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Memorandum

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TO: Interested Persons

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SUBJECT: Agreements Governing Colorado's Rivers

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Summary

This memorandum provides information about the interstate compacts, Supreme Court decrees, and international treaties that govern Colorado's use of interstate streams. Specifically, it gives a brief history of each compact and outlines the specific components and requirements of each compact currently in state law. In addition, the memorandum discusses the two memoranda, two Supreme Court decrees, and two international treaties that govern rivers in Colorado. Appendix A outlines the technical components of the laws affecting Colorado's rivers.

Colorado Water Delivery Obligations

Colorado is party to two international treaties, one interstate agreement, two U.S. Supreme Court decrees, and nine interstate compacts. The combination of these agreements determines how much water is allowed to flow out of and into the state. Colorado, also known as the Headwaters State, is home to the headwaters of several major river systems, including the



Arkansas, Colorado, Platte, and Rio Grande. All of these water systems are vital to Colorado, as well as to downstream states. Three methods, all stemming from powers given by the U.S. Constitution, govern how states are able and permitted to solve water supply issues:

- direct legislation by Congress;
- a suit by one state against another in the U.S. Supreme Court; or
- a compact between states approved, where necessary, by Congress.

How, when, and where water is delivered across states has long been a source of controversy between Colorado and the 18 downstream states, as well as Mexico and tribal nations, that all rely on the water that originates in Colorado. Over the last century, the U.S. Supreme Court has heard many conflicts over compact compliance. The negotiations and lawsuits have all played a role in informing the current state of interstate water compacts in Colorado.

Colorado Interstate Water Compacts

An interstate compact is an agreement between two or more states that has been approved by their state legislatures and Congress. Specifically, a water compact sets the terms for sharing the waters of an interstate river system. The first of these compacts was signed over 100 years ago in 1922 and the most recent in 1968. A map of each of the river basins discussed in this section are shown in Figure 1.

Salt Lake City O

Carson City

Carson City

Congruent

Colorado River

Basin

PACIFIC OCEAN

Colorado River

Basin

Phoenix

Rio Grande

Basin

O Santa Fe

Basin

O Santa Fe

Basin

O Mexico

GULF OF

CALIFORNIA

Mexico

GULF OF MEXICO

Figure 1
Geography of River Basins Governed by Interstate Compacts

Source: Water Education Colorado.



Compacts in the Colorado River Basin

Two compacts govern the Colorado River. The first compact was formed between all the states that rely on the Colorado River and the second was formed between states in the Upper Basin.

Colorado River Basin Compact of 1922

The first of its kind in Colorado, the Colorado River Compact of 1922¹ came out of several water disputes that Colorado faced in the early 1900s caused by a rising demand for a steady water supply from downstream states. In 1922, Herbert Hoover, the U.S. Secretary of Commerce at the time, created the Colorado River Compact Commission, which was made up of negotiators from Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming. Delph Carpenter, the negotiator from Colorado, laid out a plan to divide the waters between the upper and lower Colorado River Basin, with the boundary at Lee Ferry, Arizona. Arizona, California, and Nevada became the upper basin states, and Colorado, New Mexico, Utah, and Wyoming became the lower basin states.

The compact required that each basin be allowed 7.5 million acre feet (MAF), or 7.5 MAF over any period of ten consecutive years. The compact also allowed the lower basin to increase its use by 1.0 MAF per year. This is measured by calculating an average of the annual flows at the gauge at Lee Ferry. Since the compact's signing, the flow of the river has varied greatly, ranging anywhere from 3 MAF to 24 MAF in any given year. The last ten-year cumulative streamflow was about 92.5 MAF from 2011 to 2020.²

Upper Colorado River Basin Compact of 1948

After the 1922 compact was approved, Congress did not fund any water storage projects until the states agreed upon how to split the water. This led to the creation of the <u>Upper Colorado River Basin Compact</u>, which was signed in 1948. Due to the obligation to keep the river at 7.5 MAF and the reservoir storage in the upper basin, the exact amount of water available for development was relatively unknown. This caused the new compact to allocate water to each state in set percentages for consumptive use, rather than allocating specific quantities. The exception is for Arizona, which is allocated 50,000 acre-feet (ac-ft) for consumptive use.

Compact Administration and Enforcement

Once the states settled on their share of water, the federal government established the <u>Boulder Canyon Project Act in 1928</u> and the <u>Colorado River Storage Project Act in 1956</u>, which led to the

¹ Section 37-61-101, C.R.S.

² 72nd Annual Report of the Upper Colorado River Commission.



funding and eventual construction the Hoover Dam to form Lake Mead in Nevada and, later, the Glen Canyon Dam to form Lake Powell in Arizona. Currently, a large system of dams and reservoirs aid states in meeting the obligations in the two compacts that are managed by a variety of federal, state, and local entities.

