Chapter X

THE HOOVER DAM WATER CONTRACTS

A. Statutory Background

The provisions of the Boulder Canyon Project Act controlling the water contracts have been summarized in chapter IV (E). In brief, section 5 authorized the Secretary of the Interior to enter into contracts for the storage and delivery of water, and forbade anyone to use the stored water except by such a contract. Section 4 (a) authorized a compact among Arizona, California, and Nevada. Section 8 (b) subjected the Secretary's contracts to the terms of any compact among these States if approved by Congress before January 1, 1929, otherwise the compact, if made later, to be subject to the Secretary's prior contracts. Sections 8 (a), 13 (b), and 13 (c) subjected the United States and all its contractors to the Colorado River Compact. Section 6 directed that the dam and reservoir be used for various purposes, including satisfaction of present perfected rights in pursuance of article VIII of the compact. That article, in turn, it will be recalled from chapter II (C), directed that whenever storage capacity of 5,000,000 acre-feet should be provided, claims of rights by appropriators or users in the lower basin against appropriators or users in the upper basin should attach to waters stored, not in conflict with article III.

The period which was granted by section 8 (b) of the act to the States of the lower basin, to negotiate a compact which should control the water contracts authorized by section 5, expired January 1, 1929. The 6-month period allowed by section 4 (a) for consummation of a seven-State compact expired June 25, 1929, on proclamation of President Hoover on that date (appendix 503).

B. Negotiations Among the States

Not only were the States of the lower division unable to reach an agreement by January 1, 1929, the date contemplated in section 8 (b) of the Project Act, but the subsequent efforts made while the Department withheld negotiation of the power and water contracts were likewise fruitless. Interstate conferences were held in February, March, April, May and June, 1929, without results. On June 25, 1929, President Hoover proclaimed the Project Act in effect and the compact operative as a six-State agreement. On November 13, 1929, at the close of the hearings on power applications, the Secretary announced that no action would be taken until the three lower-basin States had again attempted a compact; meetings were accordingly held again in January and February 1930, but without result.[1] For that matter, no agreement has been reached to this date.

C. The Water Contracts: In General

(1) *Necessity for early conclusion of water contracts.*—The studies of the Reclamation Bureau on the disposition of Boulder Canyon energy were based on the assumption that a substantial block of the firm power, perhaps as high as 50 percent, would necessarily be allocated to the Metropolitan Water District of Southern California for pumping into and in its aqueduct.[2] As negotiation of the power contracts, initiated finally in February 1930, proceeded, it became apparent that the District could not enter into a firm contract for energy over a 50-year period, limited to pumping of water in its aqueduct, unless it held a water contract. Similarly, it became apparent that if the Secretary was to carry out the mandate of the Project Act for the construction of the All-American Canal, involving assumption by the Imperial Irrigation District of a very large repayment obligation, such a contract would involve questions of water storage and delivery under section 5, as well as repayment under section 1 and section 4 (b) of the act.

Accordingly, it became necessary to proceed with water contracts with those agencies which were required by the Project Act to assume the repayment obligation for the project, without further delay, or else indefinitely postpone the project. It was contemplated that storage and delivery contracts would be entered into, governing the deliveries in Arizona and Nevada, as well as California, but inasmuch as the Metropolitan Water District and the Imperial Irrigation District, two entities whose commitments were essential to meet the revenue requirements with respect both to Hoover Dam and the All-American Canal, were located in California, the solution of the California water-contract problem necessarily preceded the submission of the first estimates for construction appropriations.

(2) *Available data as to water supply.*—In the absence of a determination of water rights in the lower basin by interstate agreement or Supreme Court adjudication, either of which might take several years (and neither of which, in fact, has been accomplished to this date), the contracts proposed for these conflicting States were drawn in the light of the then-existing knowledge of the water supply, and the relative contentions of the States at that time.

[1] See ch. VI (B).

[2] See memorandum of Commissioner Mead, January 10, 1930 (appendix 37, first edition); tentative allocation of October 21, 1929 (appendix 33, first edition). The water contracts were negotiated under the direction of Secretary Wilbur and Commissioner Mead, by Northcutt Ely, R. J. Coffey, and E. B. Debler.

