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The Role of Water in the History and Development of Colorado

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The Role of Water in the History and Development of Colorado

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Any account of the role filled by water in the growth of Colorado must begin with yet another description of the implacable circumstances of geography. From the standpoint of persons whose culture is rooted in more humid climes, both rainfall and, as a consequence, streamflow are deficient west of the 100th meridian. Moreover, and this is also important to our tale, such streams as do exist are perverse, deceptive, and difficult to control. Arroyos either have no water in them at all or else roar with destructive flash floods laden with sand. Sand is also an eternal part of the freight even of rivers that do not dry up every summer.

The consequences are different on the different sides of the Rockies. To the east the rivers lack volume enough to cut firm channels through the gently sloping plains. Thus, the settling sand aggrades the streambed. The water wanders, and the braided flow that results is, in the folk cliché of the early settlers, a mile wide and an inch deep, too thick to drink but too thin to plow, the biggest rivers with the least water in the land. A significant portion of the flow, moreover, is completely underground. Obviously such a river presents grave problems to men endeavoring to build permanent headgates or seeking to determine ownership of the buried portions of the flow.

West of the Rockies, by contrast, the land lacks the flat sameness of the Plains. There the loads of sand have helped the water scour out canyons that are things of beauty but hardly joys forever to the frustrated settlers who want to use them for either transportation or diversion.

The point is that in the midst of a dry land of enormous extent—almost two-fifths of the area of the coterminous United States—a few cantankerous streams do exist. They exist because of the echelons of the mountains, most of them running north and south, that wrinkle the sun-smitten spaces between

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the Sierra Nevada and the Rockies. Although these uplifts occupy only 15 percent of the West's total area, they drain from passing clouds 90 percent of the moisture that reaches the ground between the 100th meridian and the western slopes of the Sierra Nevada-Cascade chain.

Because Colorado possesses the highest average elevation of any state in the Union, it captures a disproportionate share of this moisture. Of all the major streams that flow to the ocean from the interior of the American West, the Columbia River is the only one that does not receive appreciable augmentation from the Colorado Rockies.

Because water promotes prosperity, particularly when used in connection with booming new industrial and cybernetic pursuits, Coloradans are inclined to be possessive about "their" streams and to become embroiled with neighboring states that cast covetous eyes upon the same rivers. These many controversies, particularly those involving the Colorado River, are an integral part of the story of the state—a story not yet ended.

The beginnings of the state's water story are likewise shrouded in obscurity. We do know, however, that long before the documentation of ordinary events seemed necessary, the Indians of the American Southwest had learned to grow crops. Some of their maize and squash they dry-farmed, some they planted on terraces where run-off water from storms could be collected, and some they irrigated with diversion canals that tapped the streams at a few easily approachable spots.

Canal irrigation was the system adopted by the first whites to encounter America's aridity. In fact, some early settlers in Arizona actually resurrected many miles of the prehistoric ditches of the Gila River area, just as the Bureau of Land Management today occasionally utilizes ancient Pueblo Indian check dams to distribute the run-off of storm waters sluicing across the exposed slickrock of southwestern Colorado. More generally, however, the ditches were dug by those who used them—by the Spanish colonists of New Mexico, the fur traders at their posts on the high plains, and the Mormons of Utah. By 1856, well before Colorado Territory had been created, Mexican settlers in the San Luis Valley had built at least a dozen short ditches for bringing water to their croplands.

There is a paradox here. Agriculture accounted for the first water development in the intermountain West, and agriculture today remains the single greatest consumer of mountain water. The basic law of water diversion, however, did not come from agriculture but from mining.

Western water law is a California invention. When the argonauts of 1848 and 1849 descended on the foothills of the Sierra Nevada, they were trespassers on the public domain. The United States, which had just acquired the land from Mexico, had codified no laws concerning the acquisition of placer mining claims. In order to fill the vacuum, the California miners drew up, at local meetings, some 500 sets of district laws designed to legalize their extralegal position.

The men—there were very few women miners—did not want title to the ground. Titles would have resulted in taxes, and besides, the great majority intended to abandon their small plots as soon as the gold had been extracted. All they wanted was a usufructuary right. The point to recall is this: as soon as use ceased, so did the right to mine, at least until 1866 when Congress finally got around to promulgating laws whereby title to mining ground could be perfected.¹

Methods for acquiring the water needed in the mining process followed an analogous course. A claimant—either an individual, a partnership, or a corporation—posted a notice of intent and began a survey for a ditch. That was enough to establish a right, and the right continued for as long as the water was used.