Colorado's state engineers, the federal Bureau of Reclamation, and the U.S. Geological Survey are authorized to administer the Colorado River Compact, while the <u>Upper Colorado River Commission</u> is authorized to administer the Upper Colorado River Basin Compact. Lake Powell and Lake Mead are two crucial pieces of infrastructure that allow Colorado to meet obligations under these compacts. However, in 2021, the Bureau of Reclamation declared an official water shortage due to the ongoing drought in the entire basin.³ The official shortage declaration allows for downstream releases from Glen Canyon Dam and Hoover Dam to be reduced in 2022 due to declining reservoir levels. The declining levels and uncertainty of future river flow could leave upper basin states with the potential burden of curtailing use to comply with the compacts. In the event curtailment is necessary to maintain the flow at Lee Ferry required by Article III of the Colorado River Compact, Article IV of the Upper Colorado River Compact outlines how states shall determine any curtailment. The compact specifically describes a set of principles that the Upper Colorado River Commission must consider when determining the quantity of water that states must curtail to maintain flows at Lee Ferry.⁴

La Plata River Compact of 1922

After a drought in 1917 and 1918, New Mexico was ready to sue Colorado over water in the La Plata River Basin. Instead of going to court, the two states were able to resolve the dispute and sign the La Plata River Compact in 1922. Due to the highly variable flow of the river, the compact requires Colorado to maintain and operate gauging stations at Hesperus, Colorado and at the state line to record the flow from February 15 through December 1 annually. In practice, the compact restricts Colorado's right to use La Plata River water to a certain amount during this time as long as New Mexico needs the water. From December 1 through February 15, both states are entitled to unrestricted use of the water.

Since there are no significant upstream reservoirs on this river system, the La Plata River regularly goes dry between Hesperus and the state line. This prevents the water from reaching New Mexico, and Colorado must invoke the "futile call" doctrine to allow upstream junior water diversions to use the limited streamflow. A futile call may only be invoked when the water cannot be delivered to the interstate gauge.

³ U.S. Bureau of Reclamation Announcement, Aug. 16, 2021

⁴ Section 37-62-101, Art. IV, C.R.S.



South Platte River Compact of 1923

The South Platte River has long been a source of disputes between the states that it serves. The river is currently governed by four agreements—including two U.S. Supreme Court equitable apportionment decrees, an interstate compact, and an interstate administrative agreement. As the river has served Colorado's development along the Front Range, new challenges have included conserving endangered species and accommodating urban growth.

Before 1890, Colorado was using the full capacity of the South Platte River for irrigation; however, Nebraska was just starting its own irrigation activities on the river. In 1916, Nebraska sued Colorado claiming that irrigated farms in Colorado were depriving Nebraska of water. Extensive studies of the river during compact negotiations allowed for a greater understanding of the relationship between water use, return flows, and the needs of the two states. The compact that was signed between Nebraska and Colorado in 1923 reflected this understanding.⁵

When flow of the river is less than 120 cubic feet per second between April 1 and October 1 of each year, Colorado must curtail water delivery to any water rights junior to June 14, 1897, that impact the river flow at the state line. Colorado is entitled to the full use of the South Platte River in the lower part of the river basin between October 15 and April 1. However, a compact provision allows Nebraska to build the Perkins County Canal, which would divert water from Colorado. If the canal is built, Nebraska would be able to divert up to 500 cubic feet per second, after Colorado diverts 35,000 ac-ft, from October 15 to April 1. To date, the canal has not been built. However, the Nebraska Unicameral Legislature recently passed the Perkins County Canal Project Act, which authorizes the construction and operation of the canal, and has authorized funding to purchase land for the project.⁶

Platte River Recovery Implementation Plan

The river basin also provides temporary habitat for migratory birds and year-round habitat for the pallid sturgeon, which are on the federal threatened or endangered species list. In an effort to preserve entitlements of the compact and provide protections for the birds and fish, officials from Colorado, Nebraska, and Wyoming began discussions in 1993. Fourteen years later, the negotiations resulted in the Platte River Recovery Implementation Plan. The plan is aimed at restoring and protecting habitat, increasing streamflows, and preserving the ability to use and develop water in each state.⁷

⁵ Citizen's Guide to Colorado's Interstate Water Compacts, Third Edition, Water Education Colorado.

⁶ Perkins County Canal, Nebraska Department of Water, Energy, and Environment.

