}

As public views on the benefits of water have shifted over time to recognize its environmental importance, the scope of the public trust doctrine has similarly evolved beyond its economic protection origins.\textsuperscript{128} Consequently, some courts have created an “ecological public trust,” using the public trust doctrine to protect resources based on their “exhaustible and irreplaceable nature.”\textsuperscript{129}

\begin{itemize}
\item \textsuperscript{122} \textit{Mono Lake}, 658 P.2d at 716 n.11; \textit{Ctr. for Biological Diversity}, 83 Cal. Rptr. 3d at 602.
\item \textsuperscript{123} \textit{Ill. Cent. R.R.}, 146 U.S. at 452; Martin v. Waddell, 41 U.S. (16 Pet.) 366, 411–12 (1842); Brickell v. Trammell, 82 So. 221, 226 (Fla. 1919); Arnold v. Mundy, 6 N.J.L. 1, 78 (1821).
\item \textsuperscript{124} See \textit{Colberg}, 432 P.2d at 9 (noting that many courts in this era have interpreted the principle trust purposes as fishing, navigation, and commerce).
\item \textsuperscript{125} See \textit{Ill. Cent. R.R.}, 146 U.S. at 452; \textit{Colberg}, 432 P.2d at 9.
\item \textsuperscript{126} 146 U.S. at 452.
\item \textsuperscript{127} Id. at 453–56.
\item \textsuperscript{128} See Marks v. Whitney, 491 P.2d 374, 380 (Cal. 1971); \textit{Mono Lake}, 658 P.2d at 719; Morse v. Or. Div. of State Lands, 581 P.2d 520, 524 (Or. Ct. App. 1978), aff’d, 590 P.2d 709 (Or. 1979). In \textit{Marks v. Whitney}, the California Supreme Court identified the public trust as a unit that is “sufficiently flexible to encompass changing public needs.” 491 P.2d at 380. The court recognized both the historic economic uses of the trust and the growing importance of maintaining tidelands in their natural state “so that they may serve as ecological units for scientific study, as open space, and as environments which provide food and habitat for birds and marine life, and which favorably affect the scenery and climate of the area.” Id.
\item \textsuperscript{129} Morse, 581 P.2d at 524; Alison Rieser, \textit{Ecological Preservation as a Public Property Right: An Emerging Doctrine in Search of a Theory}, 15 Harv. Envtl. L. Rev. 393, 403–10 (1991); see \textit{Marks}, 491 P.2d at 380; \textit{Mono Lake}, 658 P.2d at 719.
\end{itemize}
Although a number of states have recognized aspects of the public trust doctrine through statutory or constitutional provisions, Colorado has held fast to its prior appropriation roots. This is likely due to the fundamental conflict between the public trust doctrine—forbidding certain public resources from being bought or sold—and the private property rights protected by the prior appropriation system. Thus, despite statutory and constitutional elements of the public trust doctrine in its law, Colorado courts have explicitly rejected a public trust as it relates to water.

2. Application of the Public Trust Doctrine in California

California has one of the more sophisticated applications of the public trust doctrine. The state is a prominent example because it

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132 See id. Compare Sax, supra note 82, at 489 (describing how the public trust instills the state with special regulatory obligations that are inconsistent with large-scale private ownership), with supra notes 34–39 and accompanying text (identifying prior appropriation as a private property system).

133 COLO. CONST. art. XVI, § 5 (stating, “the water of every natural stream . . . [is] the property of the public”); COLO. REV. STAT. § 37-92-102(1), (3) (2011) (stating that surface waters “have always been and are hereby declared to be the property of the public,” and also vesting the Colorado Water Conservation Board with trustee-like duties to appropriate water to “preserve the natural environment to a reasonable degree”).

134 Aspen Wilderness Workshop, Inc. v. Colo. Water Conservation Bd., 901 P.2d 1251, 1263 (Colo. 1995) (Mullarkey, J., dissenting) (“This court has never recognized the public trust doctrine with respect to water.”); Emmert, 597 P.2d at 1028 (finding that the Colorado Constitution preserves “the historical appropriation system of water rights upon which the irrigation economy in Colorado was founded” and does not “assure public access to waters for purposes other than appropriation”). But see Colo. Water Conservation Bd., 901 P.2d at 1260 (finding that the Colorado Water Conservation Board has “a unique statutory fiduciary duty to protect the public in the administration of its water rights decreed to preserve the natural environment”); Alethea O’Donnell, Comment, Something Old, Something New: Applying the Public Trust Doctrine to Snowmaking, 24 B.C. ENVTL. AFF. L. REV. 159, 186–90 (1996) (discussing Colorado Water Conservation Board and the public trust doctrine in Colorado).


136 See Mono Lake, 658 P.2d at 728; Marks, 491 P.2d at 380; Ctr. for Biological Diversity, 83 Cal. Rptr. 3d at 595–603.
has both widened the public trust to include ecological resources and integrated the public trust with historical water rights.\(^{137}\)

In 1971 the California Supreme Court recognized that the public trust was “sufficiently flexible to encompass changing public needs,” and therefore, widened the trust’s scope beyond its economic protection origins.\(^{138}\) This opened the door for protection of valuable environmental resources beyond navigable waters such as old growth forests, mountains, and wildlife.\(^{139}\) In *Center for Biological Diversity, Inc. v. FPL Group, Inc.* the California Court of Appeal found that the public trust included wildlife.\(^{140}\) In *State v. Superior Court*, the California Supreme Court extended public trust protections to a shore-zone, recognizing the area as a “fragile and complex resource” that “provides the environment necessary for the survival of numerous types of fish . . . birds . . . and many other species of wildlife and plants.”\(^{141}\)

California also successfully integrated the public trust doctrine with other applicable water rights systems.\(^{142}\) In *National Audubon Society v. Superior Court (Mono Lake)*, the California Supreme Court found that the public trust doctrine and prior appropriation water rights are “parts of an integrated system of water law,” and both must be considered when determining appropriate use of water in California.\(^{143}\) In *Mono Lake*, Los Angeles had been diverting most of Mono Lake’s tributary waters away from the lake for more than forty years, resulting in severe impairment of the environmental integrity of the lake.\(^{144}\) When citizen

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\(^{137}\) See *Mono Lake*, 658 P.2d at 728; *Ctr. for Biological Diversity*, 83 Cal. Rptr. 3d at 595–600; Rieser, *supra* note 129, at 393–94. California has both riparian and prior appropriation systems of water law. *People v. Shirokow*, 605 P.2d 859, 864 (Cal. 1980).

