

Explanation of Terms
IN THE
**COLORADO RIVER
CONTROVERSY**

BETWEEN

Arizona and California

BY

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The Colorado River Question is a complex one, hard for many people to understand. It is of importance that it should be understood by all, for its proper settlement means much for Arizona's future. The reason why it is difficult to understand is because a speaker or writer who understands it, assumes that others know all about it, and that assumption controls the speaker or writer. One feature is not explained in its bearing to another, with the result that it seems that the more one hears or reads of the subject, the more confused one becomes.

The Colorado River Question

It is necessary first to understand and to know what is meant by certain terms frequently used when the Colorado River Question is discussed. These terms and the main questions itself are understood by many. I am not writing here for their benefit; rather to and for the large number of people who acknowledge that they do not know what it is all about, but who have a sincere desire to understand, in part at least, this important matter. In defining terms, I will not give the exact legal definition but rather use words understood by any layman.

Terms Used

1. The Colorado River System.
2. The Colorado River Basin.
3. The Upper Basin.
4. The Lower Basin.
5. The Uses of Water.
 - (a) The Riparian Doctrine.
 - (b) The Appropriation Doctrine.
 - (c) Beneficial Uses—Consumptive Use—Acre Feet—Duty of Water.
5. Compacts Between States—Authority for Same.
7. The 7-State Colorado River Compact.
8. The Tri-State Compact.
9. The Boulder Canyon Dam Act.
10. The Mexican Burden.

(1) The Colorado River System

This term is used in the Seven State Compact. It means the main Colorado River, together with its tributaries.

(2) *The Colorado River Basin*

Again this term is used in the Seven State Compact. It means all the drainage area of the Colorado River System, and all other territory within the United States to which the waters of the Colorado River shall be beneficially applied. The states in the River Basin are Colorado, Wyoming, Utah, New Mexico, Arizona, California, and Nevada.

(3) *The Upper Basin*

The Upper Basin includes those parts of four states whose waters drain into the Colorado River. They are Colorado, Wyoming, Utah, and New Mexico.

(4) *The Lower Basin*

The Lower Basin includes Arizona, California, and Nevada. It should be noted that Arizona, New Mexico, and Utah are partly in both basins. The reason for this is, as you will see by looking at a map of the River, that a small part of the Gila is in New Mexico; a part of the San Juan is in Utah and New Mexico, and a part of the Virgin is in Utah and Nevada. The dividing line in the apportionment of waters between the Upper and Lower Basin as made by the Seven State Compact, is at Lee's Ferry, which is near the north line of Arizona.

(5) *Uses of Water*

This subject is divided into three heads:

(a) **RIPARIAN DOCTRINE**, which was a common law right of an owner of land bordering upon a stream or body of water to have the water retain its natural character; that is, not to be diminished to any extent; to have it remain unpolluted, and to have its use, if a stream, as it flows by his land for milling and domestic purposes, to have free access for wharves, and for many other uses and benefits which a riparian owner had. This doctrine does not exist in any of our arid states, except that in one of the Seven States of the River System, viz, California, the Riparian Doctrine is in part maintained.

(b) **APPROPRIATION DOCTRINE**. This doctrine relating to the use of water, is the one which controls in most of the arid States of the Union. It is the right of one to take water from a stream or ditch to his land, mill, mine, placer, farm or other works, and apply that water to some beneficial use. Unlike the

riparian right, it may be taken a long distance from the stream or lake, although the effect of taking it reduces the water in the stream. The right depends not on the place where taken, but rather upon the application by the taker to some beneficial use. The right is initiated by complying with the law of the state where the appropriation is made, and these requirements differ in some respects in many of the western states. In some, the person appropriating the water must place a written notice stating the amount of his appropriation at a point on the stream or lake where the diversion of water is made, that is, where the head gate of his ditch is to be located. He must record the notice in the proper county or state office, procure a permit from the State Engineer or State Water Commissioner, and build his ditch from the river or lake to his works or to his farm. But whatever the requirements are, they initiate only a right to the water. The appropriation becomes complete only when the water is actually applied to some beneficial use. When it is so applied, say for instance to irrigate a farm, it is then said to be a "vested right." When one has a vested right to water through appropriation, it is subject only to some prior appropriation of the water, and an owner cannot be divested of the right to the use of the water except by due process of the law.

(c) **BENEFICIAL USE OF WATER.** Beneficial use is where one applies water for the benefit of person or property. The owner may furnish drinking water, run a mill to grind grains or ores, to wash placer lands, or to irrigate land and thereby raise crops. Whichever way used, the owner is said to be applying it to a beneficial use.

