Colorado Residentail Property Owners and their Cloudy Right to Precipitation Capture

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COLORADO RESIDENTIAL PROPERTY OWNERS
AND THEIR CLOUDY RIGHT TO PRECIPITATION
CAPTURE

A man from the west will fight over three things: water, women and gold, and usually in that order.1

I. INTRODUCTION

Until July 1, 2009, all Colorado citizens faced fines and jail time for capturing precipitation on their residential property.2 In April 2009, however, Colorado’s governor signed into law two statutes that incrementally deviated from the State’s traditional appropriation system of water rights by permitting a certain class of residential landowners to use precipitation that collects on their rooftops.3 Colorado’s unique water laws and the statute’s passage garnered plenty of national attention in two of the country’s largest newspapers and on one of the nation’s most listened to radio programs.4 These new laws now permit a certain class of Colorado residential landowners to capture precipitation on their property before it collects into the State’s groundwater or surface water supply by giving less deference to the water rights doctrine of prior appropriation.5 Colorado’s new law permitting a certain class of residential landowners to capture rainwater on their property was inevitable and prudently legislated, but the law should have encompassed all residential landowners and not only a certain class of such residential landowners on the basis of traditional theories of property, social policy, enforceability, and utility.

Part II of this Comment provides a brief historical background concerning classical theories of property and how such theories apply to Colorado water rights. Additionally, such theories are discussed in their relation to the recently enacted Colorado law at issue

3. COLO. REV. STAT. §§ 37-90-105(1) and 37-92-602 (2010). These two statutes were enacted as part of 2009 Colo. Sess. Laws S.B. 09-80.
concerning residential landowners’ right to capture precipitation on their property. Furthermore, this section will also provide the reasoning behind Colorado’s long accepted standard of appropriation concerning water rights and why Colorado did not adopt a riparian common law water rights standard.

Part III of this Comment will evaluate the legislative history and reasoning behind Colorado’s residential precipitation capture laws and provide a response to the criticism of those opposing the new laws. Part III also includes a cost-benefit analysis concerning the new laws that will help explain in part why the State of Colorado decided to enact such laws. Part IV then examines how Colorado’s neighboring states treat precipitation capture.

Part V’s portion of this Comment will focus on why Colorado’s residential precipitation capture laws should be expanded to encompass all residential landowners in the State based on social policy and the bundle of rights associated with land ownership. This argument is substantiated on the grounds that residential landowners should have the right to use land and precipitation that collects on their property as they see fit. Furthermore, Part V will argue why the standard of appropriation can be reconciled with allowing all residential landowners to capture precipitation on their property, and why the liability residential landowners faced under the old law which denied residential landowner the right to capture rainwater on his or her property was impractical, superfluous, and unenforceable. Finally, the remaining portion of Part V sets forth an explanation and argument that despite the laws’ positive change, the new laws are inherently difficult to enforce. The argument proceeds to elucidate why the new laws do not adequately address dramatic societal and demographic changes and why residential precipitation capture should encompass all Colorado residential landowners as a means of enforceability and utility.

II. BACKGROUND

Much is written concerning the history and various facets and intricacies of property in general and Colorado water law. This Comment, therefore, will not give an exhaustive historical examination on property rights or to Colorado water law, but will rather give a brief and cursory overview of both.

Richard Epstein argues, “[p]rivate property has been part of all human societies

since primitive times."\(^7\) Property has many meanings within the law but often the word property concerns the "legal relations between persons with respect to a thing."\(^8\) Rights to property as defined by the Restatement (First) of Property are those "legally enforceable claim[s] of one person against another, that the other shall do a given act or shall not do a given act."\(^9\)

The common law or traditional approach to property "denies that external things are held in common by mankind and awards ownership of any unowned thing to its first possessor."\(^10\) The idea of first in time, first in possession is encapsulated in a maxim of Roman law, "qui prior est tempore potior est jure (who is first in point of time is stronger in right.)"\(^11\) Henry Brinklow, simply, yet eloquently, stated that the treatment of property under the common law is: "[first come, first served.]"\(^12\) William Blackstone, a renowned English judge, jurist, and professor, argued that property "consists in the free use, enjoyment, and disposal of all [an individual's] acquisitions, without any control or diminution, save only by the law of the land."\(^13\)

Despite some limitations to the common law's treatment of possession as a touchstone to property rights, the principle of possession provides courts "absent a better alternative . . . an attractive starting point, for resolving particular disputes over the ownership of particular things."\(^14\) The principle of first possession justifies itself because it serves as a means of organization as well as assures and fosters property rights through structured boundaries between individuals.\(^15\) Furthermore, as Epstein argues, the first possession rule by nature is an enduring rule because it resolves competing property interests particularly in disputes between private owners and the state.\(^16\)

One of the most well known examples of a starting point for judicial application of the first possessor rule is found in Pierson v. Post.\(^17\) The Pierson case involved a disputed claim regarding who owned a wild fox — the one who first pursued the fox or the one who killed the fox and took possession of it.\(^18\) The Pierson Court concluded that an individual or entity must have more than a mere intention to possess a thing in order to gain title and ownership to it.\(^19\) In Pierson's case, mortally wounding the fox was sufficient for possessory purposes.\(^20\)

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\(^7\) RICHARD A. EPSTEIN, SUPREME NEGLECT 15 (2008).
\(^8\) RESTATEMENT, supra note 6.
\(^9\) Id. at § 1.
\(^12\) Id.
\(^15\) Id. at 1238.
\(^16\) Id. at 1224.
\(^18\) 3 Cai. R. 175 (N.Y. Sup. 1805).
\(^19\) Id.
\(^20\) Id.
A. The Unique Nature of Water as Property

The traditional approach to property rights recognizes the "trinity of exclusive possession, use, and disposition . . . as forming the core of private property that lies at the center of organized social life."\textsuperscript{21} Water rights are considered property rights.\textsuperscript{22} However, as vital a resource and valuable a property water is in Colorado, water has "no higher or more protected status than any other sort of property."\textsuperscript{23} It is, therefore, understandable that "[p]roperty rights to land are more readily defined and enforced because it is possible to survey lines and record boundaries."\textsuperscript{24} This is because "[m]obile resources such as . . . water . . . are more difficult to bring under the property rights umbrella."\textsuperscript{25} The quandary of determining water rights is that their "effective use . . . requires that many people share it at one time."\textsuperscript{26} Therefore, "the basic systems of water rights all seek some balance among consumption, navigation, recreation, and fishing."\textsuperscript{27} It is no surprise then that "[t]he law constantly speaks of correlative and reasonable uses, never absolute and exclusive dominion."\textsuperscript{28} As a result of the unique property characteristics of water, some even argue that water rights claims under the Takings Clause of the United States Constitution will become much more commonplace in the future.\textsuperscript{29}

Property rights hold a fundamental place within the United States Constitution because of "historical antecedents in state constitutions and natural rights philosophy."\textsuperscript{30} Property rights had such special importance within American society essentially from its inception because "every state constitution was based on the idea that the purpose of government was to preserve natural rights to 'life, liberty, and property.' "\textsuperscript{31} James Madison, who helped write the United States Constitution, believed that government's purpose was to ensure and safekeep the enjoyment of citizens' property rights.\textsuperscript{32} However, despite property rights being considered of special importance within the United States as embodied in its Constitution, property rights are not without limitation.\textsuperscript{33}

B. The First Possession Rule's Application to Water Rights

Richard Epstein argues that "[t]he notion of exclusive possession . . . is implicit in
the basic conception of private property . . . ." Epstein asserts that "[t]he first-
possession rule leaves each thing with a determinate owner . . . ." Epstein thus,
articulates that over time society is "better off if the surplus in things remains well
defined with a single owner, than if each and every owner surrenders some of what he
has acquired in exchange for the right to some portion of the surplus of [property]
acquired by others." Epstein, furthermore, wrote "[t]he parallels between water law and the first-
possession rule to land . . . gives a baseline for analysis that provides a clear
foundation . . . and is largely impervious to political manipulation." That said, the
nation's high court determined in California v. United States that "except where the
reserved rights or navigation servitude of the United States is invoked, the State has total
authority over its internal waters." The United States Supreme Court prior to its California v. United States decision
held that it is within a state's prerogative to "determine for itself whether the common
law rule in respect to riparian rights or that doctrine which obtains in the arid regions of
the West of the appropriation of waters . . . shall control. Congress cannot enforce either
rule upon any state." Furthermore, the United States Supreme Court in the early 1900s
did not consider a landowner's right to water to be on par with protections afforded
by the United States Constitution to real estate.

