Statement of Northcutt Ely
Attorney for Colorado River Board of California

From Appendix J
War for the Colorado River
John Upton Terrell
1965

###

THE U. S. SUPREME COURT CASE OF
ARIZONA VS. CALIFORNIA
AND ITS RELATIONSHIP TO THE
UPPER COLORADO RIVER STORAGE PROJECT

In 1955, when the states of the Upper Colorado River Basin launched their drive to secure approval by Congress of the CRSP, the case of Arizona vs. California had been in the U. S. Supreme Court since 1952.

These three years had been consumed by preliminary legal skirmishing and a delay caused by the death of the Special Master appointed by the court to hear evidence. The second Special Master appointed was the New York attorney and former federal Judge, Simon F. Rifkind, who held hearings in San Francisco.

Thus, California was engaged simultaneously in defending its Colorado River water rights on two fronts. For the CRSP congressional testimony, Northcutt Ely of Washington, D. C., had been named chief counsel for California by Governor Edmund G. Brown.

Of the two-front war, Ely wrote:

The people of California have invested about three quarters of a billion dollars in works which are dependent upon the waters of the Colorado River system. From north to south these are:

Hoover Dam, whose cost was underwritten by the water and power users of Southern California, plus the transmission lines built by California agencies to bring Hoover Dam power to the people in that State;

Parker Dam, about 155 miles below Hoover Dam, paid for by the Metropolitan Water District of Southern California;

The Colorado River Aqueduct, built and paid for by the Metropolitan Water District, which carries Colorado River water over five hundred miles from Parker Dam to some 66 cities and districts on the coastal plain of which the largest are Los Angeles and San Diego;

The Palo Verde Irrigation District, an area about 212 miles below Hoover Dam, which has the oldest rights on the river and has been diverting water there since about 1877;

The All-American Canal, which diverts water at Imperial Dam, 303 miles below Hoover Dam and twenty-two miles above the Mexican border, and transports it into the Imperial Irrigation District and Coachella Valley County Water District. This dam and canal were built by the United States, along with Hoover Dam, as part of the Boulder Canyon Project, but these districts were required to underwrite the cost in advance. Imperial Valley's appropriations date back to 1891.

CALIFORNIA WATER CLAIMS

The quantity of Colorado River water which California claims, for which she holds contracts with the United States, and which the Colorado River Aqueduct, the All-American Canal and the Palo Verde works have been built to use, is 5,362,000 acre-feet per year. California is not seeking more water for new projects, but to defend the water supply of old projects.

More than six million people live within the areas served by the Colorado River in California. The assessed valuation exceeds eight billion dollars. The economy of Southern California is dependent on the permanent availability of these waters. The Metropolitan Water District will outgrow its present Colorado River supply, which is 1,212,000 acre-feet per year, in about twenty-five years on present forecasts, and must look to the Feather River or elsewhere for additional water.

THE PRESENT CHALLENGE

California's rights in the Colorado River System are now being seriously challenged from two directions, and in two arenas.

The first is in the United States Supreme Court, in the case of Arizona v. California, now pending.

In this suit, Arizona seeks to establish interpretations of the Boulder Canyon Project Act and the Colorado River Compact, which would have the net effect of reducing California's rights from 5,362,000 acre-feet to about 3,800,000 acre-feet per year, a quantity less than the vested rights which California's old agricultural areas possessed prior to the construction of Hoover Dam, and which would deprive California of virtually all benefit from the flood water salvaged by that dam.

The purpose of Arizona's suit is to quiet title to enough water to supply the Central Arizona Project, in addition to her existing and authorized projects. The

Central Arizona Project is a proposal to lift 1,200,000 acre-feet of water 985 feet, and transport it some three hundred miles to the Salt and Gila River Valleys, at a total cost of about $800,000,000, and an average cost of about $2,000 per acre directly served.

UPPER BASIN THREAT

The second challenge i's from the four upper States of Colorado, New Mexico, Utah and Wyoming.

These states are asking Congress to authorize the construction of the Colorado River Storage Project in the Upper Basin. It would cost a billion and a half dollars. Of this, about half would be spent to build a dozen to fifteen irrigation projects, at an average cost in excess of $1,000 per acre, and about half to build six large reservoirs which would store 48,000,000 acre-feet, or over three years' flow of the river, and generate power to be sold to subsidize the irrigation projects.