\(^{138}\) *Marks*, 491 P.2d at 380.

\(^{139}\) See *Ctr. for Biological Diversity*, 83 Cal. Rptr. 3d at 595–600; Rieser, *supra* note 129, at 393–94.

\(^{140}\) 83 Cal. Rptr. 3d at 597–98 (noting that wildlife’s transient nature means it “be-long[s] to no one, and therefore . . . belong[s] to everyone in common”).


\(^{142}\) *Mono Lake*, 658 P.2d at 728 (“The state has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.”).

\(^{143}\) *Id.* at 732.

\(^{144}\) *Id.* at 714–16. The lake area shrunk by almost twenty-five square miles and its surface level dropped forty-three feet. *Id.* at 714. The exposed lake-bed silt was easily airborne and caused respiratory distress to humans and animals. *Id.* at 716. The shrinking size of the lake gave predators access to birds nesting on islands, resulting in a ninety-five percent loss of California Gull chicks in 1981. *Id.* A corresponding increase in the lake’s salinity caused a ninety-five percent reduction in the brine shrimp hatch in the same year. *Id.* at 715. In turn, the lack of available shrimp had a devastating impact on the feeding birds and the local shrimping industry. *Id.* at 715, 716.
groups ultimately sued, the California Supreme Court required Los Angeles to reconsider the diversions in light of the lake’s environmental importance under the public trust. The public trust imposed a duty on the state to protect water-related resources by avoiding or minimizing harm when feasible. Thus, despite the primary role of prior appropriation water rights in California water law, the court limited the exercise of those rights by requiring that there be no major harm to the public trust. Notably, the court did not totally dismiss prior appropriation rights and allowed Los Angeles’ diversions to continue on a reduced scale.

Since the Mono Lake decision, California courts have reaffirmed the idea that traditional water rights rules under the prior appropriation system are not absolute. In El Dorado Irrigation District v. State Water Resources Control Board the California Court of Appeal accepted that competing interests and principles, such as the public trust, may require deviation from strict application of the prior appropriation system. Similarly, in People v. Murrison the court observed that water rights are subject to the state’s interest in wildlife protection. The court, however, has limited the superiority of the public trust to only those circumstances where direct application of the prior appropriation rule would clearly result in harm to the public trust. When the two systems of water rights directly clash, as in Mono Lake, the public trust prevails only to the extent necessary to prevent harm to public trust values.

145 Id. at 729, 732.
146 Id. at 712.
147 Id. at 712, 721, 727, 732. The court stated four times that parties may not acquire vested rights in a manner harmful to trust resources. See id.
149 See Ctr. for Biological Diversity, 83 Cal. Rptr. 3d at 604 (highlighting the balancing that must be done between demands on a resource and environmental protection); El Dorado Irrigation Dist. v. State Water Res. Control Bd., 48 Cal. Rptr. 3d 468, 490 (Ct. App. 2006) (arguing that when the prior appropriation rule clashes with the rule against unreasonable use or the public trust doctrine, the rule of priority must yield); People v. Murrison, 124 Cal. Rptr. 2d 68, 76 (Ct. App. 2002) (noting that the state possesses “sovereign power to protect its wildlife” and that the defendant’s “water rights are subject to these powers”).
150 48 Cal. Rptr. 3d at 490–91.
151 124 Cal. Rptr. 2d at 76.
152 See El Dorado, 48 Cal. Rptr. 3d at 491.
153 See 658 P.2d at 728, 732; El Dorado, 48 Cal. Rptr. 3d at 490–91.
III. WINDY GAP: AN ILLUSTRATION OF THE TENSIONS INHERENT IN THE PRIOR APPROPRIATION SYSTEM IN COLORADO

A. The C-BT Project: An Unreliable Source of Water

The Colorado-Big Thompson (“C-BT”) Project distributes approximately 213,000 acre feet of water from the Colorado River to more than 850,000 people along the Colorado Front Range for agricultural, municipal, and industrial uses.\(^{154}\) The impetus for the project was a major drought that affected farms and agricultural production in northeastern Colorado in the 1930s.\(^{155}\) As a result of the drought, communities along the Front Range realized their arid land alone could not support their growing needs.\(^{156}\) Thus, Northern Water\(^ {157}\) designed the C-BT Project to consistently deliver much needed water to dry Front Range communities.\(^ {158}\)

The C-BT project diverts water from the Colorado River just below its headwaters, and stores it primarily in Lake Granby, a large reservoir just south of Rocky Mountain National Park.\(^ {159}\) Fully completed in 1957, the C-BT Project consists of reservoirs on the east and west slopes of the Continental Divide that are connected by a long tunnel.\(^ {160}\) A series of canals and pipelines then disperse the water to municipalities and other users.\(^ {161}\) The C-BT Project supplies approximately 230,000

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\(^{156}\) See id.

\(^{157}\) Northern Water is the public agency that oversees and implements the C-BT Project. Who We Are, N. Water, http://www.northernwater.org/AboutUs/WhoWeAre.aspx (last visited Jan. 9, 2013).

\(^{158}\) See N. Water, supra note 155.

\(^{159}\) Id. at 4, 10, 12.

\(^{160}\) Id. at 6, 10, 12, 15, 16.

acre-feet of water per year to communities and other users along the Front Range.\textsuperscript{162}

B. Windy Gap: A Water Storage Problem

In the 1960s a number of Front Range communities began to worry that their growth rates, and an expected increase in the demand of water, would soon outstrip their supply from the C-BT Project.\textsuperscript{163} Therefore, these cities pursued additional water rights to meet their growing needs.\textsuperscript{164} In 1967 the Longmont, Colorado mayor, on behalf of six northern Colorado cities, filed for additional water rights from the Colorado River.\textsuperscript{165} These additional water rights materialized into the Windy Gap Project.\textsuperscript{166} Like the C-BT Project, the Windy Gap Project diverts water from the Colorado River for use by a subset of Front Range communities.\textsuperscript{167} Workers completed the Windy Gap Project in 1985.\textsuperscript{168}

Water storage issues, however, have prevented water from the Windy Gap Project from reliably reaching the communities it serves.\textsuperscript{169} Currently, most Windy Gap water is stored in Lake Granby along with the C-BT Project water.\textsuperscript{170} Under Colorado’s strict adherence to the prior appropriation doctrine, the senior water rights of the C-BT Project have left little space in Lake Granby for the junior Windy Gap Pro-


\textsuperscript{164} N. Colo. Water Conservancy Dist., supra note 163; Windy Gap Project History, supra note 163.