Inevitably the volume of water in the foothill streams diminished as the dry summer advanced. No attempt was made, however, to equitably apportion the shrinking supplies among different claimants. Instead it was decreed that whoever first put water to use was entitled to his full quota before later diverters could take a drop. This procedure was the basis of what later became known as the doctrine of prior appropriation for beneficial use, or, to resort to the catch phrase used in all water discussions, “first in time is first in right.”

Significantly, the three gold strikes that launched the Col-

1. 30 U.S.C. § 32 (1970).

orado mining stampede were made by men experienced in California customs—William Green Russell, George Jackson, and John Gregory. Russell, it is worth noting, soon turned from mining to promoting a ditch company that supplied water to placer claims. Nor was his example unique. When water decrees were adjudicated in Colorado the number one right on Clear Creek went to David K. Wall, also a California veteran, who had used his diverted water during the summer of 1859 to grow potatoes on two acres of soil now embraced within the city limits of Golden. California practice thus became Colorado custom.

The first ditches, like the first placer claims and truck gardens, were simple. Complexity and conflict did not develop until the advent of the Kansas Pacific and Denver Pacific railroads in 1870. At that point a mania for cooperative colonies seized the area. One of the earliest and most successful of those ventures was Union Colony, precursor of Greeley. An early rival was the Fort Collins Agricultural Colony, founded on the site of an abandoned military reservation beside the Cache La Poudre River. The word “colony” contained such magic connotations, indeed, that General William Palmer of the Denver & Rio Grande Railroad used the term to lend glamor to his speculative townsites of Colorado Springs and South Pueblo.

Because the colonies depended for life on ditch water, interest in irrigation swelled high. In October 1873, territorial Governor Samuel Elbert convened here in Denver the Nation’s first symposium on the subject. Delegates attended from Utah, Wyoming, New Mexico, Kansas, Nebraska, and Colorado. In 1873 Colorado was not yet a state, but already the delegates knew that the rivers of the West were too difficult to be handled by individual effort. Fervently they recommended federal aid for the construction of reservoirs and distribution systems. Congress, however, paid no heed.

Meanwhile accelerating demands for irrigation water led to conflict, notably an acrimonious dispute between Greeley and Fort Collins over the drought-shrunken waters of the Cache La Poudre. Their troubles forced the 1876 convention charged with preparing a state constitution to devote part of its attention to water problems. As a result, the legality of prior

appropriation of water was written into the State's organic law;² a trail-blazing step of such importance that prior appropriation, the basic law of all Rocky Mountain States, is often called the Colorado Doctrine.

The codification of firm laws regarding water, a growing population, and favorable climatic conditions during the 1880s touched off a burst of competitive ditch and reservoir building throughout the South Platte watershed, and somewhat later, the Arkansas Valley. Several of the projects were carried to completion by the cooperative effort of the farmers who would benefit; others were the fruit of private corporations financed by capital from the East and from Great Britain. About 1900, mutual companies legally capable of selling bonds to finance their work became as great a rage as colonies had been a quarter of a century earlier.

Geography played its inescapable part in these new developments. Water-seekers from the northern tributaries of the South Platte Valley discovered that by running canals across relatively low passes in the Continental Divide they could move Pacific water to overappropriated streams on the Eastern Slope. During the slack farm season between planting and harvest, whole families would sometimes camp in the high country while working on community ditches. Although these were the Nation's first transmountain diversion projects, it is unlikely that the participants realized even faintly the consequences that would follow from their activity.

The ditch building enthusiasm of the 1880s was temporarily chilled by the economic depression of the 1890s. Seeking relief, fervent Populists filled the Western air with demands that the federal government extend aid to suffering communities. Free silver was one such burning issue. Another revolved around federally sponsored conservation and reclamation measures. The latter drive came to fruition with the National Reclamation Act of 1902,³ which put the United States Government into the business of building dams and distribution systems on rivers too cantankerous for local agencies to handle. Those who like to use hindsight for finding omens can discover

2. COLO. CONST., art. 16, § 6.

3. Act of June 17, 1902, Pub. L. No. 57-161, 32 Stat. 388 (1902).

one in the fact that Colorado's first two federal projects, the Uncompahgre and the Grand Valley systems, both involved the waters of the Colorado River.