⁷ Platte River Recovery Implementation Program



Rio Grande River Compact of 1938

Recorded history of the Rio Grande River dates back to the 16th century, and by the late 19th century, tensions over supply and demand were rampant throughout the Rio Grande Basin. Similar to many other river basins, downstream users were experiencing shortages, and upstream users were blamed. This led to the creation of the Rio Grande Project, which includes the Elephant Butte and Caballo dams in southwest New Mexico. The two reservoirs created by the dams serve irrigation districts in New Mexico and western Texas. In 1929, Colorado, New Mexico, and Texas signed a temporary compact to maintain the status quo of the river. This gave the states time to collect data to inform a more permanent agreement. A federal study revealed that reservoir development in Colorado would benefit the entire basin. The study was instrumental in forming the provisions of the Rio Grande River Compact, which was signed in 1938 by Colorado, New Mexico, and Texas. Uniquely, the compact even accounts for potential spills from Elephant Butte Reservoir.⁸

The amount of water delivered from Colorado to the downstream states varies greatly year to year. The compact covers two separate delivery schedules, one for the Rio Grande River and one for the Conejos River. As flows increase in the upper basin, the percentage of water that must be delivered downstream also increases. Colorado must manage the diversions by in-state surface water right holders in any given wet or dry year to maintain compact compliance. In an effort to manage water supply and demand, the compact:

- creates a system of credits and debits, and limits new storage in Colorado and New Mexico;
- recognizes the variability in water supply, which may cause under-deliveries and over-deliveries depending on the year;
- allows for excess water, up to a certain level, to be held in reservoirs in upstream states or released at the downstream state's demand;
- protects Colorado and New Mexico from water overuse by downstream states; and
- allows for debits to be erased when the Elephant Butte Reservoir spills over.⁹

Republican River Compact of 1943

Colorado, Kansas, and Nebraska began negotiating a compact governing the Republican River in 1940 after the Dust Bowl and a devastating flood in 1935. The three states agreed to a compact in 1941, but when sent to Congress for approval in 1942, President Roosevelt vetoed

⁸ Section 37-66-101, C.R.S.

⁹ The reservoir has spilled over six times since completion, most recently in 1995.



the bill. The President's veto was primarily because the Federal Power Commission objected to the compact's proclamation that the Republican River and its tributaries were non-navigable. Due to this, the next round of negotiations included a federal representative. The final agreed-upon compact, which did not mention the issue of navigability, was signed and approved by Congress in 1943.

Recent Tensions

A disagreement over groundwater and surface water allocations caused Kansas to sue Nebraska for violating the compact in 1998. Colorado was named as a party even though no specific claims were made against the state. In 2000, the U.S. Supreme Court ruled that the compact restricts a state's consumption of groundwater to the extent the consumption depletes the streamflow within the basin. This caused the states to reenter negotiations, which led to a Final Settlement Stipulation in 2002. Among other things, the stipulation established a moratorium on new well development upstream of Guide Rock, Nebraska. Even with the compact and the stipulation, the states have continued to struggle over compliance.

Republican River Water Conservation District

In an effort to remain in compact compliance, the Colorado General Assembly created the Republican River Water Conservation District in 2004. Since then, the district has made efforts to reduce consumptive use within the basin; including by constructing the Compact Compliance Pipeline. However, in 2018, Colorado agreed to pay Nebraska \$4.0 million to settle claims involving the overuse of water in the Republican River Basin. In exchange, Nebraska agreed not to sue Colorado for any compact violations that may have occurred prior to 2014.¹⁰

Arkansas River Compact or 1948

Colorado and Kansas have long disputed the water of the Arkansas River Basin. Years of court battles and one doctrine of equitable apportionment led to the creation of the Arkansas River Compact. After three years of negotiations, the two states signed the compact in 1948, which included how to share water in the John Martin Reservoir located in Colorado. The compact is unique compared to other interstate compacts in that it does not apportion the waters of the river between the states in specific amounts or as a percentage. Rather, the language is intended to protect existing uses in both states from future development. The compact allows the two states to use the water as long as the waters of the Arkansas River "shall not be materially

¹⁰ "Colorado and Nebraska Settle Old Water Dispute." May 25, 2022.



depleted in usable quantity or availability for use to the water users in Colorado and Kansas."¹¹ The compact does not include any provisions for water that is imported into the Arkansas River Basin from other areas. The compact is governed and enforced by the Arkansas River Compact Administration, which sets procedures for operating the John Martin Reservoir and investigates any compact violations. Kansas sued Colorado for Arkansas River Compact violations in 1985. The court case took decades to resolve, as outlined in Figure 2.