The novel feature of this scheme, aside from its cost (twice that of TVA and eight times that of the Boulder Canyon Project), is that, unlike any other projects, the six power reservoirs are to be built below, not above, the irrigation projects, and none of the water stored will be used in the Upper Basin for irrigation. They are power dams. The best known of these would be Glen Canyon Dam, at the upper end of the Grand Canyon, and Echo Park Dam, which would flood a portion of the Dinosaur National Monument in Colorado. The water stored by these dams could only be consumed in the Lower Basin and Mexico.

The Upper states assert the right to store and withhold this water from the Lower Basin for power generation under interpretations of the Colorado River Compact which would reduce the quantity of water reaching Hoover Dam from an average of over ten million acre-feet per year the quantity assumed to be available when the Hoover Dam power contracts were made in 1930, and when the Mexican Water Treaty was negotiated in 1944 to about 7,500,000 acre-feet. This would reduce the Lower Basin power production, principally at Hoover Dam, thirty per cent or more, and curtail the Lower Basin's supply for consumptive use in about the same proportion.

In these circumstances, California asked the Supreme Court to make the Upper Basin states parties to Arizona's lawsuit.

THE HISTORICAL BACKGROUND

The dispute, on both fronts, turns primarily upon conflicting interpretations of the Colorado River Compact and the Boulder Canyon Project Act, which, ironically, were themselves supposed to settle the conflict between the Upper Basin and the Lower. The chronology is as follows:

DEVELOPMENTS PRIOR TO 1922

Irrigation in the Lower Basin developed much more rapidly than in the Upper. Palo Verde Valley commenced irrigation in 1877; Imperial Valley's appropriations date from 1891; those of the Yuma project in Arizona from 1904. By 1916 the whole natural flow had been appropriated, and the river was dry for long periods in the summer at the Mexican boundary. Nevertheless, the spring floods, depositing great quantities of silt and raising the river bed several feet in some years, were an increasing menace to lands in Imperial Valley, lying below sea level, and to lands in the Yuma Valley in Arizona.

A great storage dam was a necessity not only for flood control, but also to make possible any further development at all in either the Upper Basin or the Lower, and for power generation. But the Upper Basin, knowing that the Lower had a 2 to 1 population advantage (now over 4 to 1), better lands, flatter contours, and a longer growing season, rightly feared that if the flood waters were stored, the Lower Basin would appropriate and use them, unless in some way the Upper Basin could be insulated against the law of priority of appropriation, which is "first in time, first in right." The United States Supreme Court, in 1922, in the case of Wyoming v. Colorado, applied this rule on an interstate stream, regardless of state lines. The Upper states obtained this insulation in the 1922 compact.

THE COLORADO RIVER COMPACT

The Colorado River Compact was signed by representatives of all seven states at Santa Fe, New Mexico, November 24, 1922, subject to ratification by their legislatures and the consent of Congress, the latter being a Constitutional requirement.

Article II defined the Colorado River system as including the main stream and its tributaries, the "Upper Basin" as being the drainage area above Lee's Ferry (a point on the river in northwest Arizona), and the "Lower Basin" as the drainage area below that point. The four states of Colorado, Utah, New Mexico and Wyoming were defined as the "States of the Upper Division" and the three states of Arizona, California and Nevada as the "States of the Lower Division."

The negotiators gave up any attempt to allocate all the water, or to allocate to individual states. They hit on the idea of allocating "beneficial consumptive uses" instead of the flow of a stream, and made a general division as between Upper and Lower Basins, leaving to the future any allocation to states as such. Nor did they attempt to dispose of all the water supply, leaving, as they thought, about twenty-five per cent of it unallocated and untouched by the Compact.

THE COMPACT ARTICLES

In Article III(a) the Compact apportioned in perpetuity the "beneficial consumptive use" of 15,000,000 acre-feet of water of the Colorado River system, one-half to each basin, to include any rights which "may now exist." This was the protection against the law of priority of appropriation demanded by the Upper Basin. As Article II defined the system to include the tributaries, the apportionment in Article III(a) includes the uses on the tributaries as well as on the main stream. The Compact did not define the term "beneficial consumptive use."

Article III(b) permitted the Lower Basin to "Increase its use" of waters of the system by 1,000,000 acre-feet per annum.

These two paragraphs thus disposed of 16,000,000 acre-feet, of which 15,000,000 was insulated against the law of appropriation, basin versus basin, by a perpetual apportionment. A "Compact" title to the other 1,000,000 acre-feet could be obtained by "Increase of use" in the Lower Basin, but not by apportionment irrespective of use.

These two paragraphs did not dispose of all the water available throughout the system. This total was estimated, in reports of the negotiators to Congress, as over 20,000,000 acre-feet.