C. The Origin of the Prior Appropriation Doctrine

The appropriation model was "first used in Utah and California and ha[s] some
antecedents in Roman law . . . ." The State of Colorado, like Utah and most western
states, did not adopt the common law's riparian approach to water rights, but instead
adopted an appropriation system of water rights, which greatly differs from the common
law's riparian model. The appropriation standard's "basic principle is that the person
who first appropriates (captures) water and puts it to reasonable and beneficial use has a
right [greater than] later appropriators." A water rights system of appropriation
"quantifies the amount of water taken and establishes priorities to available water among
users according to when their appropriation was established." Colorado utilizes an

34. EPSTEIN, supra note 10, at 63.
35. Richard A. Epstein, The Utilitarian Foundations of Natural Law, 12 HARV. J.L. & PUB. POLICY 713,
Liberty with the Common Good 27 (1998).
36. Id.
37. EPSTEIN, supra note 10, at 70.
Guide 339 (2002). Some of the earliest individuals to adopt certain prior appropriation principles were
Mormon pioneers who settled various parts of the West, and in particular, what eventually became the State of
Utah. See 1 Wells A. Hutchins, Water Rights in the Nineteen Western States 163 (2004); David M.
Gillian & Thomas Capnor Brown, Instream Flow Protection: Seeking a Balance in Western
42. Dukeminier et al., supra note 11, at 34.
43. Id. at 34–35.
44. Corbridge & Rice, supra note 6, at 1.
appropriation system because of "the limited availability of water" in the State, as generally no more than fifteen inches of precipitation falls annually. In comparison, states east of Colorado, such as Minnesota and Georgia receive forty-six and sixty-six inches of annual rain, respectively. Because little rain falls within Colorado, the State must rely on snowmelt runoff as its principal water source. Colorado also adopted the appropriation standard because violence, including gunfights, and the dynamiting of dams was commonplace in its frontier days as miners, ranchers, and farmers vehemently fought over the valued resource. To this day, various entities continue to duke it out over available water rights within Colorado. As municipalities continue to grow, water disputes should only intensify. The doctrine of prior appropriation, however, is not infallible or without its shortcomings "even if it makes more productive use of water."52

Colorado also uses the standard of appropriation because eighteen states and the nation of Mexico rely on part of the State's water supply. The states that rely on Colorado water are situated both east, west, north, and south of the State. Obvious states that rely on Colorado water include Arizona, California, Nevada, New Mexico, Utah, and Wyoming. There are, however, states that one may not easily suspect as needing Colorado water, such as Arkansas, Iowa, Kansas, Kentucky, Louisiana, Idaho, Utah, and California.53 The states that rely on Colorado water include Arizona, California, Nevada, New Mexico, Utah, and Wyoming.55 There are, however, states that one may not easily suspect as needing Colorado water, such as Arkansas, Iowa, Kansas, Kentucky, Louisiana, Idaho, Utah, and California.55

45. Id. at 3.
46. Id.
48. CORBRIDGE & RICE, supra note 6, at 3.
49. Id. at 7.
50. See Stephanie Simon, Oil, Water Are Volatile Mix in West, WALL ST. J., Mar. 19, 2009, at A3 (Simon addresses the increasing amount of control energy companies are currently obtaining within the State of Colorado as they seek to extract oil and natural gas from shale that requires vast amounts of water; environmental groups such as the Western Resource Advocates adamantly oppose such allocation of water, because it believes limited State water resources should be allocated towards growing municipalities, households, and preserving wildlife). The process of oil and natural gas extraction from shale may become an even more attractive option for energy companies in Colorado and elsewhere as a result of the 2010 Deepwater Horizon oil spill in the Gulf of Mexico. See Morning Edition: Smaller Oil Firms Fear Regulation Backlash In Gulf (NPR radio broadcast, July 7, 2010), transcript available at http://www.npr.org/templates/transcript/transcript.php?storyid=128269353. The popularity of oil extraction from shale is seen in Weld County, a sparsely populated area in northern Colorado, and is viewed by some as a much-needed economic energizer. See Steve Raabe, Oil-boom Hopes: New Drilling Method May Mean Economic Boost for NE Colo., DENVER POST, Aug. 1, 2010, at 1K. There remains an ongoing debate, however, at both the state and national level concerning the shale extraction process. See Mark Jaffe, Inside Look at Fracking, DENVER POST, Nov. 20, 2011, at 1K; Tom Bearden, Tracking Energy Booms, Busts, and the Rise of the ‘Fracking’ Debate, PBS NEWSHOUR (June 15, 2011), http://www.pbs.org/newshour/updates/science/jan-june11/fracking_06-15.html; Drilling Down Series, N.Y. TIMES, http://www.nytimes.com/interactive/us/DRILLING_DOWN_SERIES.html (last visited Oct. 13, 2011). Additionally, there is also another water battle brewing in Colorado concerning who may use waterways within the state for river rafting and other recreational pursuits as two competing principles — the Colorado constitutional right for public use of waterways versus the private ownership interests of riverbeds and banks are at odds. See Morning Edition: Rafters Push For “Right to Float” in Colorado, (NPR radio broadcast, July 22, 2010), transcript available at http://www.npr.org/templates/transcript/transcript.php?storyid=128619563.
51. Id.
52. EPSTEIN, supra note 35, at 265.
54. Id.
55. Id.
Mississippi, Missouri, Nebraska, Oklahoma, Tennessee, and Texas. The main water sources serving each of the aforementioned states and Mexico include the Platte, Arkansas, and Rio Grande Rivers that head eastward as well as the Colorado River that winds to the west.

1. The Colorado Constitutional Standard of Appropriation

The scarcity of water and the conflicts that sprung from such scarcity led to Article XVI's passage into the Colorado Constitution. Article XVI includes Section 5, which addresses water rights. Article XVI, Section 5 of the Colorado Constitution planted the appropriation standard deep within Colorado jurisprudence. The State of Colorado implemented Section 5 of Article XVI as a means of fostering societal peace and economic growth within the State over how water would be used and allocated. Section 5 of Article XVI remains unchanged today from its 1876 adoption into the Colorado Constitution. The article declares "[t]he water of every natural stream, not heretofore appropriated, within the state of Colorado, is hereby declared to be the property of the public, and the same is dedicated to the use of the people of the state, subject to appropriation as hereinafter provided." The system of appropriation requires parties seeking a water right in Colorado to show "[t]he concurrence of intent and overt acts [to a water right] . . . and [that] the date on which the first step is taken [toward appropriation] determines the date of appropriation." Additionally, one must make beneficial use of such water in order to obtain an appropriated right to it.

The standard of appropriation as adopted by the Colorado Constitution and statutory law applies to more than rivers and streams within the State. It required all residential landowners within the State up until the 2009 passage of Colorado Senate Bill 09-80 to let precipitation, which fell on their residential property, to become part of the

56. Id.
57. Id. Unfortunately, the Colorado River is stressed to the point that much of the time no water remains once the river reaches the Pacific Ocean; the river is also becoming increasingly polluted. See Marketplace, 'Downstream, Death of the Mighty Colorado', (American Public Media radio broadcast, July 23, 2010) transcript available at http://marketplace.publicradio.org/display/web/2010/07/23/pm-downstream-death-of-the-mighty-colorado/. The Colorado River’s depleted condition and the ensuing ramifications of the problem is further discussed in Water Worries: The Drying of the West, ECONOMIST, Jan. 29, 2011, at 32. However, the Colorado River may have received some much needed replenishment "[t]hanks to a blizzard-filled winter [in 2011] and an unusually cold and wet spring, [where] more than 90 measuring sites from Montana to New Mexico and California to Colorado had record snowpack totals on the ground for late May, according to a federal report . . . ." Kirk Johnson & Jesse McKinley, Record Snowpacks Could Pose Threat To Western States, N.Y. TIMES, May 22, 2011, at A15.
58. COLO. CONST. art. XVI.
59. COLO. CONST. art. XVI; CORBRIDGE & RICE, supra note 6, at 7.
60. COLO. CONST. art. XVI; CORBRIDGE & RICE, supra note 6, at 7.
61. CORBRIDGE & RICE, supra note 6, at 7.
63. COLO. CONST. art. XVI, § 5.
65. Rada, supra note 6, at 828.
general water supply while barring its use or storage.\textsuperscript{67}