1985

Kansas sues Colorado for compact violations

1995

U.S. Supreme Court rules that Colorado well pumping depleted water supply to Kansas

2009

Final agreement ends the litigation

Figure 2
Timeline of *Kansas v. Colorado*

Costilla Creek Compact of 1963

The struggle over the Costilla Creek dates back to the early years of Colorado's statehood. When the Union Congress created the Colorado Territory in 1861, a line was drawn through the Costilla Creek valley. Under the prior appropriation decree of Colorado and New Mexico, some of the earliest established water rights belong to *acequias*. However, the U.S. Freehold filed a lawsuit in federal court claiming that it had riparian rights attached to its land and the *acequias* used more water than the states needed. New Mexico, Colorado, and Dutch investors came to an agreement that allowed the Dutch investors to obtain part of the water decreed to the *acequias*. When the Dutch investors went bankrupt shortly after, the land and its water rights passed to the San Luis Power and Water Company in New Mexico.

The combined development done by the San Luis Power and Water Company and Mormon pioneers in Colorado created conflict over water diversion rights along the state line. The San

¹¹ Section 37-69-101, C.R.S. Article IV (D)

¹² An *acequia* is a communal irrigation canal, from which other, smaller ditches flow. They were commonly used by the earliest settlers in the San Luis Valley coming from Mexican territories. The oldest continuous water right belongs to an *acequia* named the San Luis People's Ditch from 1852. They are still utilized in Colorado today. (<u>History Colorado</u>).



Luis Power and Water Company filed a lawsuit against New Mexico, which led to the recommendation that the states enter into a compact. The original compact was signed in 1944, and an amended version was signed in 1963. The compact sets the amount of water to be delivered to water users in the two states and outlines how to allocate surplus flows and storage in reservoirs.

Animas-La Plata Project Compact of 1968

This compact is unique because instead of being an agreement about an interstate river, the compact governs storage and priority water rights under the Animas-La Plata Federal Reclamation Project (project). The original project was planned to be far larger than what was built. The original project outlined a system of five reservoirs and delivery through a transbasin diversion to the La Plata River. After over 20 years of project designs, tribal reserved water rights filings, lawsuits, and negotiations, the United States, Colorado, the Ute Mountain Ute tribe, the Southern Ute tribe, and water districts in Colorado settled on the Colorado Use Settlement Act Amendments of 2000, which describe the current federally authorized project.

The latest rendition of the project includes one off-stream reservoir, which became Lake Nighthorse, located south of Durango. This was the only reservoir constructed to serve the entities that are allocated water from the original project. The federally owned reservoir currently serves the two Ute tribes, the Navajo Nation, the San Juan Water Commission, and the La Plata Conservancy District in Colorado and New Mexico. Other structures that were built as a part of the project include a pumping plant to the reservoir, Ridges Basin Dam, and the Navajo Nation Municipal Pipeline. The Animas-La Plata Project Operations, Maintenance, and Replacement Association operates the project. Association membership includes entities that are entitled to project water under the intergovernmental agreement.¹³

Supreme Court Decrees

In addition to the interstate compacts, two rivers in Colorado—the North Platte and the Laramie—are also governed by two Supreme Court decrees. The U.S. Constitution establishes that the Supreme Court of the United States has jurisdiction when it comes to controversies or disputes between two or more states. Most often, because of the intense complexity of water issues, the court will appoint a special master, typically a magistrate judge, to oversee the case. The special master usually hears the initial motions, evaluates and considers presented evidence, and makes a recommendation to the court. The court will then evaluate the claims and evidence,

¹³ Citizen's Guide to Colorado's Interstate Water Compacts, Third Edition, Water Education Colorado.

¹⁴ U.S. Const., art. III, § 2



consider the special master's recommendation, and make its final ruling. This section discusses the two Supreme Court cases that determine Colorado's right to waters in the North Platte and Laramie rivers.

Nebraska v. Wyoming, 1945

In 1945, Nebraska filed a suit against Wyoming for the equitable apportionment of the North Platte River. Colorado was named a defendant in the case since the river also flows through the state. The central issue was water use for irrigation. Nebraska claimed that Colorado and Wyoming were wrongfully diverting water from the North Platte River under the prior appropriation law, which deprived Nebraska of its share of water. Nebraska asked the court to apportion the water equitably between the states. Colorado argued that it should be dismissed from the case, but was unsuccessful.

The Supreme Court determined that water from the river used for irrigation would be split between Nebraska and Wyoming in flat percentages based on the natural flow of the river. Nebraska was given the larger percentage on the grounds that it had the senior water rights. The main provisions of the decree also prohibit Colorado from:

- diverting water from the North Platte River and its tributaries for irrigation of more than 135,000 acres in Jackson County during one irrigation season (this value was changed to 145,000 acres by the Supreme Court on June 14, 1953); and
- storing more 17,000 ac-ft of water for irrigation from the North Platte River and its tributaries in Jackson County from October 1 to September 30 of the following year.

