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# 1

## Colorado's Water

### *A Problem Rooted in Geography and History*

Water conservation [in Colorado] is necessary because the supplies are limited in amount. One limitation is by nature. We live in an arid region where precipitation is deficient and where artificial application of water is necessary for the reclamation and occupation of the region. The same arid conditions that create demands for water, at the same time produce limited supplies of water. Out of this relation between the demand and supply grows the value of water and the value of a right to use water in Colorado; values that are unknown and non-existent in Eastern, Southern and other humid states.

—C. L. Patterson, *Colorado state water engineer*,  
“*Conservation of Water in Colorado*”<sup>1</sup>

Colorado is a hydrological enigma. The state contains the headwaters of some of the American West's largest river systems, yet it is perpetually thirsty. It has the highest average elevation of the lower forty-eight states, yet it fights to maintain its mountain-driven precipitation within its ample borders. The

state is an innovator in the legal realm of western water law, yet it lives in perpetual fear of losing its waters to downstream and out-of-state users. Finally, the lion's share of its population resides far from where most of the precipitation originates. These quandaries represent some of the intellectual hurdles blocking the path of comprehending the nuances of Colorado's water history. These knotty problems have also conditioned the political culture of the state, creating an intense rivalry between political leaders on the populous eastern side and the water-rich Western Slope.

### ARRIVAL OF ANGLO-AMERICANS

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Long before the first Anglo-American settlers arrived in the land that would be called Colorado, waves of Native Americans, from the Ancestral Puebloans to the Cheyenne, Arapaho, Comanche, Kiowa, Apache, and Sioux, struggled with the region's abiding aridity. The first Anglo-American settlers in Colorado did not build a water right system from nothing. Yet when a water distribution system was constructed, according to William deBuys, they "erected a hydraulic civilization in one of the most intimidating environments in the continent."<sup>2</sup> Over time, Coloradans would freely borrow from, embroider, and revise existing legal doctrines and the common traditions of the diverse settlers. Native American, Spanish, and Mexican practices influenced early Anglo-American arid land legal doctrines in Colorado. The practices of the Utah Mormons, who had been vigorously irrigating their Great Basin kingdom since the late 1840s, played a role. The scattered body of legal rulings and on-the-ground practices that emanated from the California Gold Rush also provided important precedents for Colorado irrigators. These diverse influences and the experiences of pioneer settlers on the eastern plains from the late 1850s to the 1870s shaped the territory and the state's early water laws, as well as the practical needs of the first miners who flocked to the region.<sup>3</sup>

Colorado's water system began its distinctive developmental path with the great gold rush of 1858–59. As miners gouged the earth for riches, water became the miner's greatest asset other than the precious metal itself. When water was absent as a result of upstream mining diversions or seasonal shortfalls, most mining techniques became almost impossible to perform. Water abetted nearly all of the early mining processes and, if applied properly, could

accomplish the work of many individual laborers. As early as 1860, miners used hydraulic techniques: water, forced under pressure, washed gravel into the increasingly larger sluices. Most mining processes demanded a reliable source of flowing water. Needing water to power mining technology, miners redirected the water flow to where it could be put to beneficial use. Hydraulic mining became crucial to mining success. Water was forced into large hoses, and the accumulated pressure led to a hard stream that could tear away mining-region hillsides. Tons of earth could be worked in this manner. As mining became more industrial, it required even more water than it had in its simpler early phases. Not surprising, the mining regions of California and, later, Colorado developed clear-cut rules for water use: "first in time, first in right." Life in the mining camps depended on a steady supply of water, and the rule of priority or what would be called prior appropriation supplied this order. In a short number of years, Colorado's mountain streams were tapped, re-routed, and made to serve the interests of the hordes of miners flocking to the mining districts.<sup>4</sup>

The real groundwork for the territory's and the state's water history occurred following the US Civil War when farmers, ranchers, and local political authorities realized that eastern Colorado's agricultural potential was severely limited by moisture scarcity. Agricultural products were in great demand because of the territory's fast-growing population. Estimates of the territorial population in 1870 ranged from the census total of 40,000 to statehood boosters who believed the count was closer to 100,000. Denver had grown from a dismal outpost of about 4,700 in both the 1860 and 1870 censuses to a booming 32,000 in 1880. The 1870s saw tremendous growth along the Front Range as railroads arrived and competed with one another to serve the young territory. The growing urban areas provided a lucrative market for agricultural products. While small-scale agricultural irrigation diversions had been built near Bent's Fort along the Arkansas River and in the Pueblo area prior to the Civil War, the population boom of the early 1870s correlated with a significant development early in Colorado's irrigated heritage—the establishment of Union Colony (later Greeley) in 1871. While some eastern plains farmers who occupied lands adjoining small streams and rivers had diverted small amounts of water to nearby fields, few early Coloradans had yet moved large amounts of water away from the streams to non-contiguous fields. This would change within a few years. Soon, irrigated

farming would drive eastern Colorado's economy. By the time statehood had been achieved in 1876, the new state of Colorado struggled to codify its water regulations and would remain preoccupied with this activity for decades. By 1890, Colorado was competing closely with California for having the most irrigated acres in the nation.<sup>5</sup>

The humid-region farming techniques used in the eastern United States did not serve Colorado's agricultural industry. Farmers who depended on rainfall and natural moisture had a chance to survive in eastern Colorado during the occasional "wet" years. However, more often than not, a lack of adequate seasonal moisture quickly led to agricultural failure in a region where the annual precipitation was less than twenty inches per year. In many sectors of Colorado's eastern plains, precipitation averaged closer to twelve inches to fifteen inches per year. Farmers who later ventured to Colorado's Western Slope often experienced less than ten inches of moisture per year in the lower valleys like the Grand, where Grand Junction would be located in the early 1880s. As one early Colorado farmer advised, "It is better to abandon all [eastern US farming] notions and begin anew."<sup>6</sup>

Colorado began crafting its unique water laws early in its territorial history. The first mining camps made explicit references to water rights in their mining district law codes. Many, but not all, mining district laws made reference to priority of claim to have the best water right. Others did not, noting that water "should be divided proportionally among the users." The first territorial legislature enacted water legislation, allowing irrigators to withdraw water from streams to be carried to non-adjointing lands. Several years later, Colorado's Territorial Supreme Court, under its influential chief justice Moses Hallett, held that water could be diverted from streams and ditches built across both private and public lands if it was put to beneficial use. Hallett wrote that in a "dry and thirsty land it is necessary to divert the waters of the streams from their natural channels." Another Colorado Supreme Court justice added prophetically that Colorado water law is founded on "the force of necessity arising from local peculiarities of climate."<sup>7</sup>

Other Colorado and federal political acts reinforced the conclusions of Hallett and the Colorado Supreme Court. The federal Mining Acts of 1866 and 1872 and the Desert Land Act of 1877 collectively encouraged the American West's territories and states to develop their own water law systems. States could, in effect, "establish their own water laws and create property rights

to unappropriated water on and off the federal lands.” Colorado’s water law system became codified in its 1876 constitution. Soon widely known as the Colorado Doctrine, the state’s water laws would influence the policies adopted by many neighboring states. According to legal scholar David Schorr, the Colorado Doctrine of Prior Appropriation emerged from a variety of factors but above all from California and Colorado miners’ water laws, combined with mid-nineteenth-century considerations of economic justice. Nineteenth-century Supreme Court justice Stephen Johnson Field stated that mining water laws “were so framed as to secure to all comers, within practicable limits, absolute equality of right and privilege in working the mines.” The Colorado Doctrine offered widespread access to water for those who could prove they were using the water beneficially. Water scarcity led to the prioritization of water access on the basis of first use. Overall, Schorr believes this system helped avoid monopolization of this scarce resource by large-scale and corporate interests.<sup>8</sup>

