Colorado

At A Glance

CRWUA

Colorado River Profile

Allotment of Colorado River water:
3.855 million acre-feet

Percentage of allocation that is developed:
56 percent

Population served by Colorado River water:
2.3 million (80 percent from transbasin diversions)

Irrigated acres served by Colorado River water:
1.9 million

Major crops under irrigation:
Hay and alfalfa, grains, vegetables and fruit

Percentage contribution of Colorado River water to meeting state's needs:
35 percent

Watershed area in square miles:
38,542 (37 percent of state)

Precipitation in watershed:
7" to 58" a year

Federal Lands:
23.5 million acres (35 percent of state)

National Forests:
11

National Parks and Monuments:
11

State Parks:
38

Mountain peaks over 14,000':
53

Colorado... The state of Colorado has been called the mother of rivers: the North and South Platte, Arkansas, Rio Grande and the mighty Colorado all begin in its mountains. Sharing its beginnings with the state of Wyoming, in Colorado the latter begins modestly as year-round snowmelt and infrequent summer rains on the high mountain peaks of northcentral Colorado.

Similarly, many of the Colorado River's principal tributaries are also born in the state's snow-capped mountains. Although less than 20 percent of the land area of the Colorado River Basin lies within Colorado, 70 to 75 percent of the river's total flow originates within the state.

Born in the mountains of Rocky Mountain National Park, the mainstem of the Colorado River flows southwesterly until it is met by the Gunnison River at Grand Junction and continues into Utah. The Yampa and White rivers traverse the northwest corner of the state to the Utah border where they join the Green River, which, in turn, meets the Colorado in the canyonlands of Utah. The San Miguel and Dolores rivers begin in the southwest corner of the state, and flow northwest, eventually meeting the Colorado River in Utah. Although the San Juan River, which joins the Colorado at Lake Powell in Utah, originates in New Mexico, its principal tributaries, the Animas and La Plata rivers, also originate in Colorado.

History

For the earliest explorers of what would become Colorado, these rivers served as byways, as well as rich environments for food and other necessary provisions. As the population expanded

with gold's discovery in 1859 and irrigation proved the land productive for farming, settlers came in increasing numbers. Small towns sprang up and grew rapidly. Homesteaders claimed land for farming and ranching, ranging from a few acres to sizable operations. Uniformly, water was the key.

Early in this growth process, naturally occurring water became insufficient to meet the growing demand. Diversion ditches, canals, wells and reservoirs were required to slake the thirst of this vigorous economy.

Limited water supplies and rapid growth provided the only ingredients necessary for serious, often violent conflict. Resolving these conflicts was difficult; in fact, many persist today.

Water Uses

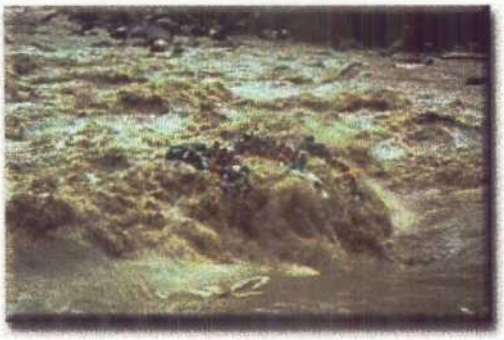
Roughly 80 percent of Colorado's annual water supply comes from snow. But due to wide fluctuations in snowfall year to year, mainstem Colorado River flows measured at the Utah Border range from an historic high of 69,800 cubic feet per second (cfs) in May 1984 to a record low of only 960 cfs in September 1956. These numbers, while extremes, clearly indicate the great importance of water storage to simultaneously control flooding during spring runoff and provide a controlled release of water for year-round uses.

Approximately 80 million acre-feet of precipitation fall annually in the Colorado River drainage within Colorado's borders. The greatest consumer of that water is nature. In Colorado's semiarid climate, roughly 85 percent of the total precipitation is lost to evaporation and transpiration.

Among the traditional users of water, agriculture is the dominant customer, accounting for approximately 88 percent of the water consumed in the state. Over one million acres are under irrigation within the Colorado River drainage in Colorado. Also, as a result of transmountain diversions, an additional 900,000 acres in eastern Colorado are supplemented by Colorado River water. Including transbasin diversions, the Colorado River helps irrigate nearly two-thirds of Colorado's total irrigated lands. Major crops grown with Colorado River water include grass and alfalfa hay, grains, vegetables and fruit. Colorado's statewide total crop value was $1.5 billion in 1998.

Average annual precipitation in Colorado is 16.5 inches; however, this varies from less than 7 inches to nearly 60 inches depending on location. Eighty percent of this precipitation falls in the Colorado River drainage, where only 10 percent of the state's population resides. Colorado's settlement patterns have favored the eastern side of the Rockies which receive far less moisture than the rural western slope. To address this imbalance, numerous transmountain diversions transport an average of one-half million acre-feet of Colorado River water annually to supply eastern Colorado agriculture and the cities of Denver, Colorado Springs, Pueblo and others.

While the Colorado River serves only 425,000 people in its natural basin within Colorado, as a result of transmountain diversions, it serves an additional 1.85 million, or nearly 60 percent of the state's population.



Municipalities represent only 5 percent of the state's total water consumption. Business, industry and increasingly recreation (e.g., snow-making) account for the remaining 7 percent of water consumed in the state. Tourism and recreation has grown steadily in Colorado and is now the state's second largest industry. Much of that growth is attributable to increases in outdoor pursuits, including skiing, fishing, hiking and rafting. Downhill skiing alone contributes $2.5 billion to the state's economy. Accordingly, free flowing rivers and streams and additional wintertime water supplies for snow-making are under increasing demand.

Control

The legal framework for use of Colorado's waters is the product of a lengthy history of water-related legislation and judicial decisions. Federal and state rules and regulations regarding flood control, water quality, hydroelectric power, water supply, drinking water, soil conservation, reclamation, forestry recreation and research also impact the allowable use of Colorado's waters. Additionally, nine interstate compacts shape the river's usage and dictate stateline delivery requirements.

Colorado's constitution dedicates all surface waters in the state to the public subject to appropriation for beneficial use. This so-called "Prior Appropriation Doctrine" governs Colorado's water law, which means that the application of water to beneficial use is governed by the order in which the use occurred (i.e., first in-time, first-in-right). Most western states follow some form of

Prior Appropriation Doctrine, but typically require a state permit to appropriate water. Colorado is unique in the absence of a state permit system. Colorado water rights are determined by the actual use of the water and certified by the courts.

For almost 100 years, water in Colorado had to be physically captured and controlled to establish beneficial use. However, in 1973, the Colorado Legislature authorized the state to appropriate water to maintain minimum stream flows "where essential to preserve the natural environment to a reasonable degree." The Colorado Water Conservation Board, the state agency charged with this responsibility, presently holds more than 1,400 rights on more than 8,400 miles of streams and rivers and 486 minimum lake level decrees. The majority of these are in the Colorado River drainage.

Principal Reservoirs in the Colorado River Drainage

Aspinall Unit	
Blue Mesa	940,800 acre-feet
Morrow Point	117,190 acre-feet
Crystal	26,000 acre-feet
Granby Reservoir	539,800 acre-feet
McPhee Reservoir	381,000 acre-feet
Dillon Reservoir	254,000 acre-feet
Green Mountain Reservoir	154,600 acre-feet
Vallecito Reservoir	129,700 acre-feet
Ruedi Reservoir	102,370 acre-feet