Wyoming v. Colorado, 1957

In 1957, Wyoming petitioned the Supreme Court with a motion to intervene against Colorado concerning the right to divert water from the Laramie River. A previous decree handed down by the court regarding rights to the Laramie River was subsequently vacated in this case. The court denied Wyoming's motion to intervene and instead granted a new decree governing the river. The decree held that Colorado may divert 49,375 ac-ft of water from the Laramie River and its tributaries, subject to specific limitations.¹⁶

¹⁵ Nebraska v. Wyoming, 325 U.S. 589 (1945)

¹⁶ Wyoming v. Colorado, 353 U.S. 953 (1957)



Memoranda

Colorado has one memorandum of understanding and one memorandum of agreement with bordering states. In general, both types of written agreements are legal documents that outline the terms of a specific agreement between parties. The main difference between the documents is that an agreement can be enforceable by law, while an understanding cannot. This section discusses the two memoranda that Colorado has with Utah and Wyoming.

Pot Creek Memorandum of Understanding

Colorado and Utah have a memorandum of understanding governing Pot Creek, which originates in Utah and flows into Colorado's Green River. In 1958, the states agreed to distribute the water based on the prior appropriation doctrine and appointed a water commissioner with the authority to administer the agreement. The states agreed to share the expense of the commissioner equitably, with Colorado bearing 20 percent of the expense and Utah bearing 80 percent. In 2005, the states revised the agreement to include a combined administration list, daily operations in accordance with the Pot Creek Operation Manual, the authority of the water commissioner, and assurance of proper maintenance of the gauging stations. The memorandum also restricts either state from utilizing direct flow diversions before May 1 of each year and establishes a schedule of priorities.¹⁷

Sand Creek Memorandum of Agreement

Colorado and Wyoming signed an initial memorandum of agreement in 1939, and then signed a revised memorandum of agreement in 1997, which is currently administered by the Colorado Division of Water Resources. The current, revised agreement corrected clerical errors concerning the amount of water appropriated to Wyoming. Today, the agreement requires Colorado to deliver 40 cubic feet per second (cfs) over a seven-day period, which is not required to be consecutive, at the beginning of irrigation season. Once Colorado has met this delivery requirement, the state must deliver 35 cfs for the remainder of the irrigation season whenever senior water right holders in Wyoming need the water. The agreement also limits diversions from Sand Creek by Colorado and the Divide Canal and Reservoir Company.¹⁸

¹⁷ Revised Pot Creek Memorandum of Understanding and Agreement

¹⁸ Addendum to Sand Creek Memorandum of Agreement and Correction of Clerical Errors



International Treaties

Colorado is involved in two international treaties between the United States and Mexico that govern waters of the Rio Grande River. The United States and Mexico established the Rio Grande and the Colorado rivers as a natural border between the two countries through a combination of treaties in the late 19th century. The two countries established the International Boundary Commission in 1889, now known as the International Boundary and Water Commission (IBWC), to administer the rules associated with governing the two rivers. The IBWC prepared studies that were used by the United States and Mexico to develop the international treaties that determine how the waters of the Colorado and Rio Grande rivers are shared.¹⁹ Today, the IBWC provides binational support and facilitates resolution of issues concerning water quantity, sanitation, water quality, flood control, and boundary demarcation. This section will discuss the two treaties that impact Colorado.

Equitable Distribution of the Waters of the Rio Grande

The 1906 Convention between the United States and Mexico determined the equitable distribution of the waters of the Rio Grande for irrigation and to remove cause for controversy between the two countries over the river. The treaty allocated waters of the Rio Grande from El Paso to Fort Quitman, Texas. Except in times of extraordinary drought, Mexico is entitled to 60,000 ac-ft of the waters that must be delivered according to a set monthly schedule as outlined in the convention.²⁰

Water Treaty of 1944

The Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande Treaty between the United States and Mexico determined the extent of Mexico's right to waters of the Colorado River and the Rio Grande. The treaty guarantees 1.5 MAF of Colorado River water to Mexico. In any instance where the river does not have adequate flow to meet this obligation, the Upper and Lower Colorado River Basins must share in efforts to make up for deficiencies. The treaty also addresses Mexico's right to Rio Grande water from Fort Quitman to the Gulf of Mexico.²¹

¹⁹ History of the International Boundary and Water Commission

²⁰ Convention between the United States and Mexico Equitable Distribution of the Waters of the Rio Grande

²¹ <u>Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande Treaty between the</u> United States and Mexico



Appendix A: Technical Components of Governing Agreements

This appendix includes tables outlining the technical components of each of the interstate river compacts, Supreme Court decrees, memoranda, and water treaties governing the use of Colorado's rivers.