As early as 1864, the Colorado Territorial Assembly asserted that stream waters could not be diverted from the original channel “to the detriment of any user who had a priority of right.”<sup>9</sup> This continued a trend dating back to Jefferson Territory’s (Colorado’s short-lived territorial predecessor) policy of limiting appropriations and resolving conflicts among irrigators by “reference to the priority of appropriation.”<sup>10</sup> Colorado’s 1876 constitution also reflected almost a decade of struggle over water law definition, including intense conflict between the young cities of Greeley and Fort Collins. The Union Colony, or Greeley, constructed its irrigation canals first, while Fort Collins based its bid for water supremacy on its Cache la Poudre River location, upstream from Greeley. Nathan Meeker, one of the Greeley colony’s founders, wrote an editorial in the *Greeley Tribune* calling for recognition of the Colorado Doctrine of Prior Appropriation, which he linked to the pioneering miners of California and Colorado. Until prior appropriation was recognized, Meeker wrote, “capital investment in irrigation would not be secure.” The results of the Greeley versus Fort Collins conflict and other festering water matters were addressed in the Colorado State Constitution of 1876, which encouraged the development of irrigation systems. Section 6 declares that the right to divert the “unappropriated waters of any natural stream to beneficial uses shall never be denied.” However, “priority of appropriation shall give the better right as between those using the water for the

same purpose.” Section 6 also awards preference to agriculture over what it terms “manufacturing uses.”<sup>11</sup>

The Colorado State Constitution encouraged the more populous and politically powerful Front Range to embed its arguments for trans-mountain diversion in Article 16, Section 5. If a party could afford to construct a diversion work, water was free for the taking. The 1882 Colorado Supreme Court decision in *Coffin v. Left Hand Ditch Company* encouraged this activity. In this case the court determined that prior appropriation water rights, not riparian rights, would guide the young state. The court also recognized that water often needed to be carried across public or private lands to be put to beneficial use far from the original stream itself. The Front Range often had the financial wherewithal to construct the diversions. In the decades ahead, the Western Slope would try to develop arguments that would help the region reserve water for future potential uses, such as an oil shale industry. Anticipating such arguments, early Colorado water legal expert L. Ward Bannister declared, “There is nothing in this doctrine of potential use. It is against our constitution. We could not have it unless we have the constitution amended.”<sup>12</sup>

#### ANGLO-AMERICAN SETTLEMENT ON COLORADO'S WESTERN SLOPE

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While Colorado became known as a difficult place to make a living, the Western Slope had a unique set of circumstances that made it an even more precarious place to reside. High mountains, rugged terrain, distance from cities and markets, and an uneven and unreliable moisture cycle all compounded the challenges facing the area's first Euro-American settlers. The Western Slope, according to most accepted definitions, is the half of the state on the western side of the Continental Divide that “follows a snaking, confusing line” from the Wyoming border in the north to the New Mexico border in the south. Colorado's vast western half holds the nation's tallest mountain sentinels, the Colorado Rockies, reinforcing the Western Slope's sense of isolation and uniqueness.<sup>13</sup>

The first permanent white settlers, miners in the San Juan Mountain range, discovered that moisture ran in uneven cycles. Stream water was abundant for a short time in the spring and early summer, then trailed off and often disappeared altogether by late summer or fall. Even snowfall was somewhat

of an illusion, as it tended to fall as a dry powder, lacking the moisture content of snow in the Midwest and the eastern half of the United States. Anglo-American miners had wandered and explored the Western Slope for years. Rumors of gold and silver brought enough miners to spark tensions between the Ute Indians and Anglo-American miners. In 1868 the federal government negotiated a treaty designating about one-third of today's Colorado as a Ute Indian reservation. The loss of some Ute land to the federal government only seemed to invite more miners and explorers to the Western Slope. By 1873 the increasing Anglo population demanded further Ute land cessions. The Brunot Agreement was ratified by the US Congress in 1874. This small but lucrative land cession (3.5 million acres) conferred legal title to thousands of acres already under Anglo-American control. It specifically clarified title to mining claims and to several communities supporting mining activity. Durango was founded in the southwest corner of the state in 1880 and quickly grew to several thousand citizens. The rich silver districts of Ouray and Silverton were also included in the dimensions of the Brunot Agreement.<sup>14</sup>

The mass removal of Ute Indians from the Western Slope flung open the door to a growing Anglo-American population. Following the so-called Meeker Massacre of 1879, the Utes were removed to reservations in Utah or sent to two small reservations in Colorado's southwest corner. A frantic rush for Ute land ensued, and in 1881 the Uncompahgre River Valley was opened to general settlement. The Western Slope had opened for business. Within a few years a land boom led to the founding of Grand Junction, Delta, and Montrose. The arrival of railroads like the Denver and Rio Grande in the 1880s gave the isolated region a sense of permanence and connection with the outside world. By 1899, Grand Junction envisioned itself as "the commercial capital of all [of] Western Colorado." The mining-based economy of the Western Slope grew in cycles, fits, and starts. Yet a permanent Anglo-American population continued to arrive.<sup>15</sup>

In its early years of Anglo-American settlement, the Western Slope remained largely unknown to eastern Colorado's population. Strong political ties between the two halves of the state would remain illusory for many decades. When Denver and Rocky Mountain Front Range citizens considered the western half of Colorado, they pictured a distant and strange land isolated from civilization and populated by barbaric whites and blood-thirsty Indians. The *Denver Tribune* said the Western Slope "is a region that

is apparently about as valuable as would be a representative section of the Desert of Sahara.” Nineteenth-century author and Colorado booster Frank Fossett described the Western Slope as “a terra incognita to Coloradans.” Descriptions of the region’s desolation and desert character seemed to creep into most late-nineteenth-century assessments of the state’s western fringe.<sup>16</sup>

Western Slope land promoters busied themselves with building their small towns and communities. Leaders in the Uncompahgre and Grand Valleys discovered that they lacked one crucial ingredient for permanence and growth: a reliable water supply. According to Felix L. Sparks, who became a great advocate of twentieth-century Colorado water planning, “much Western Slope land is as fertile as a stray alley cat.” Sparks did not mention that most of the easily obtained sources of water had been tapped by 1900. As early as 1900, 226,000 acres of the Western Slope were already under irrigation. Uncompahgre Valley promoters dreamed of diverting the nearby but inaccessible Gunnison River to supplement the water available from the small and irregularly flowing Uncompahgre River. Six miles of imposing mountain rock separated the Gunnison, which roared through the Black Canyon, from the fertile but dry Uncompahgre Valley. An ever-optimistic official of the Denver and Rio Grande Railroad predicted that with additional water, Montrose County could support a “population of two million people.”<sup>17</sup>

Initially conceived as a private commercial venture, the Uncompahgre Project’s costs and technical requirements quickly overwhelmed the capabilities of the private sector. The state of Colorado, which took control of the project in 1901, was soon similarly financially and technically challenged. Significant progress and project completion awaited the federal government’s direct involvement in 1905. With federal financial and engineering assistance through the newly created US Reclamation Service (later the US Bureau of Reclamation), the Gunnison Tunnel was completed in 1909. Within a few years, Uncompahgre Valley land prices skyrocketed and impressive crop yields followed suit. In 1909 the potato crop yield brought \$225,000 in profits. In 1910, with Gunnison Tunnel water, the yield surpassed \$1 million.<sup>18</sup>