\textsuperscript{165} Windy Gap Project History, supra note 163.

\textsuperscript{166} See id.

\textsuperscript{167} See How the Colorado-Big Thompson Project Works, supra note 161; Windy Gap Project History, supra note 163.

\textsuperscript{168} N. Colo. Water Conservancy Dist., supra note 163, at 15.


ject water.¹⁷¹ During wet years Lake Granby is often full of the senior C-BT Project water, leaving no room for junior Windy Gap Project water.¹⁷² Conversely, in dry years, the Windy Gap communities do not get their additional allocations because their junior water rights prevent them from drawing from the river.¹⁷³ Thus, the availability of the Windy Gap Project water to its participants is highly unreliable and dependent on a number of unpredictable variables.¹⁷⁴

C. The Windy Gap Firming Project

To help solve the reliability problem of Windy Gap Project water, Northern Water proposed the Windy Gap Firming Project.¹⁷⁵ The Windy Gap Firming Project would pump designated Windy Gap water, using the C-BT infrastructure, directly to a separate Windy Gap reservoir to be constructed along the Front Range.¹⁷⁶ Construction of a dedicated Windy Gap reservoir, separate from Lake Granby, would give the communities the ability to store designated Windy Gap water.¹⁷⁷ Consequently, the amount of water reliably available to the Front Range communities would increase.¹⁷⁸

IV. Changing Colorado Water Law: Responding to the Problems of Prior Appropriation in the New West

Colorado has strictly adhered to the prior appropriation rule.¹⁷⁹ Thus, water rights, such as those allocated in the 1960s for the Windy Gap Project, have historically been distributed under the rule of priority.¹⁸⁰ Colorado’s social and economic structures have changed over time, however, rendering the prior appropriation rule outdated.¹⁸¹ Fur-

¹⁷² Snider, supra note 169; Windy Gap Firming Overview, supra note 171.
¹⁷³ See Snider, supra note 169; Windy Gap Firming Overview, supra note 171.
¹⁷⁴ Snider, supra note 169; Windy Gap Firming Overview, supra note 171.
¹⁷⁵ Snider, supra note 169; Windy Gap Firming Overview, supra note 171.
¹⁷⁶ Snider, supra note 169; Windy Gap Firming Overview, supra note 171.
¹⁷⁷ Snider, supra note 169; Windy Gap Firming Overview, supra note 171.
¹⁷⁸ See supra notes 63–74 and accompanying text.
¹⁷⁹ See supra notes 169–174 and accompanying text.
thermore, the state’s inflexible application of the rule and failure to take social values into account result in significant negative economic and environmental consequences.\textsuperscript{182}

Given the changes in Colorado’s social and economic structures, Colorado’s water law must evolve to protect the environment and prevent the overuse of a scarce resource.\textsuperscript{183} Without such considerations, water use and consumption are likely to outpace supply, causing both major water shortages and significant environmental consequences.\textsuperscript{184} Thus, despite explicit renunciation of the public trust and public interest doctrines,\textsuperscript{185} Colorado courts and administrative bodies must incorporate into Colorado water law the values and ideas that come from those doctrines to help make water sustainable.\textsuperscript{186} First, Colorado should create a public interest system that outlines specific values of importance to the community.\textsuperscript{187} Then, the state should use those values to establish a comprehensive public trust that, like in California, can be integrated with the prior appropriation system.\textsuperscript{188}

A. The New West: Prior Appropriation Is Outdated

Historically, the doctrine of prior appropriation was a useful tool for allocating water rights.\textsuperscript{189} When the West was primarily a farming and mining economy, the prior appropriation doctrine was a simple and efficient solution to the problem of allocating water rights.\textsuperscript{190} It allowed farmers to expand agriculturally because they could rely on consistent diversions of water from rivers and streams to sustain their fields.\textsuperscript{191} In the predominantly agrarian, frontier economy, the requirement that an

\begin{footnotesize}
\textsuperscript{182} See infra notes 202–249 and accompanying text.
\textsuperscript{183} See infra notes 250–265 and accompanying text.
\textsuperscript{186} See infra notes 266–309 and accompanying text.
\textsuperscript{187} See infra notes 266–286 and accompanying text.
\textsuperscript{188} See infra notes 287–309 and accompanying text.
\textsuperscript{189} See GLENNON, supra note 6, at 16; VRANESH, supra note 14.
\textsuperscript{190} See GLENNON, supra note 6, at 16; VRANESH, supra note 14; Tarlock, supra note 43 (noting that prior appropriation “originally functioned as a simple, judicially enforced, system to divide small streams for a region sustained by mining, livestock grazing, and eventually irrigation”).
\textsuperscript{191} GLENNON, supra note 6, at 16.
\end{footnotesize}
appropriation be for a beneficial use both encouraged development and adequately prevented the squandering of water.\textsuperscript{192}

Colorado, however, is no longer primarily an agrarian society.\textsuperscript{193} Municipal, industrial, and domestic practices increasingly dominate the water needs in modern Colorado.\textsuperscript{194} Throughout the West, communities are becoming less dependent on irrigated agriculture and raw commodity production.\textsuperscript{195} At the same time, Colorado’s climate, mountains, and ruggedness are increasingly recognized as important to an economy dependent on tourism and outdoor recreation.\textsuperscript{196} Economic benefits from natural beauty and diverse recreational activities, rather than from natural resource development, now provide significant support to Colorado towns.\textsuperscript{197} Thus, the prior appropriation doctrine protects historical, yet currently outdated, uses of water.\textsuperscript{198}

\textbf{B. Disadvantages of Prior Appropriation in the New West}

Colorado’s changing culture, including its decreasing reliance on agriculture, exposes the inflexibility of the prior appropriation doctrine.\textsuperscript{199} Most importantly, in granting new water rights under the prior appropriation doctrine, the law does not require that courts take into account the water use’s economic efficiency or environmental consequences.\textsuperscript{200} These deficiencies remain despite the theoretical limits

\textsuperscript{192} See Combs v. Agric. Ditch Co., 28 P. 966, 968 (Colo. 1892) (discussing how the beneficial use requirement was intended to limit water speculation and encourage its use); Neuman, supra note 55, at 962.