Table 1
Technical Components of Colorado's Interstate River Compacts

Compact	Year Finalized	Signatory States	Major Purposes	Major Provisions
Colorado River Compact ²²	1922	Arizona California Colorado Nevada New Mexico Utah Wyoming	 Equitable division of the waters of the Colorado River system Establish relative importance of different beneficial uses Promote interstate comity Remove causes of present and future controversy Secure the expeditious agricultural and industrial development of the basin 	 Divides the Colorado River Basin into the Lower Basin (Arizona, California, & Nevada) and Upper Basin (Colorado, New Mexico, Utah, & Wyoming) at Lee Ferry, Arizona. Allocates 7.5 million acre feet to each basin. Allows Lower Basin to increase its consumptive use by 1 MAF per year. Subordinates navigation use to domestic, agriculture, and power purposes.
La Plata River Compact ²³	1922	Colorado New Mexico	 Equitable distribution of waters of the La Plata River Remove causes for present and future controversy Promote interstate comity 	 Requires Colorado to own and operate two gauging stations on the river, one at Hesperus and one at the state line, with both gauges operated February 15 to December 1. Allows each state to have unrestricted use of water between December 1 and February 15.

²² Section 37-61-101, C.R.S.

²³ Section 37-63-101, C.R.S.



Compact	Year Finalized	Signatory States	Major Purposes	Major Provisions
				 Does not allow for New Mexico to receive any water not necessary for beneficial use within the state.
South Platte River Compact ²⁴	1923	Colorado Nebraska	 Remove causes for present and future controversy Promote interstate comity 	 Divides the river into the Upper Section and Lower Section. Allows Colorado to have the right to full and uninterrupted use of all the waters in the Lower Section during the period of October 15 to April 1, except that should Nebraska construct the South Divide Canal with a heading near Ovid, Colorado, then that canal will bear an appropriation date of December 17, 1921, and Colorado shall have full use of the waters in the Lower Section plus 35,000 ac-ft, less the amount diverted by the South Divide Canal under its appropriation date during the period October 15 to April 1. Disallows Colorado from permitting diversions between April 1 and October 15, from the Lower Section by Colorado appropriators whose decrees are junior to June 14, 1897, or on any day when the interstate station shows a mean flow less than 120 cubic feet per second (cfs). Requires Colorado to waive any objection it may have to the diversion of waters in Colorado for use in Nebraska through the Peterson Canal or other canals in the Julesburg Irrigation District. Allows for minor irregularities in the delivery of water to be disregarded.

²⁴ Section 37-65-101, C.R.S.



Compact	Year	Signatory	Major	Major
	Finalized	States	Purposes	Provisions
Rio Grande River Compact ²⁵	1938	Colorado New Mexico Texas	 To remove all cause of present and future controversy between the states concerning the waters of the Rio Grande above Ft. Quitman, Texas To promote interstate comity To effect an equitable apportionment of the waters of the Rio Grande above Ft. Quitman, Texas 	 Obligates Colorado to deliver at Lobatos the amounts set forth in the delivery schedules for the Conejos River and the Rio Grande less 10,000 ac-ft. The Conejos Index Supply includes the San Antonio River and Los Pinos River flows for the months April through October. These schedules require zero delivery for an index of 100,000 ac-ft, up to 68% delivery for an index of 700,000 ac-ft on the Conejos; and 30% delivery for an index of 200,000 ac-ft, and up to 60% delivery for an index of 1,400,000 ac-ft on the Rio Grande. Creates delivery credits and debits computed on the basis of each calendar year. Colorado's annual or accrued debit shall not exceed 100,000 ac-ft except as either or both may be caused by holdover storage in reservoirs constructed after 1937. Allows Colorado to retain water in storage at all times to the extent of its accrued debit when possible. Allows for accrued credits to be reduced in proportion to the amount of credit held by Colorado and New Mexico when an actual spill occurs, and both states do not have a delivery obligation. In any year in which there is actual spill of usable water, all accrued debits are canceled. Reduces debits in any year that accrued debits exceed the minimum unfilled capacity of project storage, proportionally to an aggregate amount equal to the minimum unfilled capacity. Disallows an increase in storage in reservoirs constructed after 1929 whenever there is less than 400,000 ac-ft of usable water in project storage. Allows for the Compact Commissioner for Texas or New Mexico to demand the release of water from reservoirs constructed after 1929 to the amount of the accrued debit of Colorado and/or New Mexico during January of any year. Does not allow the schedules of delivery in the compact to be changed as a result of an increase or decrease in the delivery of water to Mexico.