Article III(c) provided that if the American government should recognize rights in Mexico, the Mexican burden should be met first out of any water in excess of the 16,000,000 acre-feet, and if that was insufficient, the deficiency should be equally borne by the two basins. The four states of the Upper division agreed to deliver water at Lee's Ferry to supply one-half the deficiency in addition to their obligations under Article III(d).

In Article III(d) the four Upper States promised that they would not deplete the flow at Lee's Ferry below 75,000,000 acre-feet in each ten-year period.

Article III(e) provided that the states of the Upper division would not withhold water, and the states of the Lower division would not require the delivery of water, which could not reasonably be applied to domestic and agricultural uses.

Article III(f) provided that further equitable apportionment of the beneficial uses of the system unapportioned by paragraphs (a), (b) and (c) might be made after October 1, 1963, if and when the Upper Basin should have reached a beneficial consumptive use of 7,500,000 acre-feet per annum, or the Lower Basin 8,500,000 acre-feet.

Article III(g) provided the mechanics for calling such a future conference.

Article IV provided that water might be impounded for power generation, but "such impounding and use shall be subservient to the use and consumption of

such water for agricultural and domestic purposes and shall not interfere with or prevent use for such dominant purposes."

Article VII provided that "nothing in this Compact shall be construed as affecting the obligations of the United States to Indian tribes."

Article VIII provided that "present perfected rights to the beneficial use of waters of the Colorado River system are unimpaired by this Compact."

Article XI provided that the Compact should become binding when ratified by the legislatures of all seven states and when Congress should give its consent.

RATIFICATION BY SIX STATES, REJECTION BY ARIZONA

In 1923 all states but Arizona ratified. Her legislature rejected the compact, after one house or the other had adopted reservations excluding the Gila River and subjecting all power development to a five-dollar per horsepower royalty.

SIX STATE RATIFICATION

In 1925, at the suggestion of Colorado, the other six states ratified it again, as a six-state document, waiving seven-state ratification, and presented it to Congress in that form.

THE BOULDER CANYON PROJECT ACT

The Boulder Canyon Project Act, after three unsuccessful bills, was enacted in December 1928, but Section 4(a) provided that it should not take effect unless, at the end of six months, the President should proclaim that the Colorado River Compact had been ratified by seven states, or, failing that, had been ratified by six states, including California, and, in the latter event, California's legislature had enacted a statute in terms prescribed by Congress limiting California's rights in the Colorado River.

The Upper Basin, in other words, had demanded in 1922 a seven-state compact as the price for the construction of Hoover Dam. Failing to get Arizona's ratification, they demanded (and got) a second price from California: the enactment of the Limitation Act, to avoid the possibility that California and Nevada might use all the water apportioned to the Lower Basin, and that Arizona would "raid the river" outside the Compact, i.e., establish priorities against slower Upper Basin development.

PROJECT ACT CUTS ACROSS COMPACT

The Boulder Canyon Project Act, in granting consent to a six-state Compact, cut across the seven state Compact in several particulars. Whereas the Compact

made no allocations to individual states, but only to Basins, the Project Act recognized California's right to specified quantities and required her to limit herself thereto i.e., 4,400,000 acre-feet of the waters apportioned by Article III(a), plus one-half the excess or surplus waters unapportioned by the Compact. As to the latter, whereas the Compact, in Article in (b), had recognized the Lower Basin's right to appropriate one million acre-feet of surplus, the Project Act recognized California's right to appropriate one-half of the excess or surplus, which might be more or less than one million acre-feet. The Project Act makes no specific reference to Article in (b).

The Compact did not define "consumptive use," but the Project Act did, as "diversions less returns to the river."

The Project Act, in Section 5, directed that no one should have the use of stored waters except by contract with the Secretary [of the Interior], but directed him to make contracts in accordance with the Limitation Act, and Section 6 directed him to use the reservoir, among other purposes, for satisfaction of present perfected rights in pursuance of Article VIII of the Colorado River Compact. Elsewhere, in Section 13, the statute subjected all rights of the United States and of those claiming under it to the Compact. Whereas Article IV of the Compact had declared the Colorado River to be non-navigable, Sections 1 and 6 of the Project Act directed the dam and reservoir to be used in aid of navigation and flood control.

California passed the required Limitation Act in 1929. The resulting agreement with Congress is referred to as the Statutory Compact between the United States and California, to distinguish it from the Colorado River Compact.

SIX-STATE COMPACT EFFECTIVE

The President, on June 25, 1929, proclaimed the failure of seven state ratification, and the success of six-state ratification.