\textsuperscript{194} See Abeln, supra note 14, at 518; Getches, supra note 184, at 60–61 (discussing the West’s expected population growth and how the resulting need for water transfers from agricultural uses to urban uses); The Value of Water, Colo. Water 2012, http://water2012.org/about/value-of-water.html (last visited Jan. 9, 2013) (highlighting that the population of Colorado is expected to double by 2050, causing municipal water demands to double).

\textsuperscript{195} Tarlock, supra note 43, at 773. Overall, the monetary and employment impact of agriculture is declining. See Rasker, supra note 193, at 377–78. Employment and income in the natural resource and agricultural industries has declined since 1969, and as of 1990 made up less than 6% of all employment and 5% of all income. Id. at 377. In contrast, in 1991 service industry employment and income had risen to 81% and 68%, respectively. Id.

\textsuperscript{196} Abeln, supra note 14, at 518–19; Tarlock, supra note 43, at 773.

\textsuperscript{197} See Abeln, supra note 14, at 518–19; Rasker, supra note 193, at 373; Tarlock, supra note 43, at 773. See generally Wilkinson, supra note 181.

\textsuperscript{198} See supra notes 189–197 and accompanying text.

\textsuperscript{200} See Abeln, supra note 14, at 536–38.
placed on prior appropriation rights by the requirement that water be put to a beneficial use and the prohibition against waste.\footnote{See infra notes 212–223 and accompanying text.}

1. Inefficient Use of Resources

Strict enforcement of the prior appropriation doctrine leads to inefficient use of water as a resource.\footnote{See infra notes 203–230 and accompanying text; see also Empire Lodge Homeowners’ Ass’n v. Moyer, 39 P.3d 1139, 1150 (Colo. 2001) (“Strict application of the priority doctrine to overappropriated basins would restrict new water uses to changes of water rights.”).} As one author noted, “[t]here is as yet no answer for the problem which arises when a farmer . . . pour[s] excessive quantities of water on his land and thus deprives a neighbor of needed water.”\footnote{Jean S. Breitenstein, Some Elements of Colorado Water Law, 22 Rocky Mtn. L. Rev. 343, 349 (1950).} The inherent inflexibility of the priority scheme, elasticity of the beneficial use requirement, and the “use it or lose it” rule create powerful incentives for people to take their full water claim and bypass investments in water conservation infrastructure.\footnote{Tarlock, supra note 43, at 780; see Neuman, supra note 55, at 922.} Additionally, the doctrine provides no incentives to make water use more efficient or environmentally friendly.\footnote{Vranesh, supra note 14, at 52.}

Strict adherence to the rule of priority in the prior appropriation doctrine is economically irresponsible in times of water shortage.\footnote{See Joseph W. Dellapenna, The Law of Water Allocation in the Southeastern States at the Opening of the Twenty-First Century, 25 U. Ark. Little Rock L. Rev. 9, 22, 28 (2002).} When there is not enough water for everyone with claims, the rule requires that water be apportioned according to the date of diversion.\footnote{Navajo Dev. Co. v. Sanderson, 655 P.2d 1377, 1380 (Colo. 1982); Coffin v. Left Hand Ditch Co., 6 Colo. 443, 446 (1882); Sax, supra note 34; Vranesh, supra note 14, at 1.} Thus, in years when water flows are low, people holding junior water rights may receive no water.\footnote{Glennon, supra note 6, at 16; see Navajo Dev. Co., 655 P.2d at 1380 (finding no “guarantee that there will be enough water to satisfy all claims to this scarce resource”).} In contrast, people holding more senior water rights will consistently receive the full amount of their claim.\footnote{Glennon, supra note 6, at 16.}

The uneven distribution of water allows senior diverters to continue inefficient uses at the expense of junior diverters with higher productivity or efficient uses.\footnote{Janis M. Carey & David L. Sunding, Emerging Markets in Water: A Comparative Institutional Analysis of the Central Valley and Colorado-Big Thompson Projects, 41 Nat. Resources J. 283, 301 (2001); Dellapenna, supra note 206.} Essentially, the distribution of water under the
prior appropriation system involves no correlation between productivity and priority.\textsuperscript{211}

Another problem with prior appropriation is that the beneficial use requirement allows the inefficient use of water by discouraging rights holders from altering their use from an outdated one to a more modern, efficient use.\textsuperscript{212} Though the beneficial use requirement was intended to prevent the squandering of water, the flexibility in what constitutes a “beneficial use” permits many practices that are not economically efficient.\textsuperscript{213} Given the multiplicity of uses that qualify as beneficial and the lack of a comprehensive definition, beneficial use can best be described as a threshold requirement that operates only as a backstop to the excessive taking of water.\textsuperscript{214} One author has even described the requirement as “a fairly elastic concept that freezes old customs, [and] allows water users considerable flexibility in the amount and method of use.”\textsuperscript{215} Thus, although the beneficial use doctrine could be employed to limit inefficient uses of water, it has yet to serve that function.\textsuperscript{216}

Like the beneficial use requirement, the “use it or lose it” prohibition against waste—also called forfeiture—motivates diverters to take their whole water allotment from the river.\textsuperscript{217} People threatened with losing an unused water right are not likely to reduce their water use.\textsuperscript{218} Water rights holders are discouraged from applying their water allocations to more efficient uses because they risk losing their water rights altogether should they use their water for uses other than those originally decreed.\textsuperscript{219} The prohibition incentives a diverter to hoard water and maximize diversions so long as the water is put to its originally de-