Compact	Year	Signatory	Major	Major
	Finalized	States	Purposes	Provisions
Republican River Compact ²⁶	1942	Colorado Kansas Nebraska	 Provide for most efficient use of water for multiple purposes Remove all present and future controversy Promote interstate comity Recognize that the most efficient utilization of waters in the basin is for beneficial consumptive use Promote joint action between the U.S. and the states in the efficient use of water and in the control of floods 	 Bases the allocation of waters on a computation of average, annual virgin water supply in the respective streams. Allocates Colorado the beneficial use of the entire supply of Frenchman Creek and Red Willow Creek on an annual basis and restricts it to the following: North Fork: 10,000 ac-ft; Arikaree River: 15,400 ac-ft; South Fork: 25,400 ac-ft; and Beaver Creek: 3,300 ac-ft. Makes provisions for the readjustment of historical, annual virgin flows should they vary more than 10% from those set forth in the compact. Reallocations can be made on these readjusted flows. Allocates 190,300 acre feet of beneficial consumptive use to Kansas and 234,500 acre feet to Nebraska on an annual basis.

²⁵ Section 37-66-101, C.R.S.

²⁶ Section 37-67-101, C.R.S.



Compact	Year	Signatory	Major	Major
	Finalized	States	Purposes	Provisions
Costilla Creek Compact ²⁷	1944, amended 1963	Colorado New Mexico	 Equitable division of the waters of Costilla Creek Remove present and future causes of interstate controversy Assure the most efficient utilization of water Provide for integrated operation of existing and prospective irrigation facilities in the two states Adjust conflicting jurisdictions of the two states over irrigation works diverting and storing water in one state for use in both states Equalize benefits of water from Costilla Creek Place the beneficial application of water on an equal basis in both states 	 Provides for the calculation of a safe yield prior to delivery of water each year. Defines the irrigation season as May 16 - September 30 and the storage season October 1 - May 15. Establishes a duty of water of one cubic-foot per second for each 80 acres of land irrigated. Required the relinquishment of pre-compact storage and diversion water rights from Costilla Creek. Requires specific deliveries to Colorado from Costilla Creek. Allocates a certain percent of storage from the Costilla Reservoir to Colorado (36.5%) and New Mexico (63.5%). Establishes schedules of delivery to each state based on water available. Prohibits direct flow diversions during the storage season.

²⁷ Section 37-68-101, C.R.S.



Compact	Year	Signatory	Major	Major
	Finalized	States	Purposes	Provisions
Upper Colorado River Basin Compact ²⁸	1948	Arizona Colorado New Mexico Utah Wyoming	 Provide for the equitable division of the waters of the Upper Basin allocated by the terms of the Colorado River Compact Establish the obligations of each state of the Upper Basin with respect to required deliveries at Lee Ferry, as set forth in the Colorado River Compact Promote interstate comity Remove causes of present and future controversies Secure the expeditious agricultural and industrial development of the Upper Basin 	 Apportions of waters of the Upper Basin as follows by giving Arizona 50,000 acre feet per year and dividing the remaining apportionment as follows: Colorado 51.75%; New Mexico 11.25%; Utah 23.00%; and Wyoming 14.00%. Bases the apportionment upon the allocation of man-made depletions, and establishes beneficial use as the basis, the measure, and the limit of the right to use. Recognizes the provisions of the La Plata River Compact, and consumptive use of water as it shall be charged to the respective states under Article III of the compact. Determines the extent of curtailment by each state if a call is placed at Lee Ferry by the Lower Basin; the extent and times of curtailment must assure compliance with Article III of the compact. If any state exceeds its call in the 10-year period, it shall make up that overdraft before demand is placed on any other state. Proportions curtailment among the states in the same ratio as beneficial use of waters occurred during the preceding year (rights that predate November 24, 1922 are excluded). Apportions the waters of the Yampa River between Colorado and Utah, requiring Colorado to ensure that the flow of the Yampa at Maybell must not fall below 5 MAF for any consecutive 10-year period. Apportions the waters of the San Juan River system between Colorado and New Mexico in such a way that Colorado agrees to deliver enough water in the San Juan and its tributaries to meet New Mexico's entitlement under Article III considering the water that originates within New Mexico.