CONSUMPTIVE USE. This term means where water is consumed. An illustration of consumptive use is where a farmer takes through a ditch four acre feet of water a year. He puts it all on his land, but one acre foot runs off through his waste ditch back into the river. Another acre foot runs down through the land striking a gravel bed and drains back into the river—thus there has been only two acre feet consumed. This two acre feet used up is called the consumptive use.

ACRE FEET OF WATER. An acre foot of water is water sufficient to cover an acre of land one foot deep.

DUTY OF WATER. The amount of water required to irrigate an acre of land differs greatly on account of the difference in soil, altitude and length of the growing season. In some of the Upper Basin States the consumptive use of water may run as

low as from one and one-quarter to one and one-half acre feet annually. In other states it runs from two to four acre feet. All water diverted from all the Basin States except California, has a drainage back into the Colorado River. Water used in California from the River does not drain back into the River. That used in the Imperial and Cochella Valleys drains back into the Salton Sea, while water taken to Los Angeles will have a drainage into the Pacific Ocean. There are some small tracts of land in California that lie near the River, from which the water will drain back into the Colorado River, but excepting these, all waters diverted to California from the Colorado River will be consumed as far as river drainage is concerned.

(6) **COMPACTS BETWEEN STATES.** Article X of the United States Constitution gives to the several states of the Union the right to compact between themselves respecting matters which directly concern them, reserving only to Congress the right of approval or veto. No state or number of states can force a compact on another state not consenting. The question, shall a state join in a compact, is for that state alone to decide. Congress has no power to make a compact for states, nor to decide any of the terms of a compact between states. When states do compact, then the legislatures of the compacting states must ratify it before it becomes binding. A compact between states is nothing more nor less than an agreement between them as to some matter affecting their several interests.

(7) **THE SEVEN STATES COMPACT.** This was a proposed agreement authorized by Congress between the seven states of the Colorado River Basin. The state authorized their several representatives to confer and draw a compact, the purpose of which was to divide the waters of the Colorado River among the seven states of the Basin. These representatives met in Santa Fe, New Mexico, in the fall of 1922. Mr. Herbert Hoover was appointed to act for the Federal government. The conference drew up a Seven States Compact, very often referred to as the "Santa Fe Compact." They did not divide the waters of the River among the seven states, but instead fixed two basins as described above, namely, the Upper and Lower Basin, and allocated a certain amount of water to the Upper Basin and a certain amount to the Lower Basin.

(8) **THE TRI-STATE COMPACT.** What is commonly called the Tri-State Compact is a proposed agreement between three states of the Lower Basin, that is, Arizona, California, and Nevada, to divide among such three states the waters allocated to

the Lower Basin by the Seven States Compact. Other matters were sought to be covered by such a Tri-State Compact.

(9) THE BOULDER DAM PROJECT ACT. This was an act passed by Congress in December, 1928, providing for the building of what is known as the Boulder Dam. The Act is also spoken of as the Swing-Johnson Bill. They are one and the same. The Act authorized the building of a dam at Black Canyon sufficient to impound 26,000,000 acre feet; to build at the dam, electrical works for the generation of 1,000,000 horse power of electrical energy; the building of an all-American canal to carry waters to the Imperial Valley and Coachella Valley in California. The cost of the canal is to be \$38,500,000. The cost of the canal is to be paid for by the water users over a long period of years. The balance of the project cost, including interest thereon (except that no interest shall be charged on the 25,000,000 flood control item) is to be repaid to the government within 50 years from the completion of the project. Money for the repayment is to come from the proceeds received from the sale of power produced, and also from charges for the storage and delivery of water stored by the dam. The act provides that the Imperial and Coachella Valleys in California shall not be charged any storage or delivery. (No exemption is made for Arizona.) The act provides that before any money is appropriated for the construction of the dam or power plant or any construction work done or contracted for, the Secretary of the Interior must make contracts for revenues to be received from the sale of power and for the storage and delivery of water sufficient to pay within 50 years from the completion of the dam the cost of the project, interest and operation and maintenance of the project. The act also provides that if during the period of repayment there should be revenues in excess of the amount necessary to meet the periodical payments, interest and maintenance, then after such settlement, there should be paid to the States of Arizona, and Nevada each 18 $\frac{3}{4}$ % of such excess revenues. The act seems to be based upon what we described as the Seven States Compact, and provided that it should not go into effect for six months after its passage to allow the seven states to ratify the Seven State Compact, and if the seven states did not ratify, then until six states should ratify it, including California, which state was required to agree (by an act of its legislature) with the United States for the use and benefit of the Colorado River Basin States, that the aggregate consumptive use of water should not exceed 4,400,000 acre feet of the 7,500,000 of waters apportioned to the Lower Basin States by Paragraph A of Article III of the Colo-

rado River Compact, plus not more than one-half of any excess or surplus waters unapportioned by said compact. The act further provided that when the government had been repaid for money advanced to build the project, then all revenues should be used in the River Basin States. So far as the act provides, Arizona's 18% from the excess revenues would cease when the government is repaid.