Similarly, the Grand Valley Project was one of the first six projects undertaken after passage of the Reclamation Project of 1902. In that year, western Colorado’s Grand Valley lands that had not been surveyed were withdrawn from consideration as part of the proposed project. Reclamation Service surveys soon began investigating possible canal alignments. In 1903, local

financial interests hoped to translate the federal government's reports into a privately financed water project. As a result, the government suspended further work on the Grand Valley Project. In 1907 the Reclamation Service again took over the sputtering private venture. After a series of lengthy delays, the project began to be built in 1912. The heart of the project was a fourteen-foot "roller dam" that provides water to four canals that stretch over ninety miles of the region.<sup>19</sup> Official US Bureau of Reclamation histories term this project "one of the most successful reclamation projects constructed," with water furnished to 33,368 acres of land along the Colorado River in the vicinity of Grand Junction. Future Colorado congressman Wayne N. Aspinall, who arrived in the Palisade area of the Grand Valley as a young child in the first decade of the twentieth century, literally grew up with the construction of the Grand Valley Project. Undoubtedly, his staunch advocacy of large-scale reclamation was, at least in part, conditioned by his observations of this reclamation effort.<sup>20</sup>

A pattern was thus established early on for large-scale water development on the Western Slope. Private enterprise would often try first and fail. State control would follow, with little more success than the private ventures. Finally, after the Reclamation Act of 1902, the federal government was in a position to either complete unfinished projects or design and build new ones. Yet the transformation of the Western Slope's image from a remote and isolated desert outpost to a fruitful land with unbounded economic potential was slow in developing. Local economic boosters tried to court private capital to invest in the region's land and water systems. This money often originated in distant East Coast regions and had strings attached: the need to make a fast profit for restless investors.<sup>21</sup> From the late nineteenth century to the World War I era, a self-conscious identification developed among Anglo-American Western Slope dwellers born of "boosterism, isolation, environment, and a common ambivalence" toward Front Range population and economic centers. This ambivalence remained and guided the interaction between Colorado's two halves for the first half of the twentieth century.<sup>22</sup>

#### ARRIVAL OF FEDERAL RECLAMATION IN THE CENTENNIAL STATE

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Historian Donald Worster called the Reclamation Act of 1902 "the most important single piece of legislation in the history of the West, overshadowing



FIGURE 1.1. The Grand Valley Diversion Dam or as it is known locally, the Roller Dam. Built between 1913 and 1916, the dam is on the Colorado River about eight miles northeast of Palisade, Colorado, in DeBeque Canyon. This concrete weir is 14 feet high and 546 feet long. Flow over its crest is controlled by six roller gates, the first and largest of their kind installed in the United States. It is a central feature of the US Bureau of Reclamation's Grand Valley Project. *Courtesy, US Bureau of Reclamation.*

even the Homestead Act” in ultimate significance. The Reclamation or Newlands Act (named for one of its principal US Senate sponsors, Francis Newlands [D-NV]) became law for many reasons, including the western states’ increasing power in Congress and the personal interest of President Theodore Roosevelt. In the two-year period 1889 through 1890, the number of western states doubled, with the addition of six new states. The region did not contain many people, but in the US Senate its power had suddenly become considerable. In 1889 the head of the US Geological Survey, John Wesley Powell, was in the process of conducting an irrigation survey, locating future reservoir sites. The prophetic Powell hoped to convince Congress that future sales of western land could only occur if a reliable supply of water was

available. Speaking to the Montana Constitutional Convention in 1889, Powell reminded delegates that eastern water laws and institutions did not match western environmental conditions. "All of the great values in this territory," he lectured, "have ultimately to be measured in acre-feet." Powell suggested that the new western states divide themselves into hydrographic basins rather than along traditional county lines, which often bore little resemblance to important geographic features like river systems.<sup>23</sup>

While federal reclamation policy did not follow Powell's suggestions, it promised development of water on a scale that would soon dwarf the many smaller private and state efforts of the late nineteenth century. The Newlands Act called for federally constructed irrigation projects, with funding provided through the sale of public lands linked to the new water projects. The act made an immediate difference in the Western Slope's future. During the previous twenty years, western Colorado's water development had sputtered along as a series of private ventures. In the years ahead, municipal water development, inspired by Populist and Progressive reform ideas of citizen control and abetted by the federal government's presence through the Reclamation Act, would increase the amount of water available to Western Slope settlers. Reclamation Act water, along with a determination to build municipal water systems, often with mountain collection points, also helped to stabilize the economy of towns like Grand Junction.<sup>24</sup>

In many respects, the federal reclamation program breathed new life into the region's economic backbone: agriculture. This observation is borne out by an examination of Mesa County land values, which skyrocketed following the arrival of federal reclamation in the valley. As one early-twentieth-century Palisade, Colorado, booster publication remarked, raw land, valued at \$100 an acre, "under irrigation can easily be made [to be] worth over \$1000 [an acre] in four years." While this might be a slight exaggeration, by 1910 irrigated fruit orchard lands near Palisade were usually valued between \$200 and \$300 per acre. By comparison, high, dry, non-irrigated acreage near the Mesa County town of Collbran was worth between \$3 and \$5 per acre. Mesa County's vaunted agricultural economy assumed an air of permanence with the arrival of the federal reclamation program.<sup>25</sup>

Coloradans both encouraged and celebrated the flurry of federal reclamation activity that characterized the early-twentieth-century Western Slope. Yet many citizens were of a divided mind about it: they were pleased with

the fruits of massive federal expenditures but wary that a loss of local political control over the state's water could accompany the national reclamation investment. In other words, federal political control and power might follow national taxpayers' money into the American West. Section 8 of the Reclamation Act required the federal government to honor state water laws, a development that "pandered to home rule and institutionalized fragmentation." In short, Section 8 undermined the goal of centralized irrigation planning.<sup>26</sup> Overall, the Reclamation Act may have caused more haze than clarity in addressing the state-federal water relationship. Earlier drafts of the Reclamation Act had met with the disapproval of many western members of Congress because they attempted to confer rights to unappropriated waters to the federal government, anticipating later reserved right doctrines. However, in its final version Section 8 essentially reaffirmed the uneasy status quo: "Nothing in this act shall be construed as affecting or intended to affect or in any way [to] interfere with the laws of any State or Territory relating to the control, appropriation, use of or distribution of water used in irrigation, but State and Territorial laws shall govern and control . . . the waters rendered available by the works constructed under the provisions of this act."<sup>27</sup>

Colorado and most other western states had spent almost fifty years developing their own frameworks for water law. Yet the sudden infusion of federal money into the reclamation superstructure had the potential to undermine western state water control. Colorado had sparred with federal authorities for several decades over the matter, and events would heat up often in the next several decades. Eastern and western Colorado joined together to battle federal water initiatives.