The appropriation system in most aspects as adopted by the Colorado Constitution has been consistently upheld as the water rights standard in Colorado court decisions.\textsuperscript{68} The landmark decision of \textit{Coffin v. Left Hand Ditch, Co.} in 1882 thoroughly entrenched the Colorado Constitution's appropriation standard within the State.\textsuperscript{69} In \textit{Coffin}, the Colorado Supreme Court held that the common law doctrine permitting land owners under the riparian water rights doctrine entitlement to the natural flow of a river abutting his or her land as unenforceable in the State of Colorado.\textsuperscript{70} The \textit{Coffin} Court upheld the doctrine of appropriation and determined that minus statutory language stating otherwise, those who first appropriate water and make a beneficial use of such water have superior claim to such water even if the water emanates from the land of another.\textsuperscript{71}

A short time following the \textit{Coffin} decision, "all eight Rocky Mountain states had judicially and/or statutorily recognized the Colorado doctrine."\textsuperscript{72} Colorado courts do not deviate in recognizing and enforcing the appropriation standard within the State as the Colorado Supreme Court, in one of its most modern opinions concerning water rights, held that "no person 'owns' Colorado's . . . water resource as a result of land ownership."\textsuperscript{73}

D. \textit{Colorado Senate Bill 09-80}

When the Colorado legislature enacted Senate Bill 09-80, permitting a certain class of residential landowners to capture rainwater on their property, the State deviated somewhat from its system of appropriation.\textsuperscript{74} The new provision found in the 2009 Colorado Digest of Bills for Water and Irrigation:

[a]uthorizes the collection of precipitation from the roof of a building that is primarily used as a residence and is not served by a domestic water system serving more than 3 single-family dwellings, if the water collected is used for: Fire protection; The watering of poultry, domestic animals, and livestock on farms and ranches; The irrigation of not over one acre of gardens and lawns; or Ordinary household purposes.\textsuperscript{75}

Nevertheless, Colorado's new laws are not without limitation concerning how residential landowners may use precipitation that collects on their rooftops.\textsuperscript{76} Part of the


\textsuperscript{68} Black v. Taylor, 264 P.2d 502 (Colo. 1953); Comstock v. Larimer & Weld Reservoir Co., 145 P. 700 (Colo. 1914); Oppenlander v. Left-Hand Ditch Co., 31 P. 854 (Colo. 1892); Combs v. Agricultural Ditch Co., 28 P. 966 (Colo. 1892); Strickley v. City of Colorado Springs, 26 P. 313 (Colo. 1891); Farmers' High Line Canal & R. Co. v. Southworth, 21 P. 1028 (Colo. 1889); Fuller v. Swan River Placer Min. Co., 19 P. 836 (Colo. 1888); Sieber v. Frink, 2 P. 901 (Colo. 1884) (holding in all cases that the doctrine of appropriation applies to both surface waters and groundwater in the State of Colorado).

\textsuperscript{69} 6 Colo. 443, 447 (1882).

\textsuperscript{70} Id.

\textsuperscript{71} Id.

\textsuperscript{72} CORBRIDGE & RICE, supra note 6, at 9.

\textsuperscript{73} Chatfield East Well Co., Ltd. v. Chatfield East Prop., 956 P.2d 1260, 1268 (Colo. 1998).

\textsuperscript{74} \textit{COLO. REV. STAT.} § 37-92-102 (2008). Prior to the passage of Colorado Senate Bill 09-80, this statute provided no exception for a class-based residential landowner precipitation capture on such property. \textit{Id.}


\textsuperscript{76} Id.
new law "[r]estricts use of rooftop precipitation capture systems to persons having or legally entitled to have an exempt or small capacity well."\textsuperscript{77} The new law also "[s]ubjects such systems to any limitations on use that are or would be contained in the small capacity or exempt well permit."\textsuperscript{78} In addition, the change in law "[r]ecognizes the authority of the board of a ground water management district to impose rules further restricting the use of rooftop precipitation capture systems."\textsuperscript{79}

Neither is the change in law as simple as installing a bucket on one’s roof, waiting for the next snow or rain storm to come along, and then collecting the water on one’s property from such storms.\textsuperscript{80} Before a storm arrives, Colorado residential landowners who are in the permitted class to collect precipitation on their property must first “file an application in the form and manner specified by the state engineer and, unless the applicant has a current well permit or is applying for a new well permit, pay a fee in an amount to be determined by the state engineer.”\textsuperscript{81} Furthermore, under Colorado’s recently enacted residential precipitation capture standard, those applying for precipitation capture permits who are not served by a well, must go through an evaluation process conducted by the Division of Water Resources to determine their eligibility to capture precipitation on their property.\textsuperscript{82}

Once the application is approved, the law further subjugates Colorado residential landowners capturing precipitation on their property to monitoring by state engineers to ensure “compliance with rooftop precipitation capture laws and regulations.”\textsuperscript{83} The new law also “[a]uthorizes the state engineer and division engineers to issue orders to enforce rooftop precipitation capture laws.”\textsuperscript{84} How exactly the permitted class of residential landowners can violate the new law is unclear but “when . . . [state and division engineers] orders are violated, . . . the state engineer, through the state attorney general, [may] seek an injunction or a fine of up to $500 for each violation . . . ."\textsuperscript{85}

III. LEGISLATIVE HISTORY & ANALYSIS OF COLORADO PRECIPITATION CAPTURE LAW

Colorado’s recently enacted residential precipitation capture bill quickly made its way through the legislative process.\textsuperscript{86} The bill originated in the Colorado Senate on January 13, 2009, and within six months became law.\textsuperscript{87} The Senate amended the bill in February 2009\textsuperscript{88} and subsequently passed it by a vote of 34-0-1 in the same month and

\begin{footnotes}
\item[77] Id.
\item[78] Id.
\item[79] Id.
\item[80] Id. Colorado residential landowners who are permitted to capture precipitation on their property must comply with various rules and regulations prior to installing any type of precipitation capture device — whether it be a bucket, cistern, or a small pail. \textit{Id}.
\item[81] Id.
\item[83] \textit{Digest of Bills – 2009}, \textit{supra} note 75.
\item[84] Id.
\item[85] Id.
\item[86] \textit{Summarized History for Bill Number SB09-080}, \texti{COLORADO GENERAL ASSEMBLY}, \url{http://www.leg.state.co.us/Clics/CLICS2009A/csl.nsf/fsbillcont3/49D4349AC4A73794B72575370071F5D4?Open&file=0 80_01.pdf} (last visited Oct. 18, 2009).
\item[87] Id.
\item[88] 2009 First Regular Legislature Session of the Sixty-Seventh General Assembly Bills Signed by
The House introduced the bill in March 2009 and the House passed it following a vote of 62-0-3 within twenty days. The Senate evaluated the House’s amendments on April 1, 2009, before Colorado Governor Bill Ritter signed the bill into law on April 22, 2009, making its effective date July 1, 2009. Since early August 2009, thirteen Colorado residential property owners, mostly from rural regions of the state, have applied for precipitation capture permits.

Before enacting the State’s recent residential precipitation capture laws, the State passed Colorado Senate Bill 119 that called for a study and analysis of one Colorado county’s water supply. The study helped influence the State Engineers Office, the Colorado Water Conservation Office, and some vested water owners to loosen the State’s blanket prohibition against residential precipitation capture. The study aimed to examine how precipitation rates affect available water supplies, the monetary savings residential landowners could attain through precipitation capture on their properties, and the affect precipitation capture could have on existing residential housing developments. The study indicated that much of the precipitation falling within the State was either evaporating or being absorbed by plant life. The study also found that within Northwest Douglas County and aggregated to the State of Colorado as a whole, “residents are faced with a declining nonrenewable groundwater supply and limited options for renewable water supplies.” This declining groundwater supply finding is critical as nearly a fifth of Colorado’s population depends on water emanating from wells with 70% of such well users needing the water for household and domestic purposes.

The study further found that within Douglas County precipitation capture would help alleviate outdoor water supply constraints by 75%, including reducing stress on non-tributary aquifers, which serve as major sources for irrigation and fire fighting. The study’s results played a major role in granting a limited right to residential precipitation capture within Colorado as the State’s lawmakers and many of its water owners recognized the faulty judgment of zealously enforcing laws and policies that discouraged and outlawed a substantiated beneficial practice.