As to water supply, the studies upon which the repayment capabilities of Hoover Dam were calculated were those contained in "Hydrology of Boulder Canyon Reservoir," by E. B. Debler (1929).[3] These showed the following estimates:

Development above Boulder Canyon

	1928	1938	1988
Irrigated area ... acres	1,717,000	2,040,000	3,368,000
Capacity of irrigation reservoirs ... acre-feet	662,000	...	2,933,000
Capacity of power reservoirs ... do	10,000	...	8,100,000
Transmountain diversions ... acre-feet annually	116,000	180,000	621,000
Surface area of irrigation reservoirs ... acres	27,800	60,000	86,400
Surface area of power reservoirs ... do	2,000		172,000
Mean depletion for irrigation consumptive use, transmountain diversions and reservoir losses ... acre-feet annually	2,760,000	3,481,000	6,595,000
Mean annual inflow to Boulder Canyon ... acre-feet	15,730,000	15,009,000	11,895,000

Debler, "Hydrology of Boulder Canyon Reservoir," appendix 29 to "The Hoover Dam Contracts," first edition p. 477.

(3) *Assumptions as to demand.*—

(*a*) THE MEXICAN BURDEN. With respect to the anticipated Mexican burden, the United States section of the International Water Commission, of which Commissioner of Reclamation Elwood Mead was chairman, had notified the Mexican section of the Commission (August 30, 1929) that the United States:

> * * * proposed, as an equitable division of the waters of the Colorado, to deliver to Mexico the greatest amount which had been delivered to irrigators in that country from the stream in any one year. That year was 1928, during which time Mexican irrigators received 750,000 acre-feet of water. The certainty of delivery of this water by the United States was conditioned on the construction by the United States of Boulder Dam within its territory, until which time the existing unregulated flow of the river must continue.[4]

This was followed by the formal report of the Commission, March 22, 1930, stating that:

> * * * the Commission decided to adjourn without date and to report the situation to their respective governments for such further action as the proper authorities might regard advisable to bring the questions to an authoritative determination.[5]

So far as this Government was concerned, it was not prepared at that time to concede more water to Mexico than Commissioner Mead had offered.[6]

(*b*) CONFLICTING CLAIMS OF ARIZONA AND CALIFORNIA. The status of the controversy between Arizona and California at that time,

[3] See appendix 29 to the first edition.

[4] Report of the American section of the International Water Commission, United States and Mexico (H. Doc. 359, 71st Cong., 2d sess., 1930), p. 5.

[5] Id., p. 29.

[6] See letter of former President Hoover to Senator Hawkes of New Jersey (S. Doc. 32, 79th Cong., 1st sess.), printed in ch. XIV (K).

reflected in the interstate conferences of January-February 1930, was reported by the Federal mediator, Hon. William J. Donovan, to Secretary Wilbur, February 14, 1930,[7] as follows:

Then there was submitted the following proposal:

1. Gila and all Arizona tributaries out, except return flow.
2. From the main stream water following divisions to be made:

3–A:	
A. California	4, 400, 000
B. Arizona	2, 800, 000
C. Nevada	300, 000
3–B: 1,000,000	50–50

Fifty-fifty main stream surplus.

Fifty-fifty Mexican burden—main stream.

Any shortage in main stream without preference or priority.

Reduction from Santa Fe and Washington, 200,000.

Arizona urged the adoption of this suggestion. It was pointed out that it followed the theory of compromise indicated in the Swing-Johnson bill, that all discussions brought us back to such a compromise, and that its embodiment in the bill was the result of many weeks of discussion by the congressional representatives of the States concerned.

In order to reduce this proposal to figures a table was prepared and submitted to Arizona and California. This table was based on the assumption of engineers that 10,500,000 acre-feet of water would pass through Boulder Canyon Dam per annum. If that assumption were correct, then, it was said that there would be below the dam 9,400,000 acre-feet of water for diversion by all other interests except the Metropolitan Water District, which it was estimated would need 1,100,000 acre-feet at the dam.

The following schedule of diversions for the 10,500,000 acre-feet was suggested:

	3-A	3-B	Surplus	Total
California	4, 400, 000	500, 000	1, 000, 000	5, 900, 000
Arizona	2, 800, 000	500, 000	1, 000, 000	4, 300, 000
Nevada	300, 000			300, 000
	7, 500, 000	1, 000, 000	2, 000, 000	10, 500, 000

Assumed Mexican burden of 800,000 acre-feet divided 50-50 between Arizona and California.