In 1908 the venerable Colorado senator Henry M. Teller clearly articulated Colorado's fears over federal water intentions. Soon, a new generation of Colorado politicians joined Teller to argue that if water were taken away, "it is equivalent to taking away your life." In a phrase almost every Colorado politician would try to patent as his own, Teller argued that water "was, is, and will be the lifeblood of the West." Teller denied that the US government had any control over water in Colorado. "We hold that water belongs to the state and we mean to keep it," Teller asserted in 1908. In upcoming years, Colorado water commissioner Delphus E. Carpenter and Congressman Edward T. Taylor inherited Teller's mantle in defending the state's water sovereignty against perceived federal encroachment.<sup>28</sup>

In his study of the Colorado River Compact, Norris Hundley Jr. argues that the western states wanted to take the federal largesse without “incurring federal control” of water. The cash-strapped young western states did not have the economic resources to construct and take charge of the necessary hydraulic infrastructure. Yet the states needed the water to chart an economic path to the future. Thus, a delicate political balancing act was perfected in Colorado and other western states—to claim as much federal reclamation money as possible while preserving the “integrity of state government” to control water policy. The American West entered the twentieth century moving politically closer to Washington yet still determined to discourage the federal government’s attempts to establish authority over the unappropriated waters in the region. A real fear existed that doctrines like prior appropriation would face either destruction or severe modification if the wishes of some federal water officials carried the day.<sup>29</sup>

Advocates of federal water authority hoped the US Supreme Court might come to their aid in undermining state water-control powers. Prior to the monumental *Kansas v. Colorado* decision, Colorado water users believed they had a right to waters originating within their borders. With confidence born of this faith, in 1901 the Colorado General Assembly responded to demands for more legal control of water by passing the District Irrigation Law, which meshed perfectly with the Reclamation Act of 1902. Local districts could build canals and reservoirs, issue bonds, raise capital, and levy taxes to pay construction and maintenance debts. At the same time, the Colorado General Assembly created the Office of State Engineer, whose concern would be the distribution of water within the guidelines of state law. It is fair to say that Colorado entered the twentieth century with the full intention of putting to use all of the water it could find within its borders.<sup>30</sup>

In 1907 the US Supreme Court dashed the expansive hopes of many Coloradans in the decision *Kansas v. Colorado*. Kansas had accused Colorado of appropriating more than its share of Arkansas River water. Originating high in Colorado’s Rockies, the river crosses Colorado’s eastern plains and flows through Kansas, Oklahoma, and Arkansas on its long journey to the Mississippi River. As early as the 1890s, Kansas farmers had accused Colorado of undermining their irrigation operations by taking too much water from the Arkansas River. By 1900 more than 100 Arkansas River Valley ditch systems irrigated over 300,000 acres across eastern Colorado. Colorado farmers

and industrial interests such as Colorado Fuel and Iron had used the prior appropriation doctrine to claim nearly all the surface water in the Arkansas River Valley. In 1901 Kansas filed suit against Colorado, insisting that its rights to water in the Arkansas River were depleted by Colorado's diversions. Colorado's attorneys argued that the state had rights to all waters within its boundaries. The heated tone of the interstate squabble gave credence to the arguments of federal-control proponents in the national government. An increasing number of federal bureaucrats believed it would take the wisdom and power of the federal government to resolve such a vital national issue and to referee an outcome acceptable to all parties.<sup>31</sup>

The Court's decision, as is often the case, failed to fully satisfy the three parties involved: Kansas, Colorado, and the federal government. The majority opinion, written by Justice David J. Brewer, took the Court in new regulatory directions in its interactions with the American West's waters. Reserving the right to determine the outcome of interstate water quarrels in the future, the Court announced the "doctrine of equitable apportionment," which did not undermine either the riparian or prior appropriation doctrines practiced in Kansas and Colorado, respectively, but seemed to say that each state had a right to water in the rivers within its boundaries. While the Court did not doubt that some harm was done to Kansas agriculture by Colorado's upstream diversions, it also argued that Colorado had built unquestionably beneficial irrigation projects.<sup>32</sup>

The aftermath of *Kansas v. Colorado* left an unsettled feeling in Colorado. Colorado had tried and failed to use what was called in legal circles "the Harmon Doctrine," claiming jurisdiction over all waters originating within the state's borders. The Court's assertion of the standard of "equitable apportionment" undermined Colorado's hopes and best-crafted arguments. Colorado could no longer "with impunity develop its water resources." The *Kansas* decision had served notice that if the state did damage to neighboring states by monopolizing waters flowing across borders, it would find itself answering to the Court again.<sup>33</sup>

The Supreme Court decision may have opened the door for itself to play an expanded federal referee role if states could not find agreement among themselves. Yet the federal government, notably the Department of the Interior, by choosing to become involved in the case, had been hoping for more satisfaction from the Supreme Court. The solicitor general

had argued that the US Constitution “implied” that Congress had the sole authority to resolve interstate conflicts over waters. According to Justice Brewer’s opinion, this role would be the Supreme Court’s, not Congress’s. The Reclamation Service would need to abide by each state’s water law structure. Instead of moving toward a reading of western water law that would lead to more uniformity under federal direction, *Kansas v. Colorado* “strengthened the champions of state sovereignty.”<sup>34</sup> At the time the Supreme Court decided *Kansas v. Colorado*, the leading booster organization for western irrigation interests, the National Irrigation Congress, distributed a questionnaire to water experts across the West. Federal water rights advocate Morris Bien devised the questionnaire. Among his questions was the predictable: who should control western interstate streams, the states or the federal government? Twenty-eight of forty-seven respondents supported state control over all streams, while only thirteen favored federal control of both interstate and intrastate waters; the remaining six had no opinion. Federal water-control advocates seemed to be steadily losing headway across the arid American West.<sup>35</sup>

Anti-federal feelings boiled up and peaked during a June 1907 Public Lands Convention held in Denver. Federal forest reserve withdrawals had dramatically increased since federal-control advocate Theodore Roosevelt ascended to the presidency in 1901. Questions over the impact of federal land withdrawals on state water laws abounded. The Denver conference passed a series of resolutions on a variety of natural resources topics. State water rights received more than their share of attention. Resolution number 4 declared that the peoples of the states had “free and unhampered use of all waters within forest reservations” for the “beneficial use” of irrigation, municipal water supply, and the development of power sites at no cost to states and local towns. Resolution 8 emphasized the importance of state control of waters, affirming the right of western states “to control the appropriation, use, and distribution for irrigation of the waters of all public non-navigable streams within their respective borders, and to be granted the right of way to build canals, ditches, and reservoirs across public forest lands.” The Denver Public Lands Convention mainly acted as a sounding board for fears over growing federal power to control the terms of access to public lands and their resources.<sup>36</sup>

### TAYLOR AND CARPENTER: FIGHTING CONSERVATION INITIATIVES

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Fears of federal involvement in Colorado's and the West's water policies did not abate during the Progressive era. Senator Henry M. Teller had led the charge against federal encroachment on Colorado lands and resources for many years. However, Teller retired from the US Senate in 1908, leaving a void in Colorado's defense against federal encroachment on state land and water rights. Over the next decades, two new defenders of state prerogative in water matters would emerge: Congressman Edward T. Taylor and Colorado state senator and water commissioner Delphus E. Carpenter.

Born in Michigan, Taylor moved to the raucous mountain mining boomtown Leadville, where he served as high school principal in 1881–82 and county school superintendent until 1884. After studying law at the University of Michigan, he moved to Glenwood Springs in 1887, where he set up a law practice specializing in water litigation and was elected district attorney of the Ninth Judicial District. In 1896 Taylor was elected to the Colorado State Senate, and in 1908 he moved on to the US House of Representatives as Colorado's at-large member. In 1915 he became the US congressman from western Colorado's massive fourth district, comprising most of the Western Slope. At the time of his election in 1908, Taylor had already earned a reputation as a water law expert. As he recalled in an autobiographical fragment written in 1940: "On becoming district attorney [for the state's northwestern district] in 1887, the first thing I was confronted with was a lot of criminal prosecutions for murders and fights and conflicts of all kinds mainly over water rights. Upon investigation I immediately discovered that no one had any legal rights; no decrees, no records, nor anything but notices posted on trees or something of that kind concerning water rights."<sup>37</sup>