References:

90. COLORADO CATTLEMEN’S ASSOCIATION, supra note 88.
91. John Ingold, Rain Law Wetting Appetites, DENV. POST, Aug. 5, 2009, at IB.
94. Leonard Rice Engrs, Inc. et al., supra note 96, at 1.
95. E-mail from Rep. Marsha Looper, supra note 95.
96. Leonard Rice Engrs, Inc. et al., supra note 96, at 1.
97. Looper, supra note 53.
98. Looper, supra note 95.
State Sen. Chris Romer and State Rep. Marsha Looper played instrumental roles in the passage of Colorado laws permitting limited residential precipitation capture.\textsuperscript{103} Looper wrote various messages to her constituents about the benefits of precipitation capture and her desire to see some type of precipitation capture law passed within the State of Colorado.\textsuperscript{104} Looper, one of the chief legislators behind Colorado’s new residential precipitation capture laws argues that Colorado could save as much as 60% in “treated water and energy costs if [Colorado] use[s] . . .”\textsuperscript{105} precipitation capture for landscaping and recreational needs.\textsuperscript{106} Looper also argues that permitting precipitation capture will alleviate strain on essential municipal and rural water supplies.\textsuperscript{107} Looper further argues that permitting residential precipitation capture will also ease the burden on the State’s aquifers in addition to increasing the lifespan of them.\textsuperscript{108}

Romer’s previous attempt to pass precipitation capture legislation failed.\textsuperscript{109} Concerning the failed first attempt Romer said, “[i]t was stunning to me that this common-sense thing couldn’t be done.”\textsuperscript{110} Nevertheless, two laws addressing the issue of residential precipitation capture passed this time around, thanks in part to a study that determined 97% of rainwater never reaches a body of water and residential landowners who rely on wells often find them barren due to drought.\textsuperscript{111}

A. Responding to Antagonism of Colorado Residential Precipitation Capture

Despite the findings of the aforementioned study and the benefits Looper argues for, the State of Colorado’s official Web page provides a document addressing frequently asked questions about the new residential precipitation capture standard in an attempt to justify its limitation on who can capture precipitation.\textsuperscript{112} One question within the document addresses what is an ordinary household use of water.\textsuperscript{113} The State asserts that watering a garden does not constitute an ordinary household use, and therefore, those outside of the permitted class of residential landowners entitled to precipitation capture are barred from using collected precipitation to water their own plants.\textsuperscript{114} Such an assertion by the State defies logic: if rain or other precipitation falls directly on a residential landowner’s garden, then the landowner can receive the benefit, but if it falls 100 feet away on his or her roof, he or she is barred from using such water for the

\textsuperscript{105} Looper, \textit{Rainwater Harvesting}, supra note 104.
\textsuperscript{106} Id.
\textsuperscript{107} Id.
\textsuperscript{108} Looper, \textit{Let It Rain}, supra note 104.
\textsuperscript{109} Riccardi, supra note 103.
\textsuperscript{110} Id.
\textsuperscript{111} COLO. REV. STAT. § 37-90-105 (2009); Riccardi, supra note 103; Leonard Rice Engrs, Inc. et al., \textit{supra} note 96, at 46.
\textsuperscript{113} Id.
\textsuperscript{114} Id.
Another question asks, "I’m trying to conserve and cut back on the use from my water supplier, am I allowed to collect precipitation for watering my landscaping and to fill a decorative pond?" The State’s answer is an emphatic no. The State’s reasoning, at best paternalistic, at worst draconian, is simply, “because you receive your water supply through a tap from a water supplier, you may not collect precipitation at all.”

Opponents of residential precipitation capture argue that such an exception will deplete available water resources within the State, which in turn will violate appropriated water rights. One state engineer and critic of residential precipitation capture argued, “[i]f I decide to [take rainwater] in 2009, somewhere, maybe 100 miles downstream, there’s a water right that outdates me by 100 years that’s losing water . . ..” However, despite such fears, in 2007, a multiple Colorado water district “hydrology study . . . found that just 3% of the rain falling on undeveloped land makes it back into the stream system in a dry year, compared with 15% in a wet year.” The number is higher in developed areas because of storm water drainage. Nevertheless, “in an average year, 97[%] of the precipitation that fell in Douglas County, near Denver, never got anywhere near a stream.”

These findings greatly substantiate the argument that residential landowners should be able to capture precipitation on their properties and such findings should be carefully considered by the Colorado legislature as it continues to grapple with this issue in the future. One can, therefore, rationally assert that broadening Colorado’s residential precipitation capture standard is tolerable under the standard of appropriation because “there is no injury to the vested [water] rights of others.”

IV. How COLORADO’S NEIGHBORING STATES TREAT PRECIPITATION CAPTURE

Colorado’s nearby states of Arizona, California, New Mexico, and Utah, continue to rely upon the doctrine of appropriation, at least partly, in their jurisdictions’ treatments of water rights. Utah statutory law until 2010 determined that “[n]o appropriation of water may be made and no rights to the use thereof initiated and no notice of intent to appropriate shall be recognized except application for such appropriation first be made to the state engineer in the manner . . . provided, and not otherwise.” The State of Utah...
Colorado residential precipitation capture loosened its restrictive limits on precipitation capture in May 2010, and now permits all of its residential landowners to capture limited amounts of rainwater on their properties provided they register with the Utah Division of Water Rights — which can be done with relative ease on the department’s Web site. California, however, does not constitutionally or statutorily determine all water as being appropriated. An example of non-appropriated water in California includes water that “has ceased to be put to some useful or beneficial purpose.” Colorado statutory law, in comparison, provides little exception to the standard of appropriation.

Various cities in appropriation states bordering Colorado such as Tucson, Arizona and Santa Fe, New Mexico, require or strongly encourage new residential developments to implement or install some type of rain capture system on rooftops. Other “cities outside Colorado are encouraging rain harvesting through tax credits, rain-barrel subsidies, even building codes that require rain-catching cisterns . . . ” such as “[i]n Texas, [where] up to $40,000 in rebates [are] available to businesses that install collection systems.” Moving forward, Colorado would be wise to evaluate and implement incentives and programs encouraging residential rain capture.

The State of Texas publishes a manual on rainwater capture that is available to the public. The manual “serves as a primer on the basics of residential and small-scale commercial rainwater harvesting systems design [and] is intended to serve as a first step in considering options for constructing a rainwater harvesting system or implementing a harvesting program.” These state and municipal endorsed precipitation capture programs in Arizona, New Mexico, and Texas should not be ignored by the State of

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129. CAL. WATER CODE § 1202 (West 2009).

130. Id. at § 1202(b).


132. Johnson, supra note 2. The City of Los Angeles, California is another municipality that “is encouraging residents to recycle rainwater to prevent runoff from polluting the ocean. The city also wants to impose fees on developers who fail to utilize the rain” by not planning for and including precipitation capture mechanisms within certain development projects. Marketplace Morning Report: L.A. Recycles Rain to Protect Its Ocean (American Public Media radio broadcast, Apr. 12, 2010), transcript available at http://marketplace.publicradio.org/display/web/2010/04/12/am-la-recycles-rain-protect-ocean/. The city is even providing some residents with precipitation capture devices such as a 55-gallon barrel that at least one resident uses on her property. Id. On the east coast, multiple cities are using precipitation capture mechanisms to curb pollution and other undesired effects associated with storm runoff. See Trees Grow in Brooklyn, ECONOMIST, Nov. 13, 2010, at 39. See also Emily Bobrow, Let It Pour, ECONOMIST: THE WORLD IN 2011, 2010, at 50.

133. Johnson, supra note 2.


135. Id.


Colorado. Considering that much of Arizona, New Mexico, and Texas receive very similar amounts of precipitation as Colorado with annual rainfall in Tucson, Arizona, at just over eleven inches, near eight inches in New Mexico, and in parts of southwestern Texas less than eight inches on average, Colorado lacks sufficient justification to not permit each residential landowner the right to capture precipitation on his or her residential properties.

V. THE ARGUMENT TO BROADEN COLORADO’S RESIDENTIAL PRECIPITATION CAPTURE STANDARD

In 2003, the Colorado Division of Water Resources published a directive on rain harvesting for the State. The directive determines in part:

[rainwater harvesting is the process of intercepting storm-water runoff and putting it to beneficial use. Rainwater is usually collected or harvested from rooftops, concrete patios, driveways and other impervious surfaces. The diversion and use of rainwater is subject to the Constitution of the State of Colorado, state statutes, and case law.

