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Myron B. Holburt

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INTERNATIONAL PROBLEMS OF THE COLORADO RIVER*

MYRON B. HOLBURT**

In August 1973, the United States and Mexico executed the latest in a series of agreements that have attempted to settle the international problems of the Colorado River.¹ In January 1974, representatives from the seven Colorado River Basin States introduced H.R. 12165, "The Colorado River Basin Salinity Control Act,"² in the House of Representatives. This bill would authorize those measures considered necessary by the basin states to implement the latest agreement and also authorize a major basinwide Colorado River Basin Salinity Control Program. In February, the Administration sent legislation to Congress which contains the measures it considers necessary to implement the August 1973 agreement.³ There are major differences between the bill submitted by the basin states and the bill submitted by the Administration that portend continuing controversy over the next several months. This paper discusses the Colorado River water quality and quantity problems between the United States and Mexico, considerations that have led to the several agreements between the two countries, and possible future actions.

EVENTS LEADING TO RATIFICATION OF 1944 MEXICAN WATER TREATY

Prior to the initial control of the river's flow by Hoover