Over the next two years, Taylor published legal notices, held hearings, and traveled widely through Mesa, Garfield, Eagle, and Rio Blanco Counties to secure the facts about citizen water claims, including who had priority rights. "He personally took the evidence and prepared over 1000 decrees" for water rights in the state. Taylor's prepared decrees received approval by the district court in May 1889. In a *Denver Post* article written by legendary newspaperman Damon Runyon, Taylor was referred to as early as 1908 as the "father of Water rights on the Western Slope."<sup>38</sup>

Early in his congressional career, Taylor also became an adamant foe of federal conservation efforts. Taylor viewed the Theodore Roosevelt and Taft

administration's efforts to apply the 1891 Forest Reserve Act to vast parts of the West as a dangerous centralization of power and a detriment to the sovereignty of western states. Western people, courtesy of the conservation program, were being treated as "second-class citizens." A 1910 bill opposed by Taylor, HR 24070, would have authorized the president to make withdrawals from public lands and nullify existing land, mining, and water laws. Taylor argued that if this law passed, western states would lose their "absolute, constitutional, legal and equitable right to use and control the water within their borders." Taylor expressed particular concern over the potential impact of national forests on state water rights. "I give you fair warning that we will not surrender the waters of the West under any theoretical conservation pretext," he asserted. "The water belongs to us [western states] subject to the doctrine of prior appropriation and beneficial use under our constitution."<sup>39</sup>

Taylor constantly ruminated on potential threats to his large congressional district's water supply. Toward this end, he began agitating early in his political career for a name change to the river that now bears the state's name, from Grand to Colorado. On western maps prior to 1921, the Green River flowed from Wyoming and joined the Grand (whose origins are on Colorado's Western Slope) in southern Utah, forming the Colorado. The name change issue, Taylor claimed in 1907, "is entirely original with me." The change, he believed, would especially benefit the valleys through which the river flowed. "As a matter of state pride, we should make the change," he argued. Taylor also believed the state of Colorado and his congressional district could better formulate water claim arguments if the river's headwaters could be thought to have originated within the Centennial State's borders. Taylor prodded the Colorado General Assembly to endorse the name change, and in 1921 the US Congress passed the bill to ratify it officially.<sup>40</sup>

Taylor argued that the state of Colorado also had special rights to the river because "eight great streams from the western 20 counties" in his congressional district "furnish 70 percent" of the river's flow. Colorado, in short, had by far the "largest claim of any state" to the river's water because it furnished the greatest amount of the annual flow. This argument was imitated and used time and time again by Taylor and his successors, including Congressman Wayne N. Aspinall. Taylor buttressed his claims to Colorado's water rights by referring to the river as "the Nile of America." The Colorado, Taylor asserted with some exaggeration, is the only great river in the world "entirely within

an arid region.” For this reason, it is “intrinsicly the most valuable stream in all the world.”<sup>41</sup>

Delphus E. Carpenter would join Taylor in trying to define and protect Colorado’s water rights in the early decades of the twentieth century. Born in 1877 near Greeley, Carpenter literally grew up with Colorado’s agricultural history as the son of an irrigation farmer. After graduating from law school at the University of Denver (1899) and serving as a state senator, Carpenter built a career as Colorado’s acknowledged defender of its water rights against neighboring states. Carpenter also believed, like Taylor, that the federal government’s dangerous designs could be seen in recent developments, including the establishment of the Reclamation Service, the nationalization of vast amounts of forestlands, and the increased presence of the federal government in the daily lives of early-twentieth-century Americans. Carpenter, as his biographer Daniel Tyler tells the story, “viewed the government’s attempt to control any aspect of natural resources as an abomination, a violation of states’ rights.” The new Reclamation Service “attached itself to the coattails of the conservation movement.” The implication of a federally regulated western economy, to Coloradans like Edward T. Taylor and Delph Carpenter, above all meant the potential loss of water and water rights; thus, the state’s ability to shape its own economic future would be jeopardized.<sup>42</sup>

After serving a term in the Colorado State Senate (1909–13), Carpenter embarked on his life’s calling: to defend the state’s water from the designs of other Colorado River states and to construct an innovative way of settling water disputes between aggrieved states. *Kansas v. Colorado* had waved a red flag in front of Carpenter. The US Supreme Court case had settled little between the states, and, for Carpenter, it had ominously raised the possibility of federal intervention in future interstate disputes. In addition, the protracted litigation had cost both states’ taxpayers great amounts of money. In 1911 Wyoming filed suit against Colorado and two Colorado corporations when they attempted to divert portions of the Laramie River through a tunnel into the Cache la Poudre watershed. The water was to be put to use by Colorado land developers near Greeley. Wyoming, which used large amounts of Laramie River water downstream, would be threatened with the loss of more than 100,000 acre-feet.<sup>43</sup>

While the US Supreme Court accepted the case, the litigation “dragged on interminably.” The Supreme Court finally decided in 1922 that Wyoming was

entitled to a prior appropriation right to the Laramie River, since both states recognized the Doctrine of Prior Appropriation. Colorado would be able to divert a much more limited amount of water through the Laramie-Poudre Tunnel. As a result of this decision, Delph Carpenter grew more convinced than ever of the need to negotiate a multi-state water compact. *Wyoming v. Colorado* also influenced both Upper Colorado River states like Colorado and downstream states like California to consider bargaining for a Colorado River Compact.<sup>44</sup>

Without a doubt, however, heading into the World War I era, perhaps the greatest legal threat to Colorado's water emanated from Southern California, which had shown little hesitation in pulling out all the stops to increase its water supplies.<sup>45</sup> In 1913 Los Angeles opened its new aqueduct, which transported water 233 miles from its Owens Valley source to the burgeoning West Coast metropolis. By the early 1920s, California was using millions of acre-feet each year from the Colorado River. Colorado and other Upper Basin states understood that new tactics would have to be used to slow California's quest for more Colorado River water. Carpenter, however, had grown hesitant over what he had found so unsatisfactory in *Wyoming v. Colorado*—protracted and expensive legal recourse. Carpenter's fears over these matters, and California's proven record of acting decisively to assert its water prerogatives, inspired the Greeley attorney to begin building a consensus for an interstate water compact. The seeds of the movement for an agreement or compact among the seven states dependent on the Colorado River's waters had been planted.<sup>46</sup>

#### EARLY-TWENTIETH-CENTURY FRONT RANGE WATER INITIATIVES

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As Colorado moved into the twentieth century, it could reflect positively on the groundwork it had established to protect its water supplies since gaining statehood. The Doctrine of Prior Appropriation had undergone tremendous articulation and legal testing. A rudimentary state water bureaucracy, including the Office of State Engineer, was in place and functioning. The state of Colorado had learned a hard lesson from the *Kansas* case—it would not be able to access all the waters originating in its high mountains. Perhaps as significant, the era of *Kansas v. Colorado* and *Wyoming v. Colorado* also marked the beginning of the state's intramural struggle for water. Long before 1900,

the Front Range had cast a thirsty eye on the waters of the Western Slope, where most of the state's watershed is located. The first Western Slope diversion started in 1860 when a small ditch was built at Hoosier Pass allowing waters from a Blue River tributary to flow eastward to a mining operation. Two ditches were constructed, known as the East and West Hoosier Ditches. Though they carried a minute volume of water, they nonetheless served as important precedents for further diversions.<sup>47</sup>