On this set-up, this would leave diversions out of physical water present in the main stream, as follows:

	Acre-feet
California	5, 500, 000
Arizona	3, 900, 000
Nevada	300, 000
Mexico	800, 000
	10, 500, 000

[7] See report of Col. William J. Donovan to Secretary of the Interior Ray Lyman Wilbur, February 14, 1930, Congressional Record, June 26, 1930, pp. 12203, 12204.

California's counterproposal, as reported by Colonel Donovan, was: [8]

On Saturday, February 8, at California's suggestion, a conference was held between the States of Arizona and California. At this conference, California submitted the following proposal:

"California, anxious to make one more effort to bring about an agreement, makes the following proposal for the division of the waters of the lower Colorado River system:

"To Nevada, 300,000 acre-feet of water.

"Utah and New Mexico to have all water necessary for use on areas of those States lying within the lower basin.

"Arizona to have all waters of the Gila system and her other tributaries, excepting such water as reaches the main stream, also her present uses from the main stream, within the State.

"California to have water now diverted in California for agricultural and domestic use in California.

"Balance of water in main stream to be divided one-half to Arizona and one-half to California.

"Mexican obligations to be met one-half by Arizona and one-half by California from main-stream water.

"All other points to be left to determination of the Secretary of the Interior, under the act."

Each State objected to the other's proposal.[9]

(*c*) QUANTITIES APPARENTLY AVAILABLE FOR CONTRACT. The contracts authorized by Secretary Wilbur's regulations of 1930–31, as hereinafter summarized, are within the foregoing limits,[10] aggregating 5,362,000 acre-feet for California and 2,800,000 acre-feet for Arizona, subject in each case to availability thereof under the Colorado River Compact and the Boulder Canyon Project Act.

[8] Congressional Record, June 26, 1930, p. 12205.

[9] Id., pp. 12204–12206. Commissioner Ward of Arizona was quoted by Colonel Donovan (id., p. 12205) as translating California's proposal: "With 8,500,000 acre-feet available, the division would be as follows: California, 5,400,000; Arizona, 2,800,000; Nevada, 300,000," assuming present diversions in California to be 2,850,000 acre-feet, and in Arizona 250,000 acre-feet.

[10] The California contracts were before the United States Supreme Court in *Arizona* v. *California* et al. (298 U. S. 558), appendix 1304 herein. In that case, the Court, adopting, for the purpose of the decision, figures used by Arizona in her bill of complaint (art. XVIII, "California's Maximum Legal Rights," p. 25–27), said (p. 563–564):

"The compact was duly ratified by the six defendant States, and the limitation upon the use of the water by California was duly enacted into law by the California Legislature by act of March 4, 1929, supra. By its provisions the use of the water by California is restricted to 5,484,500 acre-feet annually.

"The Secretary of the Interior, acting under authority of sec. 5 of the Boulder Canyon Project Act, has entered into contracts with California corporations for the storage in the Boulder Dam Reservoir and the delivery, for use in California, of 5,362,000 acre-feet of water annually."

Arizona asked that the project act be ignored and that an equitable apportionment be made by the Court. The Court refused to take jurisdiction in the absence of the United States as a necessary party.

As stated in the first edition (p. 42):

> * * * inasmuch as an entirely new factor, i. e., the building of Hoover Dam and providing of 30,000,000 acre-feet of storage, has intervened after the execution of the Colorado River Compact, there is every reasonable assurance that water adequate to supply all of Arizona's and California's needs can be supplied under these contracts, leaving to the future the settlement of a question which in practice will probably never arise: The technical classification of the water discharges under various provisions of the compact.

The effect of subsequent changes in available data is referred to in chapters X (G), and XIII (E), infra.

In the following pages appear a summary of the California, Arizona. and Nevada water contracts. The All-American Canal contracts are separately discussed in chapter XI.

D. The California Storage Contracts

(1) *Conflict among California applicants.*—The department was faced by a serious internal conflict among California claimants to waters of the Colorado River. Plans had been definitely made, or were under consideration, for irrigating lands in California from the Colorado River, aggregating nearly 1,500,000 acres, and involving an estimated annual use of Colorado River water of over 6,000,000 acre-feet.[11] In general, these fell into two groups, the agricultural interests on the one hand, and the Metropolitan or Coastal Plain areas on the other.