\begin{footnotesize}
\begin{enumerate}
\item\textsuperscript{211} See Carey & Sunding, supra note 210; Dellapenna, supra note 206.
\item\textsuperscript{212} See Santa Fe Trail Ranches Property Owners Ass’n v. Simpson 990 P.2d 46, 49 (Colo. 1999); Tarlock, supra note 43, at 780.
\item\textsuperscript{213} Fellhauer v. People, 447 P.2d 986, 994 (Colo. 1968) (“It is implicit in these constitutional provisions that, along with vested rights, there shall be maximum utilization of the water of this state.”); Dunning, supra note 58, at 447; Neuman, supra note 55, at 947–48.
\item\textsuperscript{214} See Douglas W. MacDougal, Private Hopes and Public Values in the “Reasonable Beneficial Use” of Hawai’i’s Water: Is Balance Possible?, 18 U. Haw. L. Rev. 1, 41 n.191 (1996) (describing how water must only be put to some beneficial use in order to fulfill the requirement, not necessarily the best or most efficient use); supra notes 48–53 and accompanying text.
\item\textsuperscript{215} Neuman, supra note 55, at 922.
\item\textsuperscript{216} See id.
\item\textsuperscript{217} See id. at 928 n.53.
\item\textsuperscript{218} See Tarlock, supra note 63, at 901; Charles F. Wilkinson, Western Water Law in Transition, 56 U. COLO. L. REV. 317, 344 (1985).
\item\textsuperscript{219} See Tarlock, supra note 63, at 901; Wilkinson, supra note 218.
\item\textsuperscript{220} See Santa Fe Trail Ranches, 990 P.2d at 49, 59.
\end{enumerate}
\end{footnotesize}
creed, plausibly beneficial use, regardless of its economic value. Further-
more, by encouraging the use of a complete water allocation, the
doctrine promotes the development of quick, and potentially unnece-
nary, water uses. The result is that the waste doctrine penalizes in-
creased efficiency in water use because any water not used is considered
legally lost.223

The interplay between the Colorado-Big Thompson (“C-BT”) and
Windy Gap Projects is a clear example of the negative effects the prior
appropriation system has on economic efficiency and productivity. The
Windy Gap Project pushes C-BT Project rights holders to take as
much water as possible without regard to the productivity or economic
efficiency of the water use. Under prior appropriation’s strict rule of
priority, the junior water rights of the Windy Gap communities have
been regularly sacrificed for more senior downstream rights, regardless
of the value or efficiency of the water’s use. Additionally, under the
flexible beneficial use definition a significant amount of C-BT and
Windy Gap Project water that does reach the communities can be used
for landscaping and other non-essential uses. In fact, only thirty-five
percent of C-BT and Windy Gap Project water currently used is dedi-
cated to municipal and industrial needs.228 Declining agricultural

221 See City & Cnty. of Denver v. Sheriff, 96 P.2d 836, 842 (Colo. 1939) (finding that the
list of beneficial uses listed in the Colorado Constitution was not exhaustive); MacDougal,
supra note 214; Tarlock, supra note 63, at 901; see also Brigham Daniels, Emerging Commons
and Tragic Institutions, 37 ENVTL. L. 515, 557 (2007) (“The bar against wasting water in the
context of incumbent uses has not progressed as demand for water has increased or as the
technologies for consuming water have blossomed.”).

222 See Ling-Yee Huang, Fifth Amendment Takings & Transitions in Water Law: Compensa-
benefit from establishing a history of use, regardless of the application or wisdom of the
use.”).

223 See Neuman, supra note 55, at 928; Tarlock, supra note 43, at 772; Wilkinson, supra
note 218.

224 See infra notes 226–230 and accompanying text.

225 See Carey & Sunding, supra note 210; Huang, supra note 222; infra notes 226–230
and accompanying text.

226 See Carey & Sunding, supra note 210; Dellapenna, supra note 206, at 22, 28; Snider,
supra note 169; Windy Gap Firming Overview, supra note 171.

227 Water-Saving Lawns & Gardens, N. WATER, http://www.northernwater.org/Water
Conservation/WaterSavingLawnsGardens.aspx (last visited Jan. 9, 2013); Water Use, DENV.
(noting that fifty-five percent of the average residential customer’s water use is for outdoor
use). Colorado homeowners use more than half the water consumed each year to water
lawns and gardens. Water-Saving Lawns & Gardens, supra; Water Use, supra.

228 N. WATER, 2010 ANNUAL REPORT 1, 10, http://www.northernwater.org/docs/annual_
needs in Front Range communities use the remaining sixty-five percent.\textsuperscript{229} Furthermore, by threatening to take away any unused water, the rule against waste simply encourages the Front Range communities to continue these economically inefficient uses.\textsuperscript{230}

2. Environmental Consequences and the Windy Gap Project

Increasing population growth in the West combined with strict prior appropriation rules have resulted in the diversion of larger amounts of water from key rivers and tributaries.\textsuperscript{231} This combination, in turn, causes devastating harm to ecosystems.\textsuperscript{232} Nevertheless, despite the resulting environmental impacts, the prior appropriation system does not require consideration of any environmental consequences prior to granting an appropriation.\textsuperscript{233} Thus, when the rights to the Windy Gap Project water were assigned to Northern Water under the prior appropriation system in the 1960s, the water court did not study the environmental consequences of such a water distribution system.\textsuperscript{234} More than forty years later, however, the Bureau of Reclamation completed an Environmental Impact Statement (EIS) detailing the impacts likely to result from the construction of a designated Windy Gap Reservoir.\textsuperscript{235} The Bureau of Reclamation examined impacts from both the reservoir’s construction and the corresponding continual loss of water from the Colorado River.\textsuperscript{236}

The effects listed in the Windy Gap Reservoir EIS are typical examples of consequences that the taking of water through prior appropriation can have on aquatic and other environments.\textsuperscript{237} The EIS expected the extra diversion of water from the Colorado River due to the Firming Project would decrease the average annual downstream flow by up to fifteen percent.\textsuperscript{238} Scientific modeling showed that lower water

\textsuperscript{229} Id.
\textsuperscript{230} See Huang, supra note 222; Tarlock, supra note 63, at 901; Wilkinson, supra note 218.
\textsuperscript{231} See Glennon supra note 6, at 17.
\textsuperscript{232} Id.
\textsuperscript{233} Id. at 21.
\textsuperscript{234} See id.; Buying Water Rights: How Is it Done?, WATER COLO. BLOG (May 15, 2009), http://www.watercolorado.com/tag/water-rights/page/3 (describing the process of filing for water rights, which notably does not include any environmental considerations).
\textsuperscript{236} Id. at ES-1 to -26.
\textsuperscript{237} See Glennon supra note 6, at 17; BUREAU OF RECLAMATION, supra note 235, at ES-1 to -26.
\textsuperscript{238} BUREAU OF RECLAMATION, supra note 235, at ES-11.
flows would likely cause the river temperature below the Windy Gap divergence to exceed the maximum weekly average temperature more frequently.\textsuperscript{239} Furthermore, the chemical composition of the water below the divergence would likely change.\textsuperscript{240} All of these effects would likely combine to put significant stress on fish populations.\textsuperscript{241} Authorities anticipate adult rainbow trout habitat in the upper Colorado River would decrease up to thirty-four percent in August, when expected demand for the Windy Gap Project water is greatest.\textsuperscript{242} The EIS also indicated potential harm to wetlands, wildlife and endangered species, and public recreation.\textsuperscript{243}