As early as 1889, water users in the South Platte Valley began investigating the feasibility of accessing Western Slope waters to supplement their dwindling water supplies. The Colorado legislature authorized the expenditure of \$25,000 to survey a possible canal to bring water from the Western Slope to the Front Range by way of a diversion to South Boulder Creek. While the original idea was ruled "infeasible" by the state engineer, for several more decades engineers and water users from eastern Colorado debated the possibility of tapping the Grand River headwaters for a major trans-mountain diversion to the Front Range. In the meantime, the growing urban oasis of Denver began searching for ways to enhance its water supply. In the last decades of the nineteenth century, the Queen City had several private water providers competing with one another for subscribers and sources of water. None of the companies could slake the growing city's thirst. Finally, in 1894 the Denver Union Water Company, headed by Walter Cheesman and David Moffat, received a twenty-year monopoly to provide the city's water. The company expanded the city's range of service and built Cheesman Dam, the world's highest dam at the time of its construction. A steady water supply meant population and economic growth for Denver. From 1900 to 1910, its population grew about 5 percent a year, from 130,000 to 215,000.<sup>48</sup>

Because of such growth and projections for an even larger population, Denver and the Front Range began an urgent search for additional water in the early twentieth century. Soon, Denver would be doing exactly what cities like Los Angeles and San Francisco were doing at the same time—tapping often distant sources of water at the expense of underpopulated and politically weak rural regions. The Denver Union Water Company sent engineering parties to the mountain regions of the Western Slope to prospect for sources of water to divert to the Front Range. By 1916 more than 20,000 acre-feet of water were being diverted annually from the Western to the Eastern Slope. The largest of these relatively small diversions included the Grand

River Ditch, which transferred 11,400 acre-feet of water from high in what in 1915 became Rocky Mountain National Park to the South Platte River system. Completed in 1892, the Grand Ditch, as it was then known, "set a precedent for later out of basin water transfers." Its location within the borders of Rocky Mountain National Park made it a controversial rearrangement of the park's natural features. However, its construction occurred before the park's creation and before citizens on the Western Slope became seriously concerned with such diversions. A clause in the park's authorization legislation allowed the Reclamation Service to "enter upon and utilize for flowage or other purposes any area within said park which may be necessary for the development and maintenance of government reclamation projects." Congressman Edward T. Taylor, sponsor of the park's authorization bill in the US House of Representatives, made sure the bill allowed access to some of the precipitation originating high on its picturesque and snowy mountain peaks.<sup>49</sup>

In their search for additional water to carry from the Western Slope, Denver and the Front Range region were armed with a large population, political clout, engineering expertise, and the Colorado State Constitution. As Article 16, Section 5, declares: "The water of every natural stream . . . 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." While large trans-mountain diversions remained in the future, the Front Range understood that its limited water supply equated to dismal growth prospects.<sup>50</sup> Notable early Colorado mining engineer George J. Bancroft illustrated Denver's covetous attitude toward Western Slope water in a 1913 *Rocky Mountain News* article: "Armed with the majesty of the law, Denver stands prepared to take what it pleases." Bancroft and other Colorado water experts asserted that the Platte River system could provide for Denver's hydraulic needs only for a short time. The Western Slope, according to Bancroft, was a region of tremendous surplus water and "scant arable lands." The mountainous and desert region of western Colorado has "a world of water and a moon[scape] of land, while the Eastern Slope has a world of land and a moon[scape] of water." As for the legal politics of diversion, Bancroft asserted that the Front Range's ability to put the surplus water to beneficial use would be its trump card. All Western Slope protests against diversion "drop like a *portcullis* at the King's command when the city desires the water."<sup>51</sup>

In 1909, California trailed Colorado in overall irrigated acreage, but that would soon change. Between 1910 and 1920, California underwent a “spurt of development.” The 1920 Federal Census revealed that California irrigated more than 4 million total acres and had taken the nation’s lead in total irrigated acres. Colorado ranked second, followed by Idaho, Montana, Utah, Wyoming, and Oregon. California’s surge resulted from several reasons, including the completion or near-completion of several massive and audacious water diversion projects such as the Los Angeles aqueduct, which brought ample amounts of fresh Owens Valley water to fuel the growth of Los Angeles and the surrounding region. The rural citizenry in the Owens Valley had proven powerless against the money and political influence of the growing Los Angeles region. Northern California was also building a spectacular project.<sup>52</sup>

By 1916 Joseph Lippincott, who had played a major role in Los Angeles’s grab of Owens Valley water, was traversing the Continental Divide in Colorado on behalf of the Denver Union Water Company. Lippincott was making recommendations for possible trans-mountain diversions to enhance Denver’s water supply. The very real fear that California would reach out and grab the Colorado River proved a motivating force behind Greeley, Colorado, attorney Delphus Carpenter’s idea to negotiate a Colorado River Compact to ensure a measure of water security for all states dependent on the river.<sup>53</sup>

#### COLORADO, 1860–1920: “TRUE WEALTH” IN A DRY LAND

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The first sixty years of Colorado history had confirmed what western author Wallace Stegner argued in his magnificent biography of John Wesley Powell. “Water,” he wrote, “is the true wealth in a dry land; without it, land is worthless or nearly so.” Moving Colorado toward prosperity in the twentieth century would require an all-out commitment to rearrange its streams and rivers for the benefit of its growing population. Historian Peter Iverson argued that Arizona’s political history “may be seen . . . in the choices that have been made about water.” By 1920, Colorado had started to make decisions about water that, in turn, would shape its political culture.<sup>54</sup>

Colorado had a divided mind about its water situation heading into the 1920s. It had made great strides toward constructing a hydraulic civilization in the midst of the deserts and mountains of the nation’s highest state by

enacting laws to encourage its citizens to put every drop of water to use. On the other hand, Colorado feared that it would not have enough water supplies to guarantee its future. The Front Range corridor of eastern Colorado was growing rapidly, and the extent of its growth, many believed, would be dictated by how much water it could commandeer. By 1920, eastern Colorado had reached the end of the water supplies it could easily access. As for western Colorado, it had been settled by an Anglo-American population more than a generation later than the Eastern Slope. The western half of Colorado did not participate in or influence the debate over Colorado's water allocation until the twentieth century. However, by 1920 some Western Slope officials had begun to connect economic growth aspirations with the region's need to retain a sufficient water supply. As in the case of Los Angeles and the Owens Valley, when Denver began to look across the mountains to obtain a water supply, a large and politically powerful force had the potential to exploit western Colorado's water resources and stifle the economic future of the Western Slope. This struggle would play out in the years ahead.<sup>55</sup>

## NOTES

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1. C. L. Patterson, "Conservation of Water in Colorado," Box 170, folder 8, Frank Delaney Papers, University of Colorado–Boulder Archives (hereafter UCBA).
2. William deBuys, *A Great Aridness: Climate Change and the Future of the American Southwest* (New York: Oxford University Press, 2011), 16.
3. See the discussions in Donald J. Pisani, *To Reclaim a Divided West: Water, Law, and Public Policy, 1848–1902* (Albuquerque: University of New Mexico Press, 1992), and Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Pantheon Books, 1985).
4. Worster, *Rivers of Empire*, 89; Charles E. Wilkinson, *Crossing the Next Meridian: Land, Water, and the Future of the West* (Washington, DC: Island, 1992), 232; Duane A. Smith, *Rocky Mountain West: Colorado, Wyoming, and Montana* (Albuquerque: University of New Mexico Press, 1992), 10–11.
5. Denver population figures are from Stephen J. Leonard and Thomas J. Noel, *Denver: Mining Camp to Metropolis* (Niwot: University Press of Colorado, 1990), 12, 30, 41; Carl Ubbelohde, Maxine Benson, and Duane A. Smith, *A Colorado History*, 9th ed. (Boulder: Pruett, 2006), 141, 149; Pisani, *To Reclaim a Divided West*, 208–9.
6. Ubbelohde, Benson, and Smith, *Colorado History*, 188.