	Year	Signatory	Major	Major
Compact	Finalized	States	Purposes	Provisions
Arkansas River Compact ²⁹	1948	Colorado Kansas	 Settle existing and future controversy between the states concerning the utilization of the waters of the Arkansas River Equitably divide and apportion the waters of the Arkansas River between Colorado and Kansas as well as the benefits which arise from the construction of John Martin Reservoir 	 Requires the conservation pool at John Martin Reservoir to be operated for the benefit of water users in Colorado and Kansas, both upstream and downstream from the dam. States that the compact does not intend to impede development of the Arkansas Basin in either state provided that the waters of the Arkansas River shall not be materially depleted in usable quantity or availability. Requires releases of stored water to be made upon concurrent or separate demands by Colorado or Kansas at any time during the summer storage period. Limitations imposed are: separate releases by Colorado shall not exceed 750 cfs and separate releases by Kansas shall not exceed 500 cfs, unless specifically authorized by the Compact Administration; concurrent releases shall not exceed 1250 cfs; and releases to Kansas shall not exceed 400 cfs and concurrent releases shall not exceed 1000 cfs when water stored in the conservation pool is less than 20,000 ac-ft. Requires Colorado users above the dam not be affected by priorities located below John Martin Reservoir when water is available in the conservation pool. Approves the 1980 Operating Plan, which modifies Article V by establishing separate volumetric accounts for each state that can be released from John Martin Reservoir when directed by each state. The Colorado account is 60% and the Kansas account is 40% of any water stored pursuant to the compact.

²⁸ Section 37-62-101, C.R.S.

²⁹ Section 37-69-101, et seq., C.R.S.



	Year	Signatory	Major	Major
Compact	Finalized	States	Purposes	Provisions
Animas-La Plata Project Compact ³⁰	1968	Colorado New Mexico	 Implement the operation of the Animas-La Plata Reclamation Project Promote interstate comity 	 Provides New Mexico with the right to divert and store water from the La Plata and Animas River systems under the project with the same validity and equal priority as those rights granted by Colorado courts for Colorado users of project water, providing such uses are within New Mexico's allocation in the Upper Colorado River Compact.

³⁰ Section 37-64-101, C.R.S.



Table 2
Technical Components of Colorado's Supreme Court Decrees

Decree	Year Finalized	Major Provisions Affecting Colorado	
Nebraska v. Wyoming and Colorado ³¹	1945 (amended in 1953 and 2001)	Colorado is not permitted to do any of the following on the North Platte River or its tributaries:	
		 irrigate more than 145,000 acres of land during any irrigation season; store or permit the storage of more than 17,000 ac-ft of water for irrigation in Jackson County from October 1 to September 30; and export more than 60,000 ac-ft of water in any consecutive ten-year period to any other stream basin or basins. 	
Wyoming v. Colorado ³²	1957	Colorado has the right to divert 49,375 ac-ft of water from the Laramie River in each calendar year. Colorado is not permitted to do any of the following on the Laramie River and its tributaries:	
		 divert or permit the diversion of more than 19,875 ac-ft of water in any calendar year for use outside of the river basin; and divert or permit the diversion of more than 29,500 ac-ft of water in any calendar year for use within the drainage basin (no more than 1,800 ac-ft can be diverted after July 31). 	

³¹ Nebraska v. Wyoming, 325 U.S. 589

³² Wyoming v. Colorado 353 U.S. 953



Table 3
Technical Components of Colorado's Water Memoranda

Memorandum	Signatory States	Year Finalized	Major Provisions
Pot Creek Memorandum of Understanding ³³	Colorado Utah	1958 (amended 2005)	 Colorado covers 20% of the cost of the water commissioner and Utah covers 80%. Neither state can exercise direct flow diversions before May 1 of each year.
Sand Creek Memorandum of Agreement ³⁴	Colorado Wyoming	1939 (amended 1977)	 Colorado must deliver 40 cfs over a seven-day period at the beginning of the irrigation season, and 35 cfs after that period as long as it is needed by senior water rights holders in Wyoming.

Table 4
Technical Components of Colorado's International Water Treaties

Waters Affected	Signatory Countries	Year Finalized	Major Provisions Affecting Colorado
Rio Grande River ³⁵	United States Mexico	1907	 United States must deliver 60,000 ac-ft of water to Mexico annually at the International Dam at Ciudad Juarez (exceptions are made for periods of extraordinary drought).
Rio Grande River Colorado River Tijuana River ³⁶	United States Mexico	1944	 United States must deliver 1.5 MAF of water from the Colorado River each year. Upper and Lower Colorado River Basins must share the obligation to make up for any deficiencies if the river does not have enough flow to meet obligations. Establishes the International Boundary and Water Commission.

³³ Revised Pot Creek Memorandum of Understanding

³⁴ Addendum to Sand Creek Memorandum of Agreement

³⁵ Convention between the United States and Mexico Equitable Distribution of the Waters of the Rio Grande

³⁶ <u>Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande</u>