The popularity of rain capture or rain harvesting is increasing. Such popularity is shown by the tremendous growth experienced by groups such as the American Rainwater Catchment Systems Association, which advocates greater rain capture from companies and individuals while seeing its membership bloom from 100 to 600 members in two years. Rain harvesters such as Brad Lancaster have books espousing the societal and household benefits of precipitation capture while giving practical guidance on developing one’s own precipitation capture system. Capturing and storing

141. Id.
142. Simon, supra note 2.
143. Simon, supra note 2. Organizations such as the American Rainwater Catchment Systems Association are seeking

...
precipitation on one's residential property has many uses including for "evaporative coolers, toilet flushing, car washing, chlorinated swimming pools, and surface irrigation, especially in food gardens." There are multiple benefits to precipitation capture on residential properties including the reduction to flood risk, erosion, and surface water contamination. Precipitation capture on residential property serves as a free and natural water source for landscaping while using water that contains "no chemicals such as fluoride and chlorine, and no dissolved salts and minerals from the soil." Furthermore, residential precipitation capture may possibly lower a residential property owner's water costs while furthering conservation efforts. Each of the aforementioned benefits appear to be highly compelling arguments as to why Colorado should extend its residential precipitation capture standard to include all residential property owners.

Colorado's new laws permitting a class of its residential landowners to capture rainwater on their residential property appears to be in lockstep with this growing trend of precipitation capture. The City of San Diego's encouragement of precipitation capture is another example. On its official government website, the City of San Diego states that "this ancient practice [of precipitation capture] is currently growing in popularity throughout our communities due to interest in reducing the consumption of potable water and the inherent qualities of rainwater." Colorado's new laws, like the City of San Diego's encouragement of precipitation capture, took away some of the impracticality, superfluousness, and unenforceability of forbidding residential landowners from capturing rainwater on his or her property. Legislatures should, however, broaden these new laws to include all residential landowners within the state. Precipitation capture plans in the cities of San Diego, Santa Fe, and Tucson, serve as excellent models for Colorado's consideration.

A. Residential Precipitation Capture & the Property Owner's Bundle of Rights

Colorado should free the restraints constraining residential precipitation capture laws and expand them in the spirit of the bundle of rights or "bundle of entitlements" associated with land ownership. These rights include "the privilege to use the property, the right to exclude others, . . . and immunity from having the property taken or

147. Id.
148. Id.
149. Id.
151. Rain Harvesting Information, supra note 146.
152. Id.
154. Vestel, supra note 134.
damaged without . . . consent."156 Richard Epstein considers the right to exclude others from one's property a serious one because it forcefully establishes a property owner's interests to the property against its non-owners who have few or no interests at all to such property.157

Another foundational basis behind the concept of American property rights is that "[o]wners are generally free to use their property as they wish, but they are not free to harm their neighbors' property substantially and unreasonably."158 Joseph W. Singer argues "[g]ranting owners power over property ensures that they all can obtain resources to satisfy human needs."159 Well-defined property rights "also promotes social welfare by encouraging productive activity and by granting security to those who invest in economic projects."160 Furthermore, Singer argues that property laws work best when they "promote efficiency and social welfare by decreasing the costs of using and obtaining property while maximizing [property’s] benefits both to individual owners and to society as a whole."161 Thus, making Colorado's precipitation capture laws broader to encompass all residential landowners will "encourag[e] productive activity"162 concerning the use of precipitation on one's residential property and "promote efficiency"163 within the State, thus reducing budgetary resources required to ensure compliance with antiquated standards that now apply only to a certain class of residential landowners.164

B. Residential Precipitation Capture & Appropriated Water — Friend or Foe?

The State of Colorado did not write its residential precipitation capture law broader than as enacted165 because of the State's appropriation standard.166 Broadening Colorado's residential precipitation capture standard can arguably comply with the State's constitutional standard of appropriation.167 Precipitation falling from the sky cannot logically be defined as being already appropriated under the Colorado Constitution.168 It would appear that permitting all residential landowners the right to capture precipitation on their properties complies with "the constitutional provision that the right to divert and beneficially use unappropriated water 'shall never be denied' . . . ."169

Precipitation capture on residential property of water that falls from the sky before

156. Id. at xlv-xlvi.
157. EPSTEIN, supra note 7, at 19.
158. SINGER, supra note 155, at xlvii.
159. Id. at 1.
160. Id.
161. Id.
162. Id.
163. SINGER, supra note 155, at 1.
164. Id. The Colorado precipitation capture standard requires a tremendous amount of oversight by state engineers in enforcing the policy. Digest of Bills — 2009, supra note 75. Broadening the precipitation capture standard as argued in this Comment could do away with much unnecessary administration. Id.
165. Id.
167. COLO. CONST. art. XVI, § 6; Symposium, supra note 6, at 234.
168. COLO. CONST. art. XVI, § 6.
169. Symposium, supra note 6, at 234 (quoting COLO. CONST. art. XVI, § 6).
becoming part of a ground or surface water supply, therefore, is unappropriated water that could be diverted under Colorado’s standard of appropriation.\textsuperscript{170} Capturing precipitation would constitute a diversion of water because diverting water within the State does not necessarily have to be the result of “an actual, physical diversion of water from a stream....”\textsuperscript{171} Colorado residential landowners would arguably have an acquired legal water right to precipitation capture as “there [would] be a taking of the [precipitation] water and an application to beneficial use.”\textsuperscript{172} Furthermore, Colorado residential landowners, who capture rainwater on their properties would be in compliance with the inherent principle behind appropriation, that being \textit{first in time, first in right}, because they would be first to claim title to such water that would not be part of an already appropriated water source such as a stream or well.\textsuperscript{173}

The beneficial uses residential landowners would contribute if permitted to capture precipitation on their property include reduced domestic and municipal water usage for landscaping, washing, wildlife, and other household uses.\textsuperscript{174} Water needed for landscaping alone accounts for up to 50% of household water use.\textsuperscript{175} Residential precipitation capture could also serve as a beneficial use of water to curb erosion\textsuperscript{176} and problems associated with heavy rains and flooding predicted to plague the Western states in coming years.\textsuperscript{177}

\section{C. Colorado’s Residential Precipitation Capture Laws’ Inherent Unenforceability}

Colorado’s new laws are still arguably unenforceable because they permit only a certain class of residential landowners to capture precipitation while excluding others.\textsuperscript{178} Addressing and enforcing rights to natural resources that are mobile in nature, such as water, are more challenging than immobile real property such as boundary lines to land parcels.\textsuperscript{179} Inherently, enforcing water rights is substantially more expensive “when it is
Property rights and laws protecting such rights are limited in their effectiveness because they are nearly impossible to enforce. Generally, the government acts as the traditional and least expensive enforcer of property rights, “but it is naïve to assume that government . . . is always the optimal solution.” This is especially true in light of Colorado’s “brutal” budget cuts the State will experience because of an enormous fall in 2009 tax revenues. Recent estimates place the Colorado budget as $1 billion short. Budget cuts facing Colorado include funds to its state prisons. Even some of Colorado’s convicted criminals were released early from prison as a result of the State’s cash strapped status. In November 2009, Colorado’s governor proposed cuts of $260 million to education and a new $132 million tax on soft drinks, candy, and online sales to make up some of the State’s budgetary shortfall. State officials, however, should be concerned about the successful likelihood of future tax increases in light of the City of Boulder voting against a proposed tax hike since Boulder is one of Colorado’s more tax friendly municipalities. Furthermore, State of Colorado employees will face slashed salaries and the State’s universities will see a reduction of $56 million in available funding come 2010. These budget cuts are so serious in nature that the State is considering allowing its citizens to amend Colorado’s Constitution in 2012. The vote would address whether to overturn a constitutional provision enacted in 1992 requiring voter approval of tax increases.