(2) *Agreement of February 21, 1930 (appendix 1001).*—On February 21, 1930, an agreement was entered into between representatives of the Metropolitan group on the one hand, and the agricultural group on the other.[12] Following the pattern of the Colorado River compact, this agreement made no attempt to allocate priorities internally within each group, but made the following general division:

	Acre-feet per annum
Class A water:	
Agricultural groups	3, 850, 000
Metropolitan district	550, 000
Total	4, 400, 000
Next 550,000 acre-feet per annum, available for California use: Metropolitan district	550, 000
All water in river available for California use in excess of above 4,950,000 acre-feet per annum: Agricultural group	All

The agreement recited:

> We recognize that California has been so limited as to make infeasible otherwise feasible projects including several hundred thousand acres of land.

[11] See figures cited by Senator Hiram Johnson, Congressional Record, December 7, 1928 (70th Cong., 2d sess.), p. 236 et seq. Cf. "The Colorado River," H. Doc. 419, 80th Cong. (interim report of the Secretary of the Interior, 1947), table CII, p. 172.

[12] Appendix 1001.

(3) *Regulations of April 23, 1930 (appendix 1004) and contract with Metropolitan Water District of April 24, 1930 (appendix 1007).*—On April 23, 1930, the Secretary promulgated regulations in very general form (appendix 1004). On April 24, 1930, in advance of execution of the power contracts (appendix 602), an agreement was signed with the Metropolitan Water District (appendix 1007), providing for the storage and delivery of water up to 1,050,000 acre-feet annually. This was somewhat less than the quantity of 1,100.000 acre-feet recognized by the internal agreement of February 21, 1930 (appendix 1001), a margin being left for certain areas which at that time had not joined the Metropolitan Water District. The Metropolitan Water District contract was subsequently amended (appendix 1008) to accord with a further agreement among California claimants, as indicated in chronological order below.

(4) *Necessity for further allocation.*—Negotiations between the Interior Department and Imperial Irrigation District respecting the All-American Canal contract meanwhile proceeded. During these negotiations the necessity for a more definite internal allocation of the water claimed by California became manifest, since the "agricultural" allocation included, en bloc, the Imperial Irrigation District, the Coachella Valley County Water District, and the Palo Verde Irrigation District. Some dispute had also arisen between the Metropolitan Water District and the agricultural group as to the relative priorities of the water allocated to each group within the so-called class A block.

(5) *Request by the Secretary for recommendations by the State (appendix 1002).*—On November 5, 1930, Secretary Wilbur wrote the Imperial Irrigation District and all other California agencies who might contract with the United States, requesting that they ask the cooperation of the State in effecting an allocation which they could join in recommending to the Secretary of the Interior. From November 5, 1930, until August 18, 1931, conferences were held in California under the chairmanship of Mr. Edward Hyatt, State engineer.

(6) *Seven-party water agreement of August 18, 1931 (appendix 1003).*—On August 18, 1931, the seven principal California claimants to waters of the Colorado River executed an agreement, which was approved by the State Division of Water Resources and submitted as a recommendation to the Department of the Interior for inclusion in all California water contracts.

This agreement provides that—

> The waters of the Colorado River available for use within the State of California under the Colorado River compact and the Boulder Canyon Project Act

shall be apportioned in amounts and with priorities stipulated.

The following table summarizes briefly the system of priorities set up in this agreement:

TABLE 4.—*California water priorities*

Priority No.	Agency and description	Annual quantity in acre-feet
1	Palo Verde irrigation district—104,500 acres in and adjoining existing district	3,850,000
2	Yuma project (California division)—not exceeding 25,000 acres	
3	(a) Imperial irrigation district and lands in Imperial and Coachella Valleys to be served by All-American Canal	
	(b) Palo Verde irrigation district—16,000 acres of adjoining mesa	
4	Metropolitan Water District, city of Los Angeles, and/or others on Coastal Plain	550,000
5	(a) Metropolitan Water District, city of Los Angeles, and/or others on Coastal Plain	550,000
	(b) City and/or county San Diego	112,000
6	(a) Imperial irrigation district and lands in Imperial and Coachella Valleys to be served by All-American Canal	300,000
	(b) Palo Verde irrigation district—16,000 acres of adjoining mesa	
	Total	5,362,000

A seventh priority with respect to all remaining water available for use in California was apportioned for agricultural use in the Colorado River Basin in California as shown on map No. 23,000 of the Department of the Interior, Bureau of Reclamation.