The six-state Compact and the Project Act thereupon became effective, authorizing the construction of Hoover Dam and the All-American Canal, on the further condition that the beneficiaries contract in advance to repay their cost. Water and power users in California did so in 1930.

The water contracts now under attack by Arizona disposed of 5,362,000 acre-feet per annum, equal to 4,400,000 acre-feet of water available under Article in (a) of the Colorado River Compact, and about 1,000,000 of "excess or surplus" available in accord with the Limitation Act.

LITIGATION, 1930 - 1936

Arizona thereupon brought suit in the United States Supreme Court to declare the Compact and Project Act unconstitutional and to enjoin construction of Hoover Dam. She alleged just about the same interpretation of the Compact and Limitation Act that California then, and now, asserts, and Arizona opposed these documents because they did have these meanings. The United States and all six states moved to dismiss, and the Court did so, in 1931. It refused to construe the Compact, and held that the dam was constitutionally authorized.

The government commenced construction on Hoover Dam and the All-American Canal, and the Metropolitan Water District commenced construction of the Colorado River Aqueduct.

SECOND ARIZONA SUIT, 1934

Arizona sued a second time, in 1934, this time to perpetuate the testimony of the negotiators of the Colorado River Compact in support of a new interpretation of the document, to the effect that whereas Article III (b) gave the Lower Basin, as such, the right to "increase its use" by one million acre-feet per annum, the negotiators meant it for Arizona alone. The Court rejected the interpretation Arizona offered and said that the proposed testimony could never become relevant. It refused permission to file the bill.

THIRD ARIZONA SUIT, 1935

In 1935 Arizona sued a third time, asking the Court to ignore the Colorado River Compact and the Statutory Compact, and to make an equitable apportionment of the waters of the Colorado River system. All of the water contracts upon which we now rely, aggregating 5,362,000 acre-feet per annum, had long since been made. Arizona pleaded these contracts and conceded California's right to use even more water under the Limitation Act (she calculated it as 5,485,000 acre-feet), but said that the Statutory Compact was too generous to California. The Court refused leave to file the bill, saying that the United States was a necessary party.

Work on the projects continued. Hoover Dam commenced to generate power in 1937. California power users built transmission lines at a cost of over $60,000,000 to make good on their fifty-year power contracts, which obligate them to pay another $200,000,000. The Colorado River Aqueduct was completed at a cost of over $200,000,000, and commenced deliveries in 1941. The All-American Canal, costing ultimately over $70,000,000, first delivered water about the same time. Congress, of course, knew all about these projects and their size, through appropriation acts and otherwise.

EVENTS OF 1944

In 1944 three related events occurred.

Arizona belatedly passed an act purporting to ratify the Colorado River Compact, after announcing still newer interpretations of it which she knew California had not accepted and would not accept. These now included the assertion that all the III (b) water was to be found flowing in the Gila River, out of California's reach, and that Arizona's "beneficial consumptive uses" should be measured, not as California was required by the Project Act to measure hers, in terms of "diversions less returns to the river," but in terms of "man made depletion of the virgin flow of the main stream." This would give Arizona, without charge under the Compact, the right to about a million acre-feet of so-called "salvaged water."

Arizona obtained a Hoover Dam water delivery contract, of controversial validity and uncertain meaning, from Secretary of the Interior Ickes, for 2,800,000 acre-feet, which disclaimed, however, any attempt to classify this "wet water" under the Compact or to impair California's contracts.

The State Department announced the terms of a proposed treaty with Mexico. This was endorsed by Arizona and the Upper Basin states, opposed by California and Nevada. In effect, it granted 1,500,000 acre-feet per annum of Colorado River water to Mexico in return for Mexican concessions on the Rio Grande. This quantity was about twice the amount that Mexico had been able to use before Hoover Dam was built to control and salvage the flood waters under a statute which declared that such waters should be used exclusively within the United States.

The Senate ratified the treaty with eleven reservations. The Upper Basin support of the treaty was based on the assumption that its burden would fall primarily on the Lower Basin, because the "surplus," which is the first victim of Mexico under Article III (c) of the Compact, had already been appropriated in the Lower Basin and was lost to the Upper Basin anyhow. Arizona's support was secured, we assume, perhaps unjustly, on the Upper Basin's promise to support the Central Arizona Project. Nevada, in the meantime, in 1942 and 1944, secured contracts with the Secretary for 300,000 acre-feet.