(10) THE MEXICAN BURDEN. There are about 200,000 acres of land in Mexico which now use Colorado River waters for irrigation. This land lies mostly on the west side of the river, south of the lands of the California Imperial Valley. The present water use on this land is about 700,000 acre feet annually. There is, roughly speaking, about one-half million acres more that could be irrigated and used if there was water for such lands. The water that Mexico now uses is carried through a canal which has its head gate at Hanlon's Heading, a few miles below Yuma, Arizona. This canal carries both the Mexican waters and the waters for the Imperial Valley. The amount of water to which Mexico will be entitled must be settled by a treaty between the United States and Mexico. Arizona, California, and Nevada are anxious that the treaty may be made in the near future, so that they may know definitely what the Mexican water allotment will be. So much for the explanation of terms.

The Reason for the Seven States Compact

The reason for this compact grew out of the desire of some of the Upper Basin States to protect their future requirements for water. Remember, the "prior appropriation of water doctrine" was in full force in the seven states of the River Basin. Under such a doctrine, any states taking water from the river and applying it to a beneficial use, acquired a prior right thereto, which was superior to the right of a subsequent appropriator, whether in the same or in another state. California for years had been advocating the building of a large storage dam on the Colorado River and a canal, all of which should be on American soil. This canal was to be of large enough capacity to carry waters for the irrigation of lands of the Imperial and Coachella Valleys. In these valleys at the present time, are large tracts of dry land, which could be irrigated if water were available. All the Basin States knew if this dam and canal were built, a large part of the river flowing in the Lower Basin would be applied to lands of the California valleys, with the result that California would thereby secure by prior appropriation a vested right to a large amount of the river water and thereby acquire rights against all

other states, especially against those states which were not ready now to appropriate and use the water. These other states knew that if this water were taken by California, then in the future, when these states could use the water, the right thereto would be lost by the prior appropriation made by the California people. This was the reason that the northern states were agitating for a Seven States Compact which would allocate a certain amount of the river waters in perpetuity to each of the seven states. If such allocation were made by compact, then the doctrine of prior appropriation as between states would be set aside and each would know its allocation and could rely and count upon the amount allocated. And while the water might continue to flow into the Lower Basin, and be taken and used by the Lower Basin States, yet at any time the other states to which the allocation had been made were in need of water, they would have the right to take it.

When the Seven States Conference met at Santa Fe, New Mexico, in 1922, they determined that instead of allocating a certain amount of water to each state, they would make the allocations between the two basins, namely, the Upper and Lower Basins. The Upper Basin at that time was consumptively using about 2,000,000 acre feet. Measurements of the water in the river over a long period of years showed that there was in excess of 15,000,000 acre feet passing Lee's Ferry annually, so the Compact fixed Lee's Ferry as a point where the waters of the river should be divided between the two basins. By Paragraph A of Article III of the compact, they allocated to each of the basins 7,500,000 consumptive acre feet and provided that this should take care of all future and present rights in both basins. The Upper Basins agreed that there should flow down to Lee's Ferry 75,000,000 acre feet in each ten year period. Subdivision B of Article III of the Compact allowed the Lower Basin to increase its consumptive use by 1,000,000 acre feet. The purpose of this provision was made for Arizona's benefit, because by the terms of the compact the Gila River and its tributaries over Arizona's objection were included in the Colorado River System, and as the normal flow of that river and its tributaries was already appropriated and put to a beneficial use, this 1,000,000 acre feet was intended to take care of the Gila River. But the Compact itself did not so specify, although all representatives present agreed that such was the purpose of the 1,000,000 acre feet set up under Sub-division B, of Article III of the Compact.

These two amounts of water set up in A and B of Article III of the Compact allocated to the Lower Basin, are spoken of in the

Compact, the Dam Act and in all negotiations as "apportioned waters." The Compact further provided that whenever there was storage in the Lower Basin equal to 5,000,000 acre feet, then all vested rights on the main river in the Lower Basin would be cared for by such storage. It will be well to remember that the vested rights on the main river in the Lower Basin are the Yuma Project, the Imperial Valley land and some other California lands. In no way could storage on the main stream take care of any vested rights on the Gila or its tributaries. And this fact was known to every member of the Conference, and it was the reason that it allowed the Lower Basin the extra 1,000,000 acre feet, so that the Gila might be counted in and yet be cared for.