(7) *Recommendation by the State.*—The agreement of August 18, 1931 (appendix 1003), was approved by the State Division of Water Resources and submitted to the Secretary of the Interior with the recommendation of the State engineer that this system of priorities be incorporated as a uniform clause in all California water contracts. Article 2 of the agreement had requested the Division of Water Resources to amend applications on file with that office under the laws of California, and to proceed with the processing of such applications in accordance therewith.

(8) *General regulations of September 28, 1931 (appendix 1005).*—The Secretary of the Interior placed the seven-party agreement of August 18, 1931 (appendix 1003) in effect by general regulations dated September 28, 1931. However, in all of these agreements, the water-delivery article was preceded by substantially uniform language, as follows:

> The United States shall, from storage available in the reservoir created by Hoover Dam, deliver to the District each year at a point in the Colorado River immediately above [specifying the point of diversion] so much water as may be necessary to provide the District a total quantity, including all of the waters diverted for use by [or in some instances "for use within"] the District from the Colorado River, in the amounts, and with priorities in accordance with the recommendation of the Chief of the Division of Water Resources of the State of California, as follows (subject to availability thereof for use in California under the Colorado River Compact and the Boulder Canyon Project Act) * * *

This "subject to availability" clause is carried forward in substantially the same form in all of the California water contracts, referred to below, the Nevada contracts (appendixes 1018–1019), and the Arizona contract (appendix 1016).

(9) *Summary of California water contracts.*—Water contracts of the California agencies conforming to the seven-party agreement of August 18, 1931 (appendix 1003), and under the general regulations of September 28, 1931 (appendix 1005), approving that agreement were executed as follows:

(1) METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, September 28, 1931 (appendix 1008): This was supplemented October 4, 1946 (appendix 1012), by an agreement between the United States and the Metropolitan Water District, providing for the consolidation of the Metropolitan and San Diego water allocations, in consequence of the decision to include the San Diego area in the Metropolitan Water District, and by an agreement of March 14, 1947 (appendix 1014), on the same subject between the Metropolitan Water District and the City of San Diego.

(2) IMPERIAL IRRIGATION DISTRICT (the All-American Canal contract), December 1, 1932 (appendix 1106): This was supplemented by an agreement February 14, 1934 (appendix 1107), between the Imperial Irrigation District and the Coachella Valley County Water District.

(3) PALO VERDE IRRIGATION DISTRICT, February 7, 1933 (appendix 1006).

(4) THE CITY OF SAN DIEGO, February 15, 1933 (appendix 1009): This was supplemented by an agreement October 2, 1934 (appendix 1111), between the United States and San Diego, contemplating the delivery of water to San Diego via the All-American Canal. This plan was superseded by the decision to construct an aqueduct from San Diego to connect with the Metropolitan Water District aqueduct, under Navy auspices. (See contracts dated October 17, 1945 (appendix 1010), September 23, 1946 (appendix 1011), October 4, 1946 (appendix 1012), October 29, 1946 (appendix 1013), and March 14, 1947 (appendix 1014).)

(5) AGREEMENT OF COMPROMISE between the Imperial and Coachella districts, dated February 14, 1934 (appendix 1107).

(6) COACHELLA VALLEY COUNTY WATER DISTRICT (an All-American Canal contract), October 15, 1934 (appendix 1108), supplemented by an agreement dated December 22, 1947 (appendix 1110), re distribution works.

Items 2, 4, 5, and 6, relating to the All-American Canal, are discussed in more detail in chapter XI.

No contract has been entered into between the United States and the Yuma project in California, relating to priority No. 2 under the seven-party agreement. Nor has any contract been entered into between the United States and the City of Los Angeles, referred to in priorities 4 and 5, inasmuch as the contract between the United

States and the Metropolitan Water District of Southern California (appendix 1008) comprehends the rights recognized jointly (but not cumulatively) in the District and the City by the terms of the seven-party agreement.

E. The Arizona Water Contract

(1) *Offer by Secretary Wilbur.*—In early 1932 Secretary Wilbur submitted to Arizona, through members of the congressional delegation, a proposal for a water-delivery contract with that State. These informal discussions having produced no result, the offer was promulgated in the form of general regulations, February 7, 1933 (appendix 1015).