As a result of such budgetary constraints facing Colorado, the allocation of state budget monies to enforce an antiquated rule barring most residential landowners from capturing precipitation on their properties trickles down to harm the indigent of Colorado as resources that could be spent tackling such issues as education, community health, and

180. Id. at 40.
181. Id.
182. Id. at 3.
183. Id.
186. Hoover, supra note 184.
188. ASSOC. PRESS, supra note 185. An example of the plight facing public education in the State of Colorado is found in the Denver public school system, which finds itself in peril following an investment plan that was supposed to significantly boost its budget but has since gone awry. See Gretchen Morgenson, Exotic Deals Put Denver Schools Deeper in Debt, N.Y. TIMES, Aug. 6, at A1.
189. Editorial, Voters Aren’t in Mood for Taxes, DENV. POST, Nov. 6, 2009, at 10B.
190. Id.
191. Tim Hoover, A Panel Recommends Giving Voters the Chance to Amend the State Constitution in 2012, DENV. POST, Nov. 5, 2009, at 1B.
192. Id.
homelessness initiatives are allocated to enforce arcane water law regulations.\textsuperscript{193} If cuts to education, prisons, community health, and new consumption-based taxes are not disconcerting enough, even state infrastructure is not immune from a Colorado budgetary trim down — including bridge maintenance.\textsuperscript{194} This is especially unsettling as a recent federal study indicated that 17\% of Colorado’s bridges are “structurally deficient or functionally obsolete.”\textsuperscript{195} In addition, the study also found the condition of 32\% of Colorado’s roads was either average or poor.\textsuperscript{196} The study concluded that “bad roads are costly as well as dangerous . . .”\textsuperscript{197} For instance, roads and bridges in disrepair lead to shorter vehicle life and increased repair and maintenance expenses, which costs individual motorists on average $335 annually in the United States.\textsuperscript{198}

Therefore, permitting all residential landowners to capture precipitation on their properties could lessen some monitoring costs and strain on the state budget associated with ensuring compliance with precipitation capture standards and household water costs, especially in residential landscaping.\textsuperscript{199} With the State of Colorado as one of the top ten states in foreclosure rates,\textsuperscript{200} reducing any type of cost associated with land

\begin{itemize}
  \item \textsuperscript{193} Jessica Fender, \textit{Colorado Budget Cuts Will Hurt Indigent Most, Some Say}, DENV. POST, Aug. 20, 2009, at 1B. For a detailed look at the homelessness problem in Colorado’s capital city of Denver, see Jeremy P. Meyer, \textit{Search for a Solution to Denver’s Homelessness Street Battle}, DENV. POST, Nov. 27, 2011, at 1A.
  
  \item \textsuperscript{194} Editorial, \textit{Budgeting By a Thousand Cuts}, DENV. POST, Dec. 22, 2008, at 23A.
  
  \item \textsuperscript{195} TRIP, \textit{Key Facts About Colorado’s Road and Bridge Conditions and Federal Funding}, (May 2009), http://www.tripnet.org/Fact_Sheet_CO.pdf.
  
  \item \textsuperscript{196} Id. Additionally, because of budgetary deficits confronting Colorado Springs, Colo., “the city [has] switched off a third of its 24,512 streetlights to save money on electricity . . . .” Michael Cooper, \textit{Governments Go to Extremes as the Downturn Wears On}, N.Y. TIMES, Aug. 7, 2010, at A1. Thus “the downturn [in one Colorado city] will be remembered, quite literally, as a dark age . . . .” as many feel that crime and other dangers have been some of the unintended consequences to turning off streetlights to save precious public dollars. Id.
  
  \item \textsuperscript{197} All Things Considered, \textit{Golden State Highways Are a California Nightmare} (NPR radio broadcast, Nov. 23, 2009), transcript available at http://www.npr.org/templates/transcript/ transcript.php?storyId=120585057. Although, this radio broadcast focused in particular on California’s roadways, much of the story’s findings are important to Colorado because the organization, TRIP who NPR interviewed extensively during this broadcast also conducted a study on Colorado’s roadways and bridges in May 2009. TRIP, supra note 195.
  
  
  \item \textsuperscript{199} Id. Conversely, many urban cities plan to remove various roadways and such efforts are facing skepticism by many citizens who think fewer roadways will mean greater traffic congestion even though proponents argue that reducing roadways in urban centers will actually reduce traffic congestion and make cities more aesthetically pleasing. See \textit{Marketplace: Some Cities Want Fewer Roadways, Not More}, (American Public Radio radio broadcast, July 14, 2010), transcript available at http://marketplace.publicradio.org/display/web/2010/07/14/pm-some-cities-want-less-roadways-not-more.
  
  \item Furthermore, some municipalities are ditching paved asphalt roadways for inexpensive gravel amid budget cuts and voter opposition to raising taxes. Lauren Etter, \textit{Roads to Ruin: Towns Rip Up the Pavement}, WALL ST. J., July 17, 2010, at A1.
  
ownership would be particularly helpful to the State’s residential landowners as home values remain volatile despite some slow recovery. This is important even though the Federal Reserve recently indicated that it does not intend to raise interest rates in the foreseeable future as the economy seeks to drag itself out of the abyss of a recession and seeks solutions to its


highest unemployment numbers in almost three decades.206


206. See Ben Casselman, Economy Adds Jobs, but Not Enough, WALL ST. J., Oct. 8, 2011, at A1; David Leonhardt, Broader Measure of Unemployment Stands at 17.5%, N.Y. TIMES, Nov. 7, 2009, at A1; Peter S. Goodman, Unemployment Rate Rises to 10.2%, Offering Little Reassurance to Job Seekers, N.Y. TIMES, Nov. 7, 2009, at B1; Editorial, Jobless Recovery, N.Y. TIMES, Nov. 8, 2009, at WK7; see also Jordan, supra note 204. A large majority of those who are unemployed have been without a job for periods of time not seen since World War II. David Leonhardt, For Those With Jobs, A Recession With Benefits, N.Y. TIMES, Aug. 11, at B1. Despite the enormity of the recession, the unemployed “had[ve] been concentrated among a surprisingly small number of people . . . .” Id. Unfortunately, despite some job gains in recent months, many have few if any job prospects—even those who have received specialized training with enhanced critical skills. See Peter S. Goodman, After Job Training, Still Scrambling for Employment, N.Y. TIMES, July 19, 2010, at A1; Michael Luo, Frustration and Dispair as Job Search Drags On, N.Y. TIMES, July 18, 2010, at A13; see also Faces—and Fates—of the Jobless, G. W. TIMES, Aug. 9, 2010, at A6. For those who have expended the 99-week limit for unemployment benefits, the situation is even more dire. See Michael Luo, 99 Weeks Later, Jobless Have Only Desperation, N.Y. TIMES, Aug. 3, 2010, at A1. The limited amount of jobs is evidenced by the May 2010 applicant-to-job ratio of 4.67% as reported by the U.S. Bureau of Labor Statistics. Catherine Rampell, Job Openings Ratio Little Changed in May, N.Y. TIMES ECONOMIX BLOG (July 13, 2010, 11:23 AM), http://economix.blogs.nytimes.com/2010/07/13/job-openings-ratio-little-changed-in-may/. One group hit particularly hard by dismal job prospects are young men aged 20 to 24 with only high school diplomas; they face an unemployment rate in excess of 22%. Conor Doughtery, Young Men Suffer Worst as Economy Staggers, WALL ST. J., Nov. 7, 2011, at B1. There are some employers, however, who are having difficulty finding workers to fill some available positions—even “the kind that sometimes seem to have all but vanished: secure, well-paying jobs with good benefits that don’t require a college degree.” See Ben Casselman, Help Wanted: In Unexpected Twist, Some Skilled Jobs Go Begging, WALL ST. J., Nov. 26, 2011, at A1. Nevertheless, John Harwood’s blog post helps shed some light as to why no one seems to be able to definitively articulate the reasons for such long-lasting high unemployment numbers. John Harwood, Mystery for White House: Where Did the Jobs Go?, N.Y. TIMES – THE CAUCUS BLOG (July 19, 2010, 12:40 AM), http://thecaucus.blogs.nytimes.com/2010/07/19/mystery-for-white-house-where-did-the-jobs-go/. Additionally, it appears that any job gains in the near future will prove difficult as evidenced by low GDP growth in the second quarter of 2010. See Catherine Rampell, With Recovery Slow, the Jobs Outlook dims, N.Y. TIMES,
Additionally, all of Colorado’s residential landowners should be able to capture precipitation on their properties in light of growing concerns over municipal water shortages facing not only the West, but also even historically much wetter climates. Such shortages are inducing states, including Arizona, California, Florida, and Texas, to implement plans for turning treated sewage water into safe drinkable water. These shortages could be further exacerbated by green technology projects that require an immense amount of water to operate. Hopefully, the nation’s and State of Colorado’s waters resources never become so depleted that water capture from the moon will need anything more than fleeting consideration. There are even some red flags rising with concern to the quality of the U.S.’s water supply and water systems. Water quality is important because it provides individuals


207. Robert Glennon, Our Water Supply, Down the Drain, WASH. POST, Aug. 23, 2009, at B2 (the author mentions various water shortages facing various regions within the country including a 2008 shortage in metropolitan Atlanta, the increasingly parch condition of various lakes in Florida, and the troublesome low water level of Lake Superior). The State of California is facing an even more dire situation concerning the availability of water as “after three years of drought, dozens of towns and cities have imposed mandatory water rationing and a half million acres in the country’s agricultural breadbasket are lying fallow.” 60 Minutes: Why California Is Running Dry, (CBS News television broadcast, Dec. 27, 2009), transcript available at http://www.cbsnews.com/stories/2009/12/23/60minutes/main6014897.shtml. For a look at the dangers water shortages present, see Bryan Walsh, Dying for a Drink, TIME, Dec. 15, 2008, at 46.