After the Compact was drawn up several of the States ratified it, Arizona alone refused. The reasons for Arizona's refusal to ratify the Seven States Compact were: First, Arizona objected to the inclusion of the Gila, and, second, while the prior appropriation doctrine would thereby be destroyed between the two basins by the allocation of waters to each of them, yet it would remain in full force and effect as between California and Arizona, and that while the Upper Basin States had escaped the danger which they had feared by California appropriating a great amount of water through the all-American canal that it intended to build, yet the same danger would still confront Arizona.

Those were the reasons why Arizona would not ratify the Seven States Compact. She knew that she could not compete in wealth or in influence with California, and that California could take the water allocated to the Lower Basin by prior right of appropriation and thereby destroy Arizona's chances of ever irrigating any considerable lands from the waters of the main Colorado River.

Therefore, Arizona's stand has been that before the Seven States Compact should be ratified, there should be a Tri-State Compact between California, Arizona and Nevada, allocating to each in perpetuity the waters that they should be entitled to. This compact Arizona has diligently sought to have made between the three states. One of the chief difficulties as to a division of the waters has always been the waters of the Gila River. California has not been willing, in fact, does not admit, that the 1,000,000 acre feet above mentioned should go to Arizona to take care of the Gila River. If she did, a compact could likely be made. If the Gila River is to be counted as in the Lower Basin and then charged to Arizona, and then the 7,500,000 acre feet allocated to the Lower Basin are divided among the

three states, and then California and Arizona are each to have one-half of the surplus waters, the result will be that if there was 1,000,000 acre feet of surplus water to be divided, each state would receive 500,000 acre feet thereof. But if the amount in the Gila is to be counted in the main river, although it never reaches it, then the amount of the surplus is greatly increased and California claiming to be entitled to one-half of the surplus might later make claim that Arizona should surrender a part of its main stream allocation to make up the claimed increase in the surplus waters. Any such theory would prevent the irrigation of any considerable tracts of land in Arizona.

Another difficulty seems to be that while California might agree to some division with Arizona of the 7,500,000 acre feet allocated to the Lower Basin, yet the 1,000,000 acre feet of apportioned water, according to California's demands, should remain open to prior appropriation, giving it to the first state which is able to get it. This means California, for the government is advancing them a great many millions of dollars to build the all-American canal, while no such provision is made to carry waters to Arizona lands. But there is another reason why this offer in regard to this 1,000,000 acre feet should not be considered, and that is the theory of a compact dividing the waters between states destroys as between them the doctrine of prior appropriation, and no state should be able to secure the benefit of the allocation of water in perpetuity by compact against another state and also maintain as against that state the doctrine of prior appropriation. The two doctrines are not consistent in relation to the division of waters between the two states.

PROJECTS IN ARIZONA. Arizona is not contending for water for any particular project, but rather water for the State of Arizona. Where it will be applied will be a matter for Arizona's future determination.

However, the Gila-Parker project has been so many times mentioned that it might be well to say something regarding it. It is estimated to contain about 800,000 acres. Its lands lie along the Colorado River and on both sides of the Gila. To irrigate these lands, it would be necessary to construct a dam in the Colorado River near the town of Parker, Arizona, where the head gate of the canal would be located. The canal would then run in a southerly direction, watering Arizona land on the east side of the river, then turn east and carry water to a point almost even with the town of Sentinel, watering the lands along the north side of the Gila, and then be syphoned under the Gila or

pumped into the Gila and then be pumped out onto the lands on the south side of the river. There is not sufficient engineering data to enable one to discuss this project as it should be discussed. While there is a provision in the Boulder Dam Project Act authorizing the Secretary of the Interior to make surveys and investigations and to determine what lands should be embraced within the Parker-Gila Reclamation Project, and authorizing the appropriation of sufficient money for such proposed investigations, the Secretary to report to Congress not later than December 10th, 1931, his findings, his conclusions and recommendations regarding such project, yet the present Arizona Colorado River Commission will likely take action and make surveys and gather information regarding that project long prior to December, 1931. Many people are asking, if no Tri-State Compact is made, what will be Arizona's stand as to the Colorado River? And what shall we do? My answer to the first question is that with the limitations as to the use of water placed upon California by Congress and accepted by its legislature, Arizona will then be in as good or better shape as by accepting anything that California has so far offered. We have already proposed to California, for them under the Tri-State Compact to take more water than they have limited themselves to from the 7,500,000 acre feet under the Boulder Canyon Project Act. As to the second question, the Attorney General of the state is advising with the Commission, has employed able Assistant Counsel, and will be prepared to take such action as may be necessary to protect Arizona's interest in the river in the event that no Tri-State Compact is made.

I have discussed only a few angles of this question. The Commission expects to issue from time to time full information of its activities, so that the people of this state may be fully informed as to their rights in the river. The Colorado River is the greatest undeveloped asset the state has at this time and it must be protected.