The following explanation is reprinted from the first edition (pp. 41–42):

It has been the Secretary's policy to establish a firm and equitable basis for future use of water not only in California but also in Arizona, despite the absence of an agreement or adjudication.

The Department has undertaken in four particulars to preserve for Arizona an opportunity to use the waters which Hoover Dam will make available. The task has been complicated by the confusion left over from the days in which Arizona was bitterly opposed to the entire project.

First, 18 percent of Hoover Dam's firm energy was reserved for use in Arizona. This amounts to the equivalent of about 117,000 continuous horsepower.

Second, the Parker Dam contract with the Metropolitan Water District reserves one-half of the power privilege, amounting to about 40,000 horsepower, for use in Arizona, without contribution by that State or the United States to the capital cost of the dam. Freed of capital investment in the dam, this power will rank among the cheapest power projects in the United States. In addition, the Metropolitan Water District has been required to undertake to transmit Arizona's Hoover Dam power at cost from Hoover Dam to Parker Dam to the extent that excess capacity of the district is available.

Third, in the All-American Canal contract the privilege has been reserved to the United States of using that dam as a pumping basin or diversion heading for irrigation of Arizona lands. The Hoover and Parker power will make feasible the irrigation of the first units of Arizona's proposed Gila project by pumping from Imperial Dam, as well as permit the reclamation of the Colorado River Indian Reservation near Parker.

Fourth, the Department has promulgated regulations designed to assure a water supply to Arizona. These regulations are included as an appendix in this volume. They outline the form of a Hoover Dam water-delivery contract which the United States will enter into with Arizona upon certain conditions. Briefly, the contract calls for the delivery of 2,800,000 acre-feet annually, in return for which Arizona undertakes to make no interference with the diversions by other Government contractors. This quantity of water is adequate for all of the Arizona projects below Hoover Dam, and is without prejudice to the power of the parties to contract in the future for delivery of additional water required. As in the case of the California water contracts, the undertaking relates simply to acre-feet of water stored by Hoover Dam, without earmarking the discharges under articles III–A or III–B of the Colorado River compact, or as surplus water. The proposed contract recites the controversy between the two States over the quantity of water available to each under the various provisions of the Project Act, and makes no attempt to adjust priorities as between the two States. But inasmuch as an entirely new factor, i. e., the building of Hoover Dam and providing of 30,000,000 acre-feet of storage, has intervened after the execution of the Colorado River compact. there is every reasonable assurance that water adequate to supply all of Arizona's and California's needs can be supplied under these contracts, leaving to the future the settlement of a question which in practice will probably never arise: The technical classification of the water discharges under various provisions of the compact. The proposed water contract with Arizona is specifically stated to be without prejudice to the States of the upper basin, and relates solely to water present in the lower basin. Arizona is thus offered an assurance of 2,800,000 acre-feet of main-stream water, and given an opportunity to look to the United States rather than to an agreement with the other States for a delivery of that quantity of water, in return for an agreement not to interfere with diversions by her sister States.

Article 10 (c) of the contract authorized by these regulations provided:

(c) It is recognized by the parties hereto that differences of opinion may exist between the State of Arizona and other contractors as to what part of the water contracted for by each falls within Article III (a) of the Colorado River Compact, what part within Article III (b) thereof, what part is surplus water under said compact, what part is unaffected by said compact, and what part is affected by various provisions of section 4 (a) of the Boulder Canyon Project Act. Accordingly, while the United States undertakes to supply, from the regulated discharge of Hoover Dam, waters in quantities stated by this contract as well as contracts heretofore or hereafter made pursuant to regulations of April 23, 1930, amended September 28, 1931, this contract is without prejudice to relative claims of priorities as between the State of Arizona and other contractors with the United States, and shall not otherwise impair any contract heretofore authorized by said regulations.

Immediately following promulgation of these regulations, the Governor of Arizona asked that negotiations be resumed. During the limited period remaining before the change of administration, March 4, 1933, discussions took place in Phoenix between representatives of the State and representatives of the Secretary without reaching any conclusion.[12]

On June 29, 1933, Secretary Ickes wrote Hon. B. B. Moeur, Governor of Arizona, withdrawing the regulations.[13]

(2) *Negotiations, 1934–44.*—From time to time from 1934 to 1939 representatives of the State of Arizona attempted to secure from the Secretary of the Interior a State-wide contract earmarking a "fund of water" for later disposition to the projects in Arizona. Hearings and conferences were held on several occasions, but with no result, in view of the objections from other States in the basin to various provisions proposed by Arizona.