First, however, we need to glance at Colorado's disputes with Wyoming over the Laramie River,⁴ a tributary of the North Platte. In that situation, Colorado wanted to "have its cake and eat it too." Because the Laramie River originates in Colorado, the state maintained that diversions within Colorado were legitimate even when they interfered with prior appropriations in Wyoming. The United States Supreme Court struck down the contention on the grounds that both states subscribed to the doctrine of prior appropriation and that both must follow it regardless of political boundaries.⁵

The decision came at a time when Californians were pressing Congress to authorize a project on the lower Colorado River that, among other things, would facilitate the diversion of large amounts of water into the fabulously rich Imperial Valley. If approved, the Imperial project would almost certainly lead to other diversions and hence enable Southern California to establish priorities capable of retarding industrial and agricultural developments in the states higher up the River.

The upper states, still smarting from the Laramie River decision, took alarm. Denver, for instance, was already dreaming of a water tunnel through the Continental Divide—the pioneer bore of the Moffat Railroad eventually opened the way—and Utah was studying means for augmenting its Strawberry Project, which even then was moving water out of the Uintah foothills to the Wasatch Front. If such dreams were to be realized, California would have to be forestalled.

The vigorous opposition of the mountain states led California to subscribe to the famed Colorado River Compact of 1922,⁶ which divided the waters of the River not among the states involved—jealousies were too intense for that—but between the upper and lower basins. This allocation, whose impact on the State of Colorado can hardly be exaggerated, vitiated the right of appropriation insofar as interstate streams are con-

4. *Wyoming v. Colorado*, 259 U.S. 419 (1921).

5. *Id.* at 466.

6. COLO. REV. STAT. ANN. §§ 37-61-102 *et seq.* (1973).

cerned, and the precedent was reaffirmed in 1948 when Colorado, New Mexico, Utah, and Wyoming at last agreed to divide the upper basin's allotment of water among themselves.⁷ Nearly 52 percent of the River's water was assigned to Colorado.

All of that 52 percent originates on the Western Slope, which is the wettest part of Colorado's mountain oasis. Historically, however, not much of that western water has been beneficially used. Except in favored spots near the Utah border, the growing season is too short for large-scale agriculture, and isolation discouraged most industry. As a result, only one-fifth of Colorado's residents live in the western two-fifths of the state, and so Eastern Slope dwellers thought it quite permissible to reach across the mountains to satisfy their water needs. After all, does not the state constitution declare that water anywhere within the boundaries belongs to *all* the people, subject only to the limits of prior appropriation?

Even the barest mention of three of the Eastern Slope's increasingly mammoth transversions will indicate the shifting direction of Colorado affairs. First is the traditional Colorado-Big Thompson Project; traditional in that it was designed to supply agricultural water to the overextended South Platte. But as a marked sign of the times the Colorado-Big Thompson also generated hydroelectric power for industrial use. A second project is the great mixing bowl of the Arkansas Valley—Turquoise Lake. In that expanding reservoir near Leadville, the waters of the Homestake Project, designed for the urban centers of Colorado Springs and Aurora, intrude into water intended ultimately for the melon and sugar beet farmers of the lower Arkansas—agricultural and urban uses mingling more or less on equal terms. Then, finally, there are Denver's Roberts Tunnel and lovely Dillon Lake, in which agricultural considerations play scant part. The thought is sobering. Industrial growth has made Denver, like Los Angeles, so powerful politically and financially that the city can complete, unaided, projects of a magnitude that agricultural districts can handle only with federal help.

The implications are not lost on the residents of the Western Slope. They feel, as the people of Colorado's northwestern

7. COLO. REV. STAT. ANN. §§ 37-62-101 *et seq.* (1973).

counties felt during the Laramie River disputes with Wyoming, that they ought to have some control over water originating in their area. They echo suspicions similar to those that all Colorado turned on California before the signing of the Colorado River Compact, namely, a dread that prior appropriation by strongly muscled adversaries can strangle their own hopes of prosperity.

The possibility of profitable development on the Western Slope looms larger now than ever before. The area contains enormous reserves of energy currently locked out of reach in the form of coal and oil shale. Releasing that energy will take large quantities of water, both for the processes themselves and for the new towns that may be built. In addition, the potentials for water-based recreation are high on the Western Slope, and the savants tell us that recreation will become increasingly important as the nation grows increasingly urbanized. But will the necessary water be available beyond the Divide if the momentum of history keeps it flowing east?

My murky crystal ball does not show clear answers. But the examples of the past will inevitably play their part during the discussions and compromises that must precede final decisions about the future welfare of both halves of this mountain-divided state.