Although Colorado’s recent change allowing minimum instream flows and instream diversions is well intentioned, it is not enough to mitigate the environmental consequences that would result from the Windy Gap Firming Project.\textsuperscript{244} Allowing instream flow requirements and diversions may have the effect of preserving natural flows for environmental conservation, however, that is not their purpose.\textsuperscript{245} The exceptions to the strict prior appropriation doctrine do not result in significant environmental protection.\textsuperscript{246} Not only are the instream flow rights junior to established water rights, but instream flow programs may only protect otherwise unappropriated flows.\textsuperscript{247} In other words, instream flow protections cannot actually change the water allocation in already over-appropriated waterways, such as those on which the Front Range

\begin{itemize}
\item \textsuperscript{239}Id. at ES-14.
\item \textsuperscript{240}Id. at ES-15.
\item \textsuperscript{241}Id. at ES-17.
\item \textsuperscript{243}Bureau of Reclamation, \textit{supra} note 235, at ES-18 to -19.
\item \textsuperscript{244}See Colo. Rev. Stat. § 37-92-102(3), -103(4) (2011) (providing that the state can appropriate minimum stream flows for the purpose of preserving the natural environment to a “reasonable degree”); Benson, \textit{supra} note 76, at 1286–87.
\item \textsuperscript{245}See Sasha Charney, Colo. Water Conservation Bd., \textit{Decades Down The Road: An Analysis of Instream Flow Programs in Colorado and the Western United States} 10 (2005), \textit{available at} http://cwcb.state.co.us/public-information/publications/Documents/ReportsStudies/ISFCompStudyFinalRpt.pdf (indicating that the requirement of “preserving the environment to a reasonable degree” in the instream flow statute does not include the protection of wildlife, recreation, aesthetics, or water quality); Abeln, \textit{supra} note 14, at 533; Benson, \textit{supra} note 76, at 1287.
\item \textsuperscript{247}Benson, \textit{supra} note 76, at 1288.
\end{itemize}
depends, and thus do nothing to prevent the dewatering of a river. Further, technically instream flow rights may only be held by the Colorado Water Conservation Board, severely limiting their usefulness.

C. Changing Colorado Law: Using The Public Trust and Public Interest

The impact of the C-BT Project on the Windy Gap Project diversion is a stark example of the economic inefficiency and environmental consequences that result from removing water from a river under the prior appropriation system. To avoid these devastating effects, Colorado water law must recognize the effects of water scarcity on the environment and the inefficiency in the current use of water. Moving forward, water rights should be determined after taking into account the efficiency and environmental concerns associated with particular water uses. To accomplish this, Colorado courts must incorporate the public interest and public trust doctrines into their jurisprudence.

Some Colorado citizens proposed to fix the problems of the prior appropriation system by rejecting it in favor of a public trust. They proposed an initiative to amend the Colorado state constitution to create public ownership of rivers and streams. The trust would have

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248 See id. See generally Trout Unlimited, supra note 246 (providing ten case studies of stream dewatering problems in Colorado).

249 Colo. Rev. Stat. § 37-92-102(3); Benson, supra note 76. But see City of Thornton v. City of Fort Collins, 830 P.2d 915, 931 (Colo. 1992) (treating structures that control water instream as if they were a “diversion” in a traditional sense, thus essentially giving a private party an instream diversion right); Getches, supra note 184, at 32 (noting some exceptions to the state’s exclusive power over instream flows).

250 See supra notes 225–249 and accompanying text.


252 See supra notes 225–249 and accompanying text.

253 See infra notes 266–309 and accompanying text.


provided significant environmental protection to water resources, and would “allow unfettered recreational access to streams.”256 The initiative met significant, though not unexpected, opposition.257 The resistance stemmed from the fact that public ownership of the water would be legally superior to any longstanding water rights.258 Thus, some critics argued, all current water rights in Colorado would have to go through an entirely new process to determine whether they meet the new criteria.259 Further, the lack of a means to transition equitably from the prior appropriation system to the proposed public trust was more likely to result in a prolonged administrative nightmare and significant entanglement of water rights than in proper environmental protection.260 The proposed initiative did not garner enough signatures to make it onto the ballot in November of 2012.261

Instead of leaping to a public trust only system, Colorado’s end goal should be to create a model of law similar to California’s where the protective public trust is balanced against the vested rights of the prior appropriation system.262 The public trust doctrine includes, and is informed by, public interest considerations.263 It is therefore important
that Colorado also explicitly identify public interest values to define the scope of the public trust. Thus, to create a legal model that balances existing rights with a public trust, Colorado must first adopt a statutory public interest system of water review that identifies clear public interest values.

1. Public Interest Reform

The basic benefit of the public interest system, in contrast to the public trust, is that it explicitly identifies values that are important in the creation of water rights. As Colorado changes its views about water from a use-centered model to one that recognizes water as a scarce resource, the malleability inherent in the public interest system will be advantageous. Though the values the public interest system protects may vary from state to state, the public interest approach enables legislatures to define economic efficiency and environmental protection variables that the prior appropriation system lacks.

In New Mexico, the courts consistently identify particular public interest considerations when deciding whether an appropriation should move forward. Using the maximum utilization model to express unwritten public policy, New Mexico courts broadly construe such values. Thus, unlike Colorado, over the years New Mexico has been able to protect changing and elastic public values.

Colorado should adopt a similar statutory body of public values to protect. Establishment of statutory public interest laws could fill the gaps in the prior appropriation system by modernizing the law to give

(noting that Idaho’s public interest requirement is “related to the larger doctrine of the public trust”).

See Mono Lake, 658 P.2d at 719; Marks, 491 P.2d at 380; Getches, supra note 184, at 34.

See Mono Lake, 658 P.2d at 719; Marks, 491 P.2d at 380; Getches, supra note 184, at 34.