[12] A draft of the proposed contract had been submitted to Arizona by the Department via Congressman Lewis Douglas of Arizona several months previously.

[13] Secretary Ickes referred to Governor Moeur's telegram of February 16, 1933, stating that the proposed contract was not satisfactory to Arizona.

In 1939 the Arizona Legislature passed an act [14] setting out verbatim Arizona's version of an acceptable compact among Arizona, California, and Nevada (differing from that proposed in section 4 (a) of the Project Act, among other respects, by prefixing to the reference to the Gila River the words, "in addition to the water covered" by Article III (a) of the Colorado River Compact and by surplus). This statute also conditionally ratified the Colorado River Compact, the condition being the acceptance by California and Nevada of the compact proposed by Arizona. Neither State accepted, and the Arizona statute expired by its own limitation.

In 1943 Arizona resumed negotiations with the Department. A contract was drafted. Objections were filed by California.

(3) *Hearings and decision. 1944.*—Hearings were held by Secretary Ickes in February 1944. On February 9, 1944, the Secretary, after making amendments designed to meet the California objections, executed the contract that appears herein as appendix 1016. On so doing he issued an explanatory memorandum, printed herein as appendix 1017.

(4) *Terms of contract of February 9, 1944 (appendix 1016).*—The water contract of February 9, 1944, between the Secretary and the State of Arizona provides, in general, for the delivery by the United States from Hoover Dam storage of certain maximum quantities of water, subject to availability thereof, under the project act and the compact (art. 7 (a)), such deliveries to be made to users in Arizona who may contract with the Secretary for the same (art. 7 (1)). The quantities referred to are 2,800,000 acre-feet, unclassified (art. 7 (a)), plus one-half of the excess or surplus "to the extent that such water is available for use in Arizona under said compact and said act" (art. 7 (b)), minus the equitable share of Nevada (art. 7 (f)), New Mexico and Utah (art. 7 (g)), in such surplus, minus also the quantity of water diverted by Arizona above Lake Mead (art. 7 (d)), and reservoir losses (art. 7 (d)). With reference to the contracts theretofore made by the Secretary for use in Nevada (ch. X (F), infra) and California (ch. X (D), supra), the Arizona contract provides—

Article 7 (f):

Arizona recognizes the right of the United States and the State of Nevada to contract for the delivery from storage in Lake Mead for annual beneficial consumptive use within Nevada for agricultural and domestic uses of 300,000 acre-feet of the water apportioned to the Lower Basin by the Colorado River Compact, and in addition thereto to make contract for like use of 1/25 (one-twenty-fifth) of any excess or surplus waters available in the Lower Basin and unapportioned by the Colorado River Compact, which waters are subject to further equitable apportionment after October 1, 1963 as provided in Article III (f) and Article III (g) of the Colorado River Compact.

[14] Act of March 3, 1939 (Arizona Laws, 1939, ch. 33).

Article 7 (h):

Arizona recognizes the right of the United States and agencies of the State of California to contract for storage and delivery of water from Lake Mead for beneficial consumptive use in California, provided that the aggregate of all such deliveries and uses in California from the Colorado River shall not exceed the limitation of such uses in that State required by the provisions of the Boulder Canyon Project Act and agreed to by the State of California by an act of its Legislature (Chapter 16, Statutes of California of 1929) upon which limitation the State of Arizona expressly relies.

As to the status of the waters to be delivered to Arizona, article 10 provides:

Neither Article 7 nor any other provision of this contract, shall impair the right of Arizona and other States and the users of water therein to maintain, prosecute or defend any action respecting, and is without prejudice to, any of the respective contentions of said States and water users as to (1) the intent, effect, meaning and interpretation of said compact and said act; (2) what part, if any, of the water used or contracted for by any of them falls within Article III (a) of the Colorado River Compact; (3) what part, if any, is within Article III (b) thereof; (4) what part, if any, is excess or surplus waters unapportioned by said Compact; and (5) what limitations on use, right of use and relative priorities exist as to the waters of the Colorado River system; provided, however, that by these reservations there is no intent to disturb the apportionment made by Article III (a) of the Colorado River Compact between the Upper Basin and the Lower Basin.