7. David Schorr, *The Colorado Doctrine: Water Rights, Corporations, and Distributive Justice on the American Frontier* (New Haven, CT: Yale University Press, 2012), 13–15 (first quotation); John D.W. Guice, *The Rocky Mountain Bench: The Territorial Supreme Courts of Colorado, Montana, and Wyoming, 1861–1890* (New Haven, CT: Yale University Press, 1972), 96–III, 123 (third quotation); Gregory J. Hobbs Jr., *Citizens Guide to Colorado Water Law* (Denver: Colorado Foundation for Water Education, 2004), 5, 28.

8. Schorr, *Colorado Doctrine*, 29.

9. G. E. Radosevich, K. C. Nobe, D. Allardice, and C. Kirkwood, *Evolution and Administration of Colorado Water Law: 1876–1976* (Fort Collins, CO: Water Resources Publications, 1976), ix, 32, 68.

10. Schorr, *Colorado Doctrine*, 33.

11. Daniel Tyler, *Silver Fox of the Rockies: Delphus E. Carpenter and Western Water Compacts* (Norman: University of Oklahoma Press, 2003), 50–53. Discussion of Meeker's editorial was reconstructed from Tyler, *Silver Fox*, 50–53; Meeker quoted in Dick Stenzel, "An Irrigated Legacy: The Union Colony," in *Citizen's Guide to Colorado's Water Heritage* (Denver: Colorado Foundation for Water Education, 2004), 22; Constitution of the State of Colorado, accessed March 8, 2011, [www.michie.com/colorado/lpext.dll?f=templates&fn=main-h.htm&cp=](http://www.michie.com/colorado/lpext.dll?f=templates&fn=main-h.htm&cp=).

12. Duane Vandenbusche and Duane A. Smith, *A Land Alone: Colorado's Western Slope* (Boulder: Pruett, 1981), 1; Hobbs, *Citizens Guide to Colorado Water Law*, 28; Bannister quoted in "The United Water Program for Colorado—Panel Discussions—1955," Box 44, folder 25, Pughe Papers, UCBA. Schorr, *Colorado Doctrine*, 32–64, offers thoughts on early territorial water laws and how water is treated in the Colorado State Constitution. See *Coffin v. Left Hand Ditch Company*, 6 Colo. 443 (1882).

13. Vandenbusche and Smith, *A Land Alone*, 1.

14. *Ibid.*, 16–28, 55; Ubbelohde, Benson, and Smith, *Colorado History*, 42–50; Peter R. Decker, *Old Fences, New Neighbors* (Golden, CO: Fulcrum, 1998), 13–15; Robert W. Delaney, *The Ute Mountain Utes* (Albuquerque: University of New Mexico Press, 1988), 45–46; William Wyckoff, *Creating Colorado: The Making of a Western American Landscape* (New Haven, CT: Yale University Press, 1999), 223–25.

15. Vandenbusche and Smith, *A Land Alone*, 181; Denver and Rio Grande promotional literature quoted in Wyckoff, *Creating Colorado*, 234–35; Ubbelohde, Benson, and Smith, *Colorado History*, 183–85.

16. *Denver Tribune* and Fossett quoted in Wyckoff, *Creating Colorado*, 221; Ubbelohde, Benson, and Smith, *Colorado History*, 149–50; Duane A. Smith, "A Land unto Itself: The Western Slope," *Colorado Magazine* 55 (1978): 181–204.

17. Sparks quoted in Vandenbusche and Smith, *A Land Alone*, 184; railroad official quoted in Wyckoff, *Creating Colorado*, 232–33.

18. “Taft Opens Tunnel That Will Make the Desert Bloom,” screamed the *Denver Post* headline at the time. See *Empire Magazine* (*Denver Post*), May 22, 1977; *Denver Post*, May 26, 1966; *Daily Sentinel* (Grand Junction, CO), January 18, 1949.

19. The major canals included the Government High Line Canal, completed in 1917, and the Orchard Mesa Power Canal, completed in 1924, bringing much-needed water to the higher lands of East Orchard Mesa. See William Joe Simonds, *Grand Valley Project* (Washington, DC: Bureau of Reclamation, 1994), 4–7. The unique roller structure, the largest of its type in the world, was placed on the National Register of Historic Places in 1991.

20. “Grand Valley Project,” accessed June 14, 2015, [http://www.usbr.gov/projects/Project.jsp?proj\\_Name=Grand+Valley+Project](http://www.usbr.gov/projects/Project.jsp?proj_Name=Grand+Valley+Project). Interestingly, future Bureau of Reclamation commissioner (1937–42) John Page learned his trade on the Grand Valley Project as a junior engineer, office engineer, and eventually project manager in 1925. See *ibid.*, 22–23.

21. Pisani, *To Reclaim a Divided West*, 208–22, tells the story of the failure of early pre-federal efforts at reclamation in Colorado. Douglas Kupel, *Fuel for Growth: Water and Arizona's Urban Environment* (Tucson: University of Arizona Press, 2003), 23–24, shows the same pattern of private ventures giving way to territorial efforts and finally the arrival of federal reclamation in Arizona.

22. Wyckoff, *Creating Colorado*, 220.

23. Worster, *Rivers of Empire*, 130–31; Donald J. Pisani, ed., *Water, Land, and Law in the West: The Limits of Public Policy, 1850–1920* (Lawrence: University of Kansas Press, 1996), xiv; Wallace Stegner, *Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the West* (Boston: Houghton Mifflin, 1954), 315.

24. Worster, *Rivers of Empire*, 160–69; Donald J. Pisani, *Water and American Government: The Reclamation Bureau, National Water Policy, and the West, 1902–1935* (Berkeley: University of California Press, 2002), xi–xvii.

25. This discussion is based on an examination of the *Mesa County Directory* for the years 1912–25. See also Bradley F. Raley, “Irrigation, Land Speculation, and the History of Grand Junction, Colorado” (paper presented at the Western History Association Meeting, Lincoln, NE, October 17, 1996), 6–8; quotation in Steven C. Schulte, *Wayne Aspinall and the Shaping of the American West* (Boulder: University Press of Colorado, 2002), 13.

26. Pisani, *To Reclaim a Divided West*, 325.

27. Donald J. Pisani, “State versus Nation: Federal Reclamation and Water Rights in the West: The Progressive Era,” in Donald J. Pisani, ed., *Water, Land, and Law in*

*the West: The Limits of Public Policy, 1850–1920* (Lawrence: University of Kansas Press, 1996), 42–43.

28. *Ibid.*; Duane A. Smith, *Henry M. Teller: Colorado's Grand Old Man* (Boulder: University Press of Colorado, 2002), 229–30; Ed Quillen, "The War on the West," *High Country News Online*, February 15, 2011, accessed February 20, 2014, <http://www.hcn.org/articles/the-latest-war-on-the-west>.

29. Norris Hundley Jr., *Water and the West: The Colorado River Compact and the Politics of Water in the American West*, 2nd ed. (Berkeley: University of California Press, 2009 [1975]), xi–xiv.

30. Ubbelohde, Benson, and Smith, *Colorado History*, 252–53; Pisani, "State versus Nation," 45; Gregory J. Hobbs Jr., "Colorado Water Law: An Historical Overview," *Water Law Review* 1, no. 1 (Fall 1997): 73. See *Kansas v. Colorado*, 185 U.S. 125 (1902).

31. James Earl Sherow, *Watering the Valley: Development along the High Plains Arkansas River, 1870–1950* (Lawrence: University of Kansas Press, 1990), 79, 103–7.

32. Michael Broadhead, *David J. Brewer: The Life of a Supreme Court Justice, 1837–1919* (Carbondale: Southern Illinois University Press, 1994), 162–63; Sherow, *Watering the Valley*, 116; James E. Sherow, "The Contest for the Nile of America, *Kansas v. Colorado* (1907)," *Great Plains Quarterly* 10 (1990): 57.