See supra notes 85–89 and accompanying text.

See supra notes 189–198 and accompanying text.

See supra notes 202–249 and accompanying text.


See Young & Norton, 110 P. at 1050; Grant, supra note 81, at 499–500.

See City of El Paso v. Reynolds, 597 F. Supp. 694, 700 (D.N.M. 1984) (noting that the public interest is “a broad term including health and safety, recreational, aesthetic, environmental and economic interests”); Grant, supra note 81, at 490.

See N.M. Stat Ann. §§ 72-5-7, 72-12-3(E); Young & Norton, 110 P. at 1050; Grant, supra note 81, at 499–500.
new content to the beneficial use requirement.\textsuperscript{273} Historically, the public’s interest was served by requiring that water be appropriated for a beneficial use.\textsuperscript{274} As noted above, however, application of an overly flexible beneficial use definition has allowed uses of water that are neither economical nor efficient.\textsuperscript{275} Unambiguously identifying and defining concrete values, like economic efficiency and environmental conservation, will provide the Colorado courts with an explicit set of values to protect.\textsuperscript{276} Thus, statutory public interest protections would function to promote values similar to those that were behind the creation of the beneficial use requirement, while constraining some of the flexibility that has undermined beneficial use in Colorado.\textsuperscript{277}

Some Colorado courts have already specifically identified public interest values to be protected.\textsuperscript{278} Nevertheless, the lack of a comprehensive statutory body of public interest law means that no law requires the courts to review important public interest values, and therefore it is not uniformly performed.\textsuperscript{279} Creation of a comprehensive body of public interest law would establish a base of “public uses” that could ultimately be incorporated into a public trust to define its scope.\textsuperscript{280}

Defining public interest values, such as economic efficiency and environmental protection, to fill the gaps in the prior appropriation system is likely to encourage implementation of these ideals among the

\begin{itemize}
\item \textsuperscript{273} See Klein, supra note 53 (finding that “beneficial use has a flexible meaning, generally reflecting the dominant public interest of the time”); Adam Schempp, Envtl. Law Inst., Western Water in the 21st Century 7 (2009), available at http://www.elistore.org/Data/products/d19_02.pdf (arguing that by adding water conservation values to the definition of “beneficial use,” Colorado could discourage waste).
\item \textsuperscript{274} Benson, supra note 76, at 1303 (suggesting that the lack of public interest law in Colorado is a result of the idea that “the public interest is best served by ensuring that water may be appropriated for beneficial use”); Hobbs & Raley, supra note 92 (suggesting that the Colorado courts’ application of the prior appropriation doctrine itself actually furthers the public interest).
\item \textsuperscript{275} See supra notes 202–249 and accompanying text.
\item \textsuperscript{277} See Combs, 28 P. at 967–68 (Colo. 1892) (noting that the beneficial use requirement was intended to discourage water speculation and encourage quick use of water resources); Klein, supra note 53; Schempp, supra note 273; supra notes 212–216 and accompanying text.
\item \textsuperscript{278} Wadsworth v. Kuiper, 562 P.2d 1114, 1116–17 (Colo. 1977) (finding that the Colorado Constitution implies “a vital interest in preserving the water resources of the state” and “mandates the protection of the public interest in water”); Hobbs & Raley, supra note 92 (suggesting that the Colorado courts’ application of the prior appropriation doctrine itself actually furthers the public interest).
\item \textsuperscript{279} Abeln, supra note 14, at 536–38.
\item \textsuperscript{280} See Bokum, supra note 118, at 690–91; Getches, supra note 184, at 34.
\end{itemize}
Windy Gap communities. If, after conducting a public interest review, a court finds that the communities’ water use would not meet the designated public interests, the communities would be required to come into compliance prior to gaining additional water rights associated with the Windy Gap Firming Project. In contrast, if a court finds that the Front Range communities’ need for water outweighs other defined considerations, the public interest review would, at the least, draw attention to the issues at hand and likely would encourage, though not mandate, economically efficient and environmentally friendly uses.

Public interest review, however, is not ideal in the long run. The temporal and geographic flexibility inherent in the public interest system is likely to create insecurity and uncertainty in the granting of water rights. Further, should Colorado adopt the “other laws” model of public interest review, which requires an agency to take into account explicit constitutional policies when deciding whether to allow an appropriation, the outcome would likely mimic the economic-centered focus of Colorado’s current statutory prior appropriation system. The public interest system’s inherent flexibility suggests that statutorily required public interest review should be a step toward the solution to Colorado’s water law problem, but not the final answer.

2. Adopting the California Public Trust Model

Colorado should achieve a system of water rights similar to California’s, where the court balances the public trust against vested water rights. California’s model is the prime example of both the widening of the public trust through public interest considerations and the integration of the trust with vested water rights. Adoption of a similar model in Colorado could incorporate public interest values such as

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281 See Abeln, supra note 14, at 533; Grant, supra note 81, 490; supra notes 85–115 and accompanying text.
282 See Abeln, supra note 14, at 533; Grant, supra note 81, 490; supra notes 85–115 and accompanying text.
283 See Abeln, supra note 14, at 533; Grant, supra note 81, 486, 490; supra notes 85–115 and accompanying text.
284 See Grant, supra note 81, at 491; supra notes 104–115 and accompanying text.
285 See COLO. CONST. art. XVI, § 6; Grant, supra note 81, at 489.
286 See Grant, supra note 81, at 489–91.
287 See Mono Lake, 658 P.2d at 728.
288 See id.; Ctr. for Biological Diversity, Inc. v. FPL Grp., Inc., 83 Cal. Rptr. 3d 588, 595–600 (Ct. App. 2008); Rieser, supra note 129, at 393–94.
economic efficiency and environmental protection, without having to completely overhaul Colorado’s prior appropriation system.  

The public trust is informed by and incorporates public interest values, but also avoids the inherent uncertainty and flexibility of a traditional public interest system. For example, in California, the courts recognized an ecological public trust by identifying and incorporating public interest values centered around preservation. In contrast, Colorado’s strict adherence to the prior appropriation system has prevented Colorado water law from adapting similarly to the social and economic changes over the past century. To do so, Colorado would have to incorporate newfound statutory public interest values into a public trust. As noted above, in the case of the Windy Gap water, such values could include efficient use of the water and environmental protection. Incorporation of these values would curtail non-efficient uses of water, such as landscaping, and would help protect against the devastating environmental effects detailed in the Windy Gap Firming Project EIS. Furthermore, explicitly identifying these values and incorporating them into the trust would clearly define the trust’s scope.