210. See Kenneth Chang, Water Found on Moon, Researchers Say, N.Y. TIMES, Nov. 14, 2009, at A1 (Chang’s article addresses the long held suspicions of astronauts and other scientists about water’s availability on the moon and why they were not surprised at the vast quantity of water recently discovered hundreds of thousands of miles from Earth). There is now debate on how much water — if any exists on the moon or ever did exist there. See Sindya N. Bhanoo, Observatory: Water on Moon Unlikely, a New Study Indicates, N.Y. TIMES, Aug. 10, 2010, at D3. Nevertheless, a few months later, NASA issued another report substantiating the claim that water may in fact exist on the moon. Kenneth Chang, NASA Reports a Moon Oasis, Just a Little Bit Wetter Than the Sahara, N.Y. TIMES, Oct. 22, 2010, at A20. Furthermore, recent discoveries indicate that there may be thousands of additional planets in the Milky Way — fifty-four of which may even have liquid water. Dennis Overbye, Hunting the Galaxy for Planets and Finding 1,235 Contenders, N.Y. TIMES, Feb. 3, 2011, at A1.

and communities with healthy aquatic populations, safe drinking water, and water that may be safely used for recreational purposes. The EPA states that water quality deterioration limits and restricts water use. A water supply of poor quality also leads to expensive treatment to control and mitigate its harmful effects. Over a decade ago, the private sector spent $30 billion combating polluted water, and municipalities spent another $23 billion on the problem. Thus, from a logical standpoint as water quality concerns appear to be rising, none of Colorado’s residential landowners should be punished for prudently and beneficially making use of precipitation falling on their property, especially if it lessens the burden on municipal water distribution and seeks to alleviate water quality concerns.

1. Colorado Citizen Confusion Concerning State Water Law

An inherent problem Colorado faced in enforcing its previous standard forbidding precipitation capture and one that now permits a certain class of residential landowners to capture precipitation on their property is the State’s “wink-and-nod shadow economy.” Within Colorado, one can visit a hardware, home improvement, or gardening store and find “[r]ain equipment . . . legally sold, but [with] retailers [who know] better than to ask what the buyer intend[s] to do with the product.” Today, permitting a certain class of Colorado’s residential landowners to capture precipitation on their properties while barring others from doing so creates greater confusion and enforceability problems.

The doctrine of prior appropriation in itself is a perplexing policy that confronts Colorado citizens. Lobbyists like Kevin Bommer do not want residential landowners to be permitted to capture precipitation on their properties and argues that “[e]very drop of water that hits the ground belongs to someone.” The State Engineers Office, the Colorado Water Conservation Commission, and the majority of vested water owners within the State are hell-bent on the view espoused by those such as Bommer.

All of these articles appeared in a series by The New York Times examining the deteriorating condition of America’s water supply as well as America’s water systems and how regulatory agencies are responding. Toxic Waters Series, N.Y. TIMES, http://projects.nytimes.com/toxic-waters (last updated Mar. 22, 2010).


213. Id. at 4.

214. Id.

215. Id.

216. See Toxic Water Series, supra note 211.


218. Id.

219. Id.

220. Bob Berwyn, State’s Waters Laws a House of Cards, SummitDaily.com, http://www.summitdaily.com/article/20090706/COLUMNNS/907069998/1078&ParentProfile=1055 (last updated July 6, 2009). Berwyn not only addresses the confusing nature of Colorado’s water laws for the general populace, but also argues that water law power brokers within the State seek to keep water laws as confusing as possible. Id. Berwyn opines that Colorado’s water laws were made with a “goal . . . to ensure that entrenched interests — a huge conglomeration of lobbyists, lawyers, and water managers — maintain ironclad control. State-run public hearings for permits feature dense legal verbiage and bureaucratic proceedings that make it extremely difficult for the public to participate in a meaningful way.” Id.


222. E-mail from Rep. Marsha Looper, supra note 95.
However, one could legitimately argue that the majority of Colorado residential landowners believes that precipitation falling on their residential property belongs to them. Therefore, what Bommer and the Colorado legislature fail to understand is the infeasibility of permitting one class of residential landowners to capture precipitation on their property while barring others of such right. This in turn only further confuses Colorado citizens in their struggle to grasp the intricacies of the State’s water laws. The confusion Colorado citizens have concerning who or what controls water resources within the State is said well by Rep. Marsha Looper, “[p]eople are shocked that some developer or water provider owns the water that falls out of the sky.”

Looper’s expressed shock that precipitation falling from the sky as already owned under Colorado law is irreconcilable with a traditional underpinning of property law. This traditional underpinning is one that both common and civil law accept as critical for determining who owns what because “the taking of unowned things is the only possible way to acquire ownership of them.” Because precipitation falling from the sky has yet to reach surface or ground waters, the argument can be made that those who do capture precipitation on their properties have acquired ownership to such water irrespective of the doctrine of prior appropriation. Such an argument is logical considering that 97% of precipitation falling in Colorado never reaches a body of water.

The enforceability problem Colorado continues to face even in light of its new precipitation capture standard is illustrated by the story of Kris Holstrom. Holstrom “fancifully painted 55-gallon buckets underneath the gutters of her farmhouse on a mesa 15 miles from the resort town of Telluride. The barrels catch rain and snowmelt, which Holstrom uses to irrigate the small vegetable garden she and her husband maintain.” When Holstrom sought official word on if her precipitation capture mechanism was permissible, she contacted “the state water department, which told her it was technically illegal, though it was unlikely that she would be cited.” Holstrom’s story helps beg the question, why should the State of Colorado continue to place restrictions on precipitation capture on any residential landowner if its law is too cumbersome to enforce?

D. The Utility in Broadening Colorado’s Residential Precipitation Capture Laws

Colorado’s precipitation capture standard should also be broadened as a means of utility. Implicit within the legal theory of utilitarianism is the goal of enacting societal laws and policies that “compare the costs and benefits . . . .” This is due to the
principle of utilitarianism that looks to the future concerning the overall impact of laws
to “maximize . . . welfare or some other ‘good.’”235 With regard to a residential
precipitation capture standard, the State of Colorado should enact a law that yields the
most favorable consequences.236 Entitling all Colorado residential landowners the right
to precipitation capture under the legal theory of utilitarianism could “yield . . . more
total . . . value.”237 Broadening Colorado’s residential precipitation capture standard,
therefore, may serve as a “good utilitarian rule [that] advance[s] utility . . . .”238

Colorado’s residential precipitation capture standard must be viewed through the
prism of utility because of the consequences such a standard will have on residential
landowners’ ability to control and possess their properties fully.239 Beneficial
consequences are what ultimately give any law utility.240 Permitting all of Colorado’s
residential landowners the right to capture precipitation on their properties will lead to
beneficial consequences.241 These beneficial consequences include compliance with
traditional ideals of real property ownership by permitting all Colorado residential
landowners to use their property as they see fit, and it will afford all residential
landowners the same beneficial opportunity and treatment under the law, which in turn,
promotes maximum welfare,242 a societal good,243 and arguably creates “the greatest
total or aggregate utility . . . .”244