33. The Harmon Doctrine dated from 1895 when US attorney general Judson Harmon argued that the national government possesses "sole and absolute jurisdiction within its territory." In *Kansas v. Colorado*, Colorado's lawyers tried and failed to compare Colorado's control of water to this form of absolute sovereignty the nation possesses. See Sherow, *Watering the Valley*, 108.

34. Broadhead, *Brewer*, 163; Sherow, "Nile of America," 58. See also Pisani, "State versus Nation," 47–48, where he points out that Department of the Interior attorney Morris Bien, who continued as the head of the Reclamation Service's legal staff until 1924, never relinquished his belief in federal sovereignty over water matters.

35. Pisani, *Water and the Federal Government*, 41–42.

36. *Proceedings of the Public Lands Convention, Held in Denver, Colorado June 18–20, 1907 by the States and Territories Containing the Public Lands of the United States and Lying West of the Missouri River*. Copied and published by authority of the convention, Fred C. Johnson, secretary, Denver, CO, accessed February 10, 2013, [http://memory.loc.gov/cgi-bin/query/r?ammem/consrvbib:@OR\(@field\(AUTHOR+@3\(Public+land+convention,+Denver,+1907++\)\)+@field\(OTHER+@3\(Public+land+convention,+Denver,+1907++\)\)](http://memory.loc.gov/cgi-bin/query/r?ammem/consrvbib:@OR(@field(AUTHOR+@3(Public+land+convention,+Denver,+1907++))+@field(OTHER+@3(Public+land+convention,+Denver,+1907++))), 9–11; Michael G. McCarthy, *Hour of Trial: The Conservation Conflict in Colorado and the West* (Norman: University of Oklahoma Press, 1977), 218–22.

37. *Daily Press* (Montrose, CO), January 30, 1940.

38. *Ibid.*, January 30, 1940; *Bingham (UT) Bullet*, January 23, 1907, undated articles in unnumbered scrapbook, Edward T. Taylor Papers, UCBA.
39. Carl Abbott, *Colorado: A History of the Centennial State* (Boulder: Colorado Associated University Press, 1976), 116; Taylor quoted in *Congressional Record*, February 1, April 20, 1910, in Box 1, folder 19, Edward T. Taylor Papers, Colorado State Historical Society, Denver (hereafter CSHS).
40. *Bingham (UT) Bullet*, January 23, 1907; Philip L. Fradkin, *A River No More: The Colorado River and the West*, expanded and updated ed. (Berkeley: University of California Press, 1996), 35; House Joint Resolution 32, 67th Congress, 1st session, US House of Representatives, in Box 1, folder 22, Edward T. Taylor Papers, CSHS.
41. Edward Taylor, in *Congressional Record*, 69th Congress, 2nd session, US House of Representatives, February 25, 1927.
42. Tyler, *Silver Fox of the Rockies*, 16–19; Pisani, *Water and American Government*, xii–xiii.
43. Tyler, *Silver Fox of the Rockies*, 15–16; G. E. Radosevich et al., *Evolution and Administration of Colorado Water Law: 1876–1976* (Fort Collins, CO: Water Resources Publications, 1976), 224–25; Frank Gibbard, “Wyoming v. Colorado: A ‘Watershed’ Decision,” *Colorado Lawyer* 34, no. 3 (2005): 37.
44. Tyler, *Silver Fox of the Rockies*, 16, 107; Gibbard, “Wyoming v. Colorado,” 37; *Wyoming v. Colorado*, 259 U.S. 419 (1922).
45. Tyler, *Silver Fox of the Rockies*, 18–19, 114–15.
46. *Ibid.*, 17–19. For the story of the Los Angeles aqueduct and its impact on the rural Owens Valley, see Abraham Hoffman, *Vision or Villainy: Origins of the Owens Valley–Los Angeles Water Controversy* (College Station: Texas A&M Press, 1981); William L. Kahrl, *Water and Power: The Conflict over Los Angeles’ Water Supply in the Owens Valley* (Berkeley: University of California Press, 1982).
47. John N. Winchester, “A Historical View: Transmountain Diversion Development in Colorado,” Hydrosphere Resource Consultants, Inc., accessed February 29, 2012, [https://dspace.library.colostate.edu/bitstream/handle/10217/46354/116\\_Proceedings%202001%20USCID%20Water%20Management%20-%20Transbasin%20Water%20Transfers%20Winchester.pdf?sequence=15&isAllowed=y](https://dspace.library.colostate.edu/bitstream/handle/10217/46354/116_Proceedings%202001%20USCID%20Water%20Management%20-%20Transbasin%20Water%20Transfers%20Winchester.pdf?sequence=15&isAllowed=y).
48. Daniel Tyler, *The Last Water Hole in the West: The Colorado–Big Thompson Project and the Northern Colorado Water Conservancy District* (Niwot: University Press of Colorado, 1992), 29–33; Stephen J. Leonard and Thomas J. Noel, *Denver: From Mining Camp to Metropolis* (Niwot: University Press of Colorado, 1990), 49–52; Neil S. Grigg, “A History of Colorado Water by the Decades,” *Colorado Water* 27, no. 2 (March–April 2010): 13; Patricia Nelson Limerick with Jason Hanson, *A Ditch in Time: The City, the West, and Water* (Golden, CO: Fulcrum, 2012), 65–69.

49. Tyler, *Last Water Hole*, 32–33; Hundley, *Water and the West*, 97; Fradkin, *A River No More*, 45–47. Fradkin points out that Taylor's clause allowed for the later Colorado–Big Thompson Project's 13.1-mile tunnel to be built. In addition, more than thirty water rights were issued prior to the park's establishment, which led to the building of several small dams, constructed around 1900.

50. Colorado Constitution, Article XVI, Section 5.

51. *Rocky Mountain News* (Denver), December 22, 1913. A *portcullis* is a heavy iron grating that was lowered by chains to bar the gateway to a medieval castle or fortified town.

52. For an overview of both the Los Angeles–Owens Valley and San Francisco–Hetch Hetchy stories, see Norris Hundley Jr., *The Great Thirst: Californians and Water, 1770s–1990s* (Berkeley: University of California Press, 1992), 119–200; Worster, *Rivers of Empire*, 213–14. The Los Angeles–Owens Valley story is told in many places, including Kahrl, *Water and Power*, and Hoffman, *Visions or Villainy*.

53. Hundley, *Great Thirst*. It was Lippincott, (while working for the Bureau of Reclamation on a possible federal water project for the Owens Valley) who decided to recommend that his superiors curtail the project to allow Los Angeles to access a significant portion of the valley's water. Lippincott ended up working as an engineer for Los Angeles during the aqueduct project. Robert Righter calls Lippincott a "water engineer of questionable ethics." See Robert W. Righter, *The Battle over Hetch Hetchy: America's Most Controversial Dam and the Birth of Modern Environmentalism* (New York: Oxford University Press, 2005), 28. Righter's book is the most reliable guide to the Hetch Hetchy controversy. A Colorado perspective on the event is Limerick and Hanson, *A Ditch in Time*, 53–55.

54. Stegner, *Beyond the Hundredth Meridian*, 226; Kahrl, *Water and Power*, 1; Peter Iverson, "The Cultural Politics of Water in Arizona," in Richard Lowitt, ed., *Politics in the Postwar American West* (Norman: University of Oklahoma Press, 1995).

55. John Walton, *Western Times and Water Wars: State, Culture, and Rebellion in California* (Berkeley: University of California Press, 1993), 12, 193–94.