One of the primary benefits of California’s public trust model is that it balances vested prior appropriation rights against the trust’s public interest values when the two systems conflict. As the Mono Lake decision emphasized, the public trust doctrine should be considered alongside other water rights systems. In Mono Lake, the court recognized the importance of Los Angeles’s vested water rights and balanced those concerns against the dramatic environmental consequences of

289 See Mono Lake, 658 P.2d at 728; infra notes 290–296 and accompanying text.
290 Bokum, supra note 118, at 690–91; Getches, supra note 184, at 34; see Grant, supra note 81, at 491; supra notes 116–122 and accompanying text (noting that the state must preserve the public trust for the benefit of all the state’s people, both present and future); supra notes 284–286 and accompanying text (discussing the uncertainty and flexibility introduced by geographic and temporal problems in the public interest doctrine).
291 Marks, 491 P.2d at 380; Ctr. for Biological Diversity, 83 Cal. Rptr. 3d at 595–600; Rieser, supra note 129, at 393–94.
292 See Abeln, supra note 14; supra notes 189–198 and accompanying text.
293 See Bokum, supra note 118, at 690–91; Getches, supra note 184, at 34.
294 See Abeln, supra note 14, at 533; Grant, supra note 81, at 486, 490; supra notes 85–111 and accompanying text.
295 BUREAU OF RECLAMATION, supra note 235, at ES-1 to -26; see supra notes 224–249 and accompanying text.
296 See Marks, 491 P.2d at 380; Bokum, supra note 118, at 690–91; Getches, supra note 184, at 34.
297 See Mono Lake, 658 P.2d at 728, 732; El Dorado, 48 Cal. Rptr. 3d at 490–91.
298 Mono Lake, 658 P.2d at 728.
taking water out of Mono Lake.\textsuperscript{299} Nevertheless, the court ultimately refused to dictate a decision on the water allocation, only requiring reconsideration of the diversions from Mono Lake in light of the public trust purposes.\textsuperscript{300} The court’s action implies significant protection for vested rights, subordinating to the public trust only so long as the vested rights are imminently injurious to the trust res (i.e., public interest values).\textsuperscript{301}

In the case of the contested diversions, application of public trust protections would integrate public interest considerations while also generally protecting vested prior appropriation rights.\textsuperscript{302} In circumstances like the Windy Gap Firming Project, where the public trust’s environmental and economic efficiency protections would directly conflict with vested rights, the court must balance the competing interests.\textsuperscript{303} The public trust’s protections may prevail only to the extent necessary to protect specific public interest considerations.\textsuperscript{304} Thus, like in Mono Lake, the Windy Gap communities that have vested rights in the water may have to curtail and change their water uses to accommodate the public interest concerns.\textsuperscript{305}

The integration of public interest concerns into Colorado water law may also require downstream users to curtail or change their water use to accomplish fully the public interest goals.\textsuperscript{306} This would result in communities across the Southwest shouldering together the responsibility for dealing with water shortages.\textsuperscript{307} In contrast, should a court find instead that the public trust protections win out fully over the communities’ vested rights, the result would encourage Front Range communities to devise other innovative ways of acquiring and using water.\textsuperscript{308} Thus, such a new legal system is likely to promote the economically efficient

\textsuperscript{299} Id. at 714–16, 727–28.
\textsuperscript{300} Id. at 732.
\textsuperscript{301} See id. at 728, 732; see also El Dorado, 48 Cal. Rptr. 3d at 490–91, 495–96. Some commentators argue that limiting or taking vested water rights through implementation of a public trust would constitute a taking and thus require just compensation. Leonhardt & Waite, supra note 118, at 209–11. Such an argument, however, is not truly a negative because although it could subject the state to significant monetary liability, it would also curtail use of the public trust in inappropriate situations. See id.
\textsuperscript{302} See Mono Lake, 658 P.2d at 728, 732; El Dorado, 48 Cal. Rptr. 3d at 490–91; Bokum, supra note 118, at 690–91; Getches, supra note 184, at 34.
\textsuperscript{303} See Mono Lake, 658 P.2d at 728, 732; El Dorado, 48 Cal. Rptr. 3d at 490–91, 495–96.
\textsuperscript{304} See Mono Lake, 658 P.2d at 728, 732; El Dorado, 48 Cal. Rptr. 3d at 490–91, 495–96.
\textsuperscript{305} See Mono Lake, 658 P.2d at 728–29.
\textsuperscript{306} See Mono Lake, 658 P.2d at 728–29; El Dorado, 48 Cal. Rptr. 3d at 491 & n.21.
\textsuperscript{307} See Mono Lake, 658 P.2d at 728–29; El Dorado, 48 Cal. Rptr. 3d at 491 & n.21.
\textsuperscript{308} See Mono Lake, 658 P.2d at 728–29; El Dorado, 48 Cal. Rptr. 3d at 491 & n.21.
use of current water resources while simultaneously protecting the Colorado River environment.\textsuperscript{309}

**Conclusion**

Water is becoming an increasingly scarce resource in the Desert West. Some communities have tackled this problem by filing for more water rights from the Colorado River. However, under Colorado’s current water law system, rights are granted without concern for the efficiency of the use of water or the dramatic environmental consequences of the taking. Creating a statutory public interest system of water law in Colorado would identify explicit values that Colorado wishes to protect. In Colorado, these values ought to include economic efficiency and environmental protection. In the short run integration of such protective values in central Colorado would likely prevent the creation of a designated Windy Gap Reservoir due to the projected environmental effects of the project, possibly also causing water shortage issues. However, long-term implementation of the values would ultimately result in more water available to the junior water rights holders. Thus, integrating these values into the protective nature of the public trust will provide environmental and economic benefits to the public over the long-term. Furthermore, vested prior appropriation rights will remain untouched so long as they do not directly harm the public trust protections.

\textsuperscript{309} See *Mono Lake*, 658 P.2d at 728–29; *El Dorado*, 48 Cal. Rptr. 3d at 491 & n.21; Bokum, *infra* note 118, at 690–91; Getches, *infra* note 184, at 34; *infra* notes 287–308 and accompanying text.