THE CENTRAL ARIZONA PROJECT

The Central Arizona Project was actively before Congress from 1946 to 1952. This scheme is predicated on interpretations of the Compact which we are now contesting in the Supreme Court. The Secretary of the Interior reported that the ultimate increase in the national debt occasioned by this project would exceed two billion dollars. Nevertheless, bills to authorize it twice passed the Senate, with the assistance of the Upper Basin states.

During this period California countered with Congressional resolutions authorizing suit in the Supreme Court. The United States had been ruled to be a necessary party in the 1936 decision, and the consent of Congress is necessary

to an action joining the United States as a party unless it voluntarily intervenes. These resolutions were opposed by Arizona and the Upper Basin states, and were not enacted.

In 1952 Arizona, temporarily putting the Central Arizona Project on the shelf, brought the present suit in the Supreme Court.

THE PRESENT SUIT

In this action, which named as defendants the state of California and seven public agencies of this state which hold water storage and delivery contracts with the United States, Arizona asks the Court (1) to quiet her title to 3,800,000 acre-feet of water per annum, including all the 1,000,000 acre-feet referred to in Article III (b) of the Compact, which she says is in the Gila and not the main stream, and 2,800,000 acre-feet of the III (a) water, substantially all to be taken from the main stream; (2) to limit California to 4,400,000 acre-feet of in (a) water, less reservoir losses which would reduce California's uses to a net of about 3,800,000 acre-feet; (3) and this is new to enjoin any claim of right by California to the use of excess or surplus waters unapportioned by the Compact (California claims the right to about 1,000,000 acre-feet of water of this class); (4) to define the term "beneficial consumptive use," as used in the Compact, as meaning "depletion of the virgin flow of the main stream occasioned by the activities of man," with no charge for the use of waters salvaged by man's activities. Translated, this means that Arizona seeks to use about 5,000,000 acre-feet, measured in terms of actual quantities consumed, but to reduce the charge to 3,800,000 acre-feet, measured in terms of main stream depletion, because, says Arizona, the difference was lost, in a state of nature, by evaporation. But she would charge California with the whole quantity we consume, although, measured in terms of stream depletion, our consumptive use of 5,362,000 acre-feet would shrink to about 4,500,000 acre-feet. Arizona would not be charged with the use of water salvaged on the Gila River system by Roosevelt Dam and other dams, but California would be charged with the use of water salvaged on the main stream by Hoover Dam.

Arizona concedes to Nevada 300,000 acre-feet, and offers to assume the burden of the claims of Utah and New Mexico, whatever they may be, in order to keep those two Upper Basin states out of the suit.

NEVADA AND UNITED STATES INTERVENE

Nevada intervened in the suit, claiming a minimum of 539,000 acre-feet and a maximum of 900,000.

The United States intervened, claiming rights "as against the parties to this cause," for water to supply all the government water contracts (aggregating, in Arizona, California and Nevada, about 8,500,000 acre-feet), the Mexican Water Treaty (1,500,000 acre-feet more), plus water to supply Indian "diversion rights"

(not the same as "consumptive uses") of over 1,700,000 acre-feet in the Lower Basin. (In the whole Basin, there would probably exceed 3,000,000.) The United States denies that all its rights are subject to the Colorado River Compact, and leaves in a high degree of suspense the question of whether the Indian claims are inside or outside of the Compact apportionments. If inside, and as large as claimed, the Compact is splitting at the seams, and if outside, busted.

THE LEGAL ISSUES

Basin versus basin, the principal issues are twofold: first, how much water the Upper Basin is entitled to use; second, what water the Lower Division is entitled to receive from the Upper.

The Reclamation Bureau has planned the Colorado River Storage Project on basic assumptions which California challenges:

MEANING OF "PER ANNUM"

1. That the Upper Basin's apportionment of 7,500,000 acre-feet "per annum" means an average of that quantity, so that it may claim 9,000,000 of apportioned water in one year if it uses 6,000,000 in another. We say that "acre feet per annum" means the same as "miles per hour" in a speed limit, and that in any year in which the Upper Basin uses more than 7,500,000 acre-feet, it is using water which has long since been appropriated in the Lower Basin. This encroachment amounts to 2,000,000 acre-feet in some years, and 500,000 acre-feet on a thirty-five year average. California's uses are required by our government water contracts to be measured as we ask the Upper Basin's uses to be measured.

MEASURING USES

2. That the Upper Basin's consumptive uses are to be measured by their effect on depletion of the flow of the main stream at Lee's Ferry. We deny this and say that the method of measurement must be the one defined in the Project Act and the Mexican Water Treaty, i.e., the quantity consumed in growing crops, usually measured by diversions less returns to the river. This represents another encroachment upon us of about 500,000 acre-feet per year.