The contract was to be of no effect unless unconditionally ratified by act of the Arizona Legislature within 3 years and, further, unless within the same period the Colorado River Compact should be unconditionally ratified by Arizona (art. 14).

(5) *Approval by Arizona Legislature.*—The Arizona contract, redrafted in accordance with the Secretary's announcement of February 9, 1944, was executed as of the same date, and approved by act of the Arizona Legislature of February 24, 1944 (appendix 1016). The Colorado River Compact was ratified by the Arizona Legislature the same day (appendix 230).

F. The Nevada Water Contracts

(1) *Contract of March 30, 1942 (appendix 1018).*—In preparation for the furnishing of water for the important plants built during the war near Las Vegas, Nev., the Secretary of the Interior and the State of Nevada, through its Colorado River Commission, entered into a contract on March 30, 1942, for the delivery of not to exceed 100,000 acre-feet per year to the State for consumptive use, but not for the generation of electric power.

The agreement was subject to the availability of such water for use in Nevada under the provisions of the compact and the Boulder Canyon Project Act. The contract stipulated a charge of 50 cents per acre-foot, in consequence of the reduction in power output at Hoover Dam occasioned by this diversion from Lake Mead.

(2) *Contract of January 3, 1944 (appendix 1019)*.—In a supplemental contract dated January 3, 1944, between the same parties, the agreement of March 30, 1942, was amended by increasing the quantity from 100,000 to 300,000 acre-feet.

G. *Effect of Changes in Data*

The power and water contracts previously referred to were based, as stated in chapter X (A), upon studies of the water supply made in 1929,[15] which in turn were based on the best available data of record for the period prior thereto, beginning in 1897, and available in more adequate form from 1922. However, beginning in 1930–31, almost concurrently with the execution of the California power and water contracts, and continuing with interruptions to date, a period of drought has prevailed, as compared with the period of record on which the projects estimates were based. C. C. Elder, hydrographic engineer, Metropolitan Water District of Southern California, states:

> Compared with the mean annual inflow of 15,730,000 acre-feet [see Mr. Debler's table above, quoted from appendix 29 to the first edition] for the 1897–1929 period, the 1930–47 mean inflow (present depletion) is 12,120,000 acre-feet or 77 percent as great; the 1931–40 mean is 10,790,000 acre-feet or 68 percent; and the minimum year 1934 had but 4,273,000 acre-feet or 27 percent. From 1930 to date only 4 years out of 18 have been above normal and only 1 had a run-off in excess of 10 percent above normal.

The legal effect of these changes in estimates of supply, plus the increase in demand occasioned by the Mexican water treaty of 1945, which guaranteed Mexico twice the quantity offered in 1930,[16] remains to be determined. Arizona and California are in sharp disagreement with respect thereto.[17]

The foregoing chapter cites all of the Hoover Dam water contracts executed to date, including the All-American Canal contracts, but postpones detailed discussion of the latter to the next chapter.

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[15] See the comments by Mr. Hoover in S. Doc. 32 (79th Cong., 1st sess.), quoted in ch. XIV. See also S. Doc. 39 (79th Cong., 1st sess.), "Water Supply Below Boulder Dam" (1945), p. 8. The legal assumptions implicit in Mr. Bashore's hypothetical tabulation are not necessarily accepted by either Arizona or California. Cf. pt. 2 (separately printed) of S. Doc. 39, supra.

[16] Cf. H. Doc. 359 (71st Cong., 2d sess.), "Report of the American Section of the International Water Commission, United States and Mexico" (1930), p. 5.

[17] Cf. hearings, House Committee on Irrigation and Reclamation on H. R. 5434 (79th Cong., 2d sess., 1946); hearings of the Senate Committee on Interior and Insular Affairs on S. 1175 (80th Cong., 1st sess., 1947), hearings of the House Committee on the Judiciary on H. J. Res. 225 (80th Cong., 2d sess., 1948); hearings of the Senate Committee on Interior and Insular Affairs on S. J. Res. 145 (80th Cong., 2d sess., 1948). See also "The Colorado River" (H. Doc. 419, 80th Cong., 1st sess., 1947), particularly comments of Arizona (p. 15 et seq.) and California (p. 19 et seq.). See Ch. XIII (E), infra.