Colorado’s current residential precipitation capture applies only to those who live
in rural areas.245 Such an application is alarming from a utility standpoint based on
recent statistics indicating that within the United States over “three-fourths of
prospective home buyers are now more inclined to live in an urban area . . . .”246 The
State’s decision to permit only rural Colorado residential landowners the right to
precipitation capture fails to recognize this considerable change in American
demography.247 In 2007, the average commute time for Americans was twenty-five

235. RAYMOND WACKS, UNDERSTANDING JURISPRUDENCE: AN INTRODUCTION TO LEGAL THEORY 245
(2005).
237. REIDY, supra note 233.
239. See SINGER, supra note 155, at xiv.
240. DIMOCK, supra note 236; Sherwin, supra note 238.
241. DIMOCK, supra note 236.
242. REIDY, supra note 233.
244. REIDY, supra note 233. See also WACKS, supra note 235.
See also Marketplace, Museum Takes on Study of Suburban Life, (American Public Media radio broadcast, July
9, 2010), transcript available at http://marketplace.publicradio.org/display/web/2010/07/09/pm-museum-takes-
on-study-of-suburban-life/.
247. Id. One author, Christopher B. Leinberger, an urban studies professor elaborates on this demographic
shift and argues,
[a structural change is under way in the housing market—a major shift in the way many Americans
want to live and work. It has shaped the current downturn, steering some of the worst problems
away from cities and toward the suburban fringes. And its effects will be felt more strongly, and
more broadly, as the years pass. Its ultimate impact on the suburbs, and the cities, will be profound.
Christopher B. Leinberger, The Next Slum?, ATLANTIC, Mar. 2008, at 70, 71. See also Christopher B.
Leinberger, The Death of the Fringe Suburb, N.Y. TIMES, Nov. 26, 2011, at A19. Leinberger’s view, however,
minutes as the result of the American workforce living further and further from their respective places of employment. 248 However, various studies now indicate that suburban and rural housing is an increasingly unpopular option as more than twenty million homes in excess of “a sixth of an acre” could be vacant within the next fifteen years. 249

With this demographic shift and with the principle of utility in mind, it appears imprudent that residential precipitation capture applies only to those living in rural areas. 250 Furthermore, Colorado will undoubtedly have to broaden its residential precipitation capture standard in the near future as a result of President Barack Obama “encouraging more people to live in neighborhoods close to their workplaces . . .” and as the EPA and Department of Housing and Urban Development “use the government’s powers to control land-use and transportation funding to promote ‘energy efficient housing choices.’ “252 Such initiatives are also coupled with President Obama’s hopes of cutting carbon emissions by 17% in the next ten years.253 These goals are particularly important for the State of Colorado’s consideration since President Obama and the EPA will undoubtedly seek to implement them as “Obama chose [environmental] officials who take the threat of climate change seriously and value the independent opinion of scientists . . .” 254

What this aforementioned shift in demography and Obama administration goals could mean for the United States and State of Colorado is “fewer subdivisions sprawled out in cornfields, and more housing along transit lines or in settled neighborhoods.” 255 Thus, as the federal government issues more guidelines and incentives for housing

has been criticized as being overly pessimistic, as one author argues that the suburbs and exurba will remain popular residential staples of American life whose demise is being grossly exaggerated. See Joel Kotkin, The Myth of the Back-to-the-City Migration, WALL ST. J., July 6, 2010, at A17.


249. Leinberger, The Next Slum?, supra note 247, at 71. Furthermore, the housing crisis has not impacted merely the middle class — as more and more wealthy individuals are abandoning upscale residential homes rather than paying mortgages on properties where little or no equity remains. David Streitfeld, Biggest Defaulters on Mortgages Are the Rich, N.Y. TIMES, July 9, 2010, at A1. See also Marketplace Morning Report, Rich More Likely to Walk From Homes, (American Public Media radio broadcast, July 9, 2010), transcript available at http://marketplace.publicradio.org/display/web/2010/07/09/rich-more-likely-to-walk-away-from-homes-q/). Surprisingly, however, the glut of available housing has enabled many who rely on subsidized government housing, which is often found in poorer, unsafe areas to now find themselves in spacious new living arrangements — some even located in gated communities. See Dawn Wotapka, Housing Bust Opens New Doors for Subsidized Tenants, WALL ST. J., Aug. 2, 2010, at A1.


253. Seth Borenstein, Obama Wants Big Carbon Dioxide Cuts, But Daily Life Should be Much the Same With Higher Bills, ASSOC. PRESS, NOV. 27, 2009.


255. White, supra note 251.
development closer to urban centers, there is even more reason for the State of Colorado to permit all its residential landowners the right to precipitation capture rather than merely a certain class of rural ones.  

VI. CONCLUSION

Colorado’s new laws permitting a certain class of residential landowners to capture precipitation on their property were inevitable and prudently legislated, but the laws should encompass all residential landowners and not only a certain class of such residential landowners on the basis of traditional theories of property, social policy, enforceability, and utility.

Traditional theories of property, in particular, the principle of first possession should entitle all Colorado residential landowners the right to precipitation capture. Colorado’s residential precipitation capture standard should also be broadened with enforceability in mind as both the past and current precipitation capture standards were and are difficult to enforce because of their complicated and non-commonsensical nature. As a means of utility, the State should broaden its precipitation capture standard to encompass all residential landowners thereby granting such owners the ability to control and possess their properties fully. With social policy in mind, Colorado’s lawmakers should broaden the residential precipitation capture to all residential landowners as a means of reducing some of the State’s energy, water, and enforcement costs as well as household expenditures associated with residential land ownership such as landscaping.

Colorado wisely ended its blanket prohibition concerning precipitation capture on residential property; however, Colorado should look to models developed in Albuquerque, San Diego, Santa Fe, and Tucson, as well as the State of Utah, to create and achieve a workable system where the doctrine of appropriation and an individual residential property owner’s right to capture precipitation on his or her property can be reconciled. Permitting all residential property owners, not just a certain class of them, to capture rainwater on their property under the new law will not divert a dramatic amount away from Colorado’s ground and surface waters as opponents argue.

A solution is achievable. The State of Colorado is entitled to place some restriction on the collection, use, and rights to water within the State as determined by its Constitution. However, this does not mean that only a certain class of residential landowners should be the beneficiaries of the new laws while leaving others high and dry without the same benefit to use captured precipitation as they see fit. Making

256. Id. See also Leinberger, The Death of the Fringe Suburb, supra note 247, at A19.
257. Dukeminier et al., supra note 11; Epstein, supra note 10; Epstein, supra note 14; Singer, supra note 155.
258. See Johnson, supra note 2; Riccardi, supra note 103.
259. See Singer, supra note 155.
260.Looper, Rainwater Harvesting, supra note 104.
261. See O’Donoghue, supra note 128; Vestel, supra note 134.
262. Johnson, supra note 2; Simon, supra note 2.
263. Colo. Const. art. XVI.
Colorado’s residential precipitation capture standard broader is compliant with the standard of prior appropriation because it would not injure water rights already vested in others.265

Furthermore, by permitting all Colorado residential landowners the right to precipitation capture on their properties, they would be making beneficial use of water that is arguably not already appropriated by reducing domestic and municipal water usage for landscaping, washing, wildlife, and other household uses.266 In addition, permitting all of Colorado’s residential landowners the right to precipitation capture could also serve as a beneficial use of water as a means of slowing erosion267 with heavy rains and flooding expected to confront Colorado and the Western United States in the future.268

Colorado must broaden its laws by extending the right to precipitation capture to all residential landowners. There is no strong evidence that a shortage in ground and surface water supplies will result by broadening the law as the majority of precipitation that falls on such properties is usually absorbed by landscaping or evaporates.269 Broadening the laws to encompass all residential landowners concerning precipitation capture will help Colorado alleviate some of its fiscal demands and constraints, particularly in light of the State’s decreased tax revenue stream and today’s uncertain economic environment.270 Broadening the law will most importantly create a more equitable and enforceable law that is in harmony with both individual property rights and the State’s interest in the proper allocation of what is arguably Colorado’s most important natural resource.

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265. CORBRIDGE & RICE, supra note 6, at 58.
266. See Rada, supra note 6, at 828; Rainwater Harvesting: Rainwater Basics, supra note 174.
268. See THE ROCKY MOUNTAIN CLIMATE ORGANIZATION, supra note 177.
269. Johnson, supra note 2; Simon, supra note 2; E-mail from Rep. Marsha Looper, supra note 95.
270. See Editorial, supra note 189; Hoover, supra note 184; Leonhardt, supra note 206.

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