MINIMUM GUARANTEE

3. That if the Upper Basin releases 75,000,000 acre-feet in each ten-year period, it may keep and use all the rest. We say that this turns the Compact upside down: That the Upper Basin is protected against the law of appropriation only to the extent of a maximum of 7,500,000 acre-feet per annum, all the rest must come down to satisfy the Treaty and Lower Basin appropriations, and the 75,000,000 acre-feet guarantee is a minimum. The Mexican Water Treaty was

presented to the Senate on the assumption that an average of at least 90,000,000 acre-feet would be available at Lee Ferry per ten-year period, over a longtime average.

WATER CAN'T BE WITHHELD

4. That the water which escapes consumptive use in the Upper Basin may be impounded downstream at Glen Canyon or other dams, and withheld there for power generation, even though required for irrigation and domestic use in the Lower Basin, so long as 75,000,000 acre-feet are allowed to flow past Lee's Ferry in each ten-year period. We deny this and say that under Articles III (b), III(e) and iv of the Compact, water appropriated in the Lower Basin, even though excess or surplus waters, may not be withheld from us in the Upper Basin for the generation of power.

Johnson Statement: On some of these points, it was refreshing to read the candid statement of Governor Ed Johnson of Colorado, released December 20, 1954. After quoting from the reports of the Compact negotiators to Congress, and the legislatures, in 1923, Governor Johnson said:

I am compelled to keep emphasizing that whatever water is stored in the Glen Canyon and Echo Park reservoirs will be surplus to the agricultural and domestic needs of the Upper Basin, and must be delivered to the Lower Basin to satisfy the award of 1,500,000 acre-feet to Mexico and 1,000,000 acre-feet to the Lower Basin. Furthermore, should the Lower Basin require an additional supply of water for agricultural and domestic purposes, the water stored in these reservoirs must be released.

Under the Seven-state Compact the Upper states must deliver at Lee's Ferry in each ten-year period 75 million acre-feet to the Lower states and 71/2 million acre-feet to Mexico before they can use one drop of water themselves beyond what they used before the Seven-state Compact was ratified. In the current ten-year period that will leave only 3,250,000 acre-feet per year for their total use. In the previous ten-year period they would have had 4,150,000 acre-feet a year. In 1902 the Upper Basin states under this formula would have had no water at all.

Unfortunately, the project is planned by the Reclamation Bureau on just the opposite of Governor Johnson's very fair assumptions: namely, the claim of a right to deprive the Lower Basin of all waters in the main stream in excess of 75,000,000 acre-feet in each ten-year period, which is twenty-five per cent less than the expectation under the interpretations of the Compact and Project Act on which this same Reclamation Bureau relied in making water and power contracts in the Lower Basin, and in selling the Mexican Water Treaty to the Senate. This would happen at once, not in the distant future, because even if water should be accumulated in these giant upstream reservoirs only at the rate of two million acre-feet per year, all the mainstream surplus would be withheld from us in this

manner for more than twenty-four years. During this period evaporation losses would account for another 20,000,000 acre-feet and be lost for power generation at Hoover Dam.

Heavy Losses in Lower Basin: The loss of power revenues to the United States in the Lower Basin due to the construction and filling of the Upper Basin storage reservoirs, during the first twenty-five years, is estimated at about two hundred million dollars, with a corresponding loss of energy for the industries and people of Arizona, California and Nevada. Ninety-one per cent of Hoover Dam firm power goes to public agencies. And after twenty-five years, if the releases from the Upper Division were only 75,000,000 acre-feet in each ten years, as the Upper Division states claim is their only obligation, the loss would continue forever.

A distinguished engineer retained by the state of Colorado has said that if Lake Mead is not full on the day the gates are closed at Glen Canyon Dam, Lake Mead will never fill again. Right now it is about half full.

QUALITY OF WATER

5. Another issue relates to quality of water: Does Article VIII of the Colorado River Compact, which assures against the impairment of "present perfected rights," include the protection of the quality as well as the quantity of our water? We say that it does. California claims that her perfected rights at the time the Compact became effective were over 4,950,000 acre-feet per annum. The water reaching us now from the Upper Basin contains a little less than one ton of salt per acre-foot of water. It is estimated that when all the Upper Basin projects arc built, the quantity of salt will about double, and the quality of our water will deteriorate accordingly. The Upper Basin Compact negotiators said in published speeches, but unfortunately not on the face of the Compact, that their feasible transmountain diversions would not amount to more than 500,000 acre-feet per year, and Colorado's would not exceed five per cent of her uses. Parenthetically, this compares with present plans to export 3,000,000 acre-feet from the Upper Basin of the Colorado River into the Mississippi and Rio Grande watersheds; Colorado wants to export, not 5 per cent, but over 50 per cent, of the total amount she claims. We ask a study of the effect on our agriculture before great transmountain export projects are built.

THE ISSUES, STATE VS. STATE

Within the Lower Basin, a myriad of issues can be simplified, for lay discussion, down to two interrelated groups: those involved in Arizona's attack on California's rights and those involved in her own claim of title.

AS TO CALIFORNIA'S RIGHTS
DANGER TO COLORADO RIVER AQUEDUCT

1. Did the Statutory Compact mean what it said in saying that California can use one-half of the excess or surplus waters unapportioned by the Colorado River Compact, or was this an illusory promise, to mean nothing unless and until all seven states agree on an apportionment of surplus after 1963? That is what Arizona contends. If that is sustained, Arizona would strip California of 962,000 acre-feet, with the result that the Colorado River Aqueduct, whose rights are in large part junior to the old agricultural priorities, would be half dry.

HOW BIG IS SURPLUS?

2. If California is entitled to appropriate, or contract with the United States for, "surplus," how big is the "surplus" of which California can use one-half? If it is two million acre-feet or more, the California contracts are well within it. This involves the question of how the uses of water are to be measured, i.e., by diversions less return flow or by main stream depletion; whether the million acre-feet of III (b) water is a part of the excess or surplus; and the classification of uses on the Gila River, which must be added into the total chargeable to the Lower Basin under the Compact.

MEANING OF LIMITATION ACT

3. As to the 4,400,000 acre-feet, which the Limitation Act says shall be the quantity of in (a) water available "for use in California," measured by "diversions less returns to the river": Does this mean what it says, or does it mean "approximately 3,800,000 acre-feet" because, as Arizona says, the Act meant to say "44/75 of a net quantity represented by 7,500,000 minus reservoir losses"? If so, not only is the rest of the Metropolitan Water District's water gone, but California's senior agricultural priorities have less water than these districts owned in the natural flow before Hoover Dam was built. In short, California underwrote Hoover Dam and got it built, despite two filibusters and three lawsuits by Arizona, so that all the salvaged water could go to Arizona and Mexico. We don't think so.

ARIZONA CLAIMS

As to Arizona's claim of title to 3,800,000 acre-feet, which does not quite dovetail with her attack on California's rights:

THREE B WATER

1. Where did Arizona get title to the 1,000,000 acre-feet of in (b) water? She made that same claim in the second Supreme Court case, in 1934, and the Court rejected it as obviously in conflict with the face of the Compact, which gave the right to the whole Lower Basin, not just Arizona, to "Increase its use" by this million acre-feet.

GILA WATER

2. Why is the in (b) water all in the Gila and none in the main stream? Article in (a) says that the apportionment of 7,500,000 acre-feet must include all ' water to supply "any rights which may now exist" on the Colorado River system, and Article II defines the system to include the Gila. Arizona said in the 1930 Supreme Court suit that the uses on the Gila, which date back to the '70s would have to be charged to Article in (a), reducing her share of in (a) water on the main stream, and that that was why she was staying out of the Compact. When did Arizona's oldest rights, supplied in part by Roosevelt Dam, built in 1910, change their color from "rights which may now exist," under Article in (a) and "present perfected rights" under Article VIII, to the junior classification of an "increase of use" under Article in (b)?

USES ON THE GILA

3. What is the magnitude of the uses on the Gila to be charged under the Compact? The measured inflow into the Phoenix area exceeds 2,000,000 acre-feet per year, and is all used. Why isn't this to be measured as the Mexican Water Treaty and the Boulder Canyon Project Act spell out, i.e., in terms of actual quantities consumed? If Arizona's actual use of 2,000,000 acre-feet is to be devalued to 1,000,000, as she claims, by the "stream depletion" method, why isn't California entitled to the same rule? And if no charge at all is to be made under the Compact for water salvaged on the Gila, why not the same rule for California on the main stream?

ARIZONA TITLE

4. Where did Arizona get title to 2,800,000 acre-feet of in (a) water? Not on the face of the Compact. Not by agreement with California. And why all on the main stream? Arizona says it is very simple: Article in (d) guarantees the Lower Basin 75,000,000 acre-feet at Lee's Ferry; this is ten times 7,500,000; Article in (a) apportions 7,500,000 per year to the Lower Basin; therefore the one is the other; therefore all in (a) water is found flowing at Lee's Ferry. Next, she says, California is limited to 4,400,000 acre-feet of in (a) water by the Limitation Act; Arizona concedes 300,000 to Nevada; this leaves 2,800,000 acre-feet of in (a) water on the main stream to Arizona.

Q. E. D. What is wrong with this? Everything. Where is the water for Mexico? The 75,000,000 acre-feet guaranteed under in (d) is a supply; Article in (a) is an apportionment of consumptive use. Doesn't the Lower Basin get any credit for return flow? If it does, the diversion of 75,000,000 acre-feet on the main stream won't result in the consumptive use of 7,500,000 acre-feet per annum. Moreover, if the old rights on the Gila are chargeable to Article in (a), obviously the Lower Basin cannot claim that much in (a) water twice, once on the Gila and again at

Lee's Ferry, even though the uses on the Gila are valued on the depletion theory at only 1,000,000 acre-feet per annum. If valued at the true quantity consumed, the discrepancy is greater. On either measurement, the Upper division ought to get credit for part of the 75,000,000 acre-feet as a delivery of excess or surplus waters available in part for satisfaction of the Mexican burden. But on Arizona's argument, the Upper division, under Article in (c), must automatically add enough water to meet half the Mexican Treaty burden, because the 75,000,000 delivered under Article in (d) contains no excess or surplus; it is all apportioned under Article in (a).

Arizona vs. Upper Basin. This seems to indicate some degree of conflict between Arizona and the Upper Basin as to the burden of the Mexican Water Treaty. It would be painful to see such a disagreement develop among the allies who put over that Treaty, but we are prepared to sustain that discomfort as philosophically as possible.

ARIZONA COMPACT CLAIMS QUESTIONED

5. Finally, how can Arizona claim rights under the California Limitation Act which was enacted as a condition to a six-state Colorado River Compact, to take effect only if Arizona failed to ratify before June 25, 1929 and in the same breath claim rights as a party to a seven state compact? If she had ratified in time, before June 25, 1929, the Limitation Act, by its terms, would never have taken effect. Can she get a better position by ratifying fifteen years after the President proclaimed the time closed? We would like to find out.

THE IMMEDIATE FUTURE

These pressures on California's water supply, from the Upper Basin and from Arizona, would not exist if the standards of project feasibility which Congress applied in determining California's share of the Colorado River were applied to the rest of the basin. We were obliged by the Boulder Canyon Project Act to promise, in advance of any appropriation, to repay every cent of the federal investment, and there are no write-offs, even for flood control. These pressures would not exist if Congress limited the subsidy to the Upper Basin irrigation project and the Central Arizona Project to 50 per cent, or even 75 per cent, of the investment. The subsidy required by the proposed irrigation projects in the Upper Basin is over 85 per cent. As to the Central Arizona Project, the amount the farmers can pay barely equals operation and maintenance, plus about three cents per acre per year to apply on an irrigation investment by the federal taxpayer of over $300,000,000. The gross, repeat gross, annual power and water revenues of the Central Arizona Project are less than simple interest on the total power and irrigation investment.

APPORTIONMENT NOT TREASURY LIEN

We say that the Colorado River Compact's apportionment to the Upper Basin of 7,500,000 acre-feet per annum was not a lien on the Federal Treasury for subsidies needed for infeasible projects costing over $1,000 per acre, and the same is true with respect to Arizona's share of the Lower Basin's water.

The Dixon-Yates contract for the supply of energy by a private company in the TVA area has been attacked as implying the ultimate destruction of TVA. Its immediate effect is not to reduce TVA's present power production, but to limit its growth. The Boulder Canyon Project is in much more imminent peril than is TVA.

Essentially, the proposed Colorado River Storage Project implies the destruction of about a third of the value of the Boulder Canyon Project, in terms of water and power production, to enable construction of a new project in the Upper Basin which will generate power at twice the cost and irrigate lands at many times the cost of the power and irrigation furnished by Hoover Dam.

We say that the water and power users of California, who have invested more than three quarters of a billion dollars upon the faith of their agreements with the federal government, are entitled to the protection of their stake in the Colorado River, both in Congress and the Supreme Court, against the fantastic projects proposed in the Upper Basin and in Arizona.

The true peril is not merely to California, Arizona and Nevada, but to the people of the United States, to whom Hoover Dam belongs and who would be taxed a billion and a half dollars to build the Colorado River Storage Project to withhold the waters on which the Boulder Canyon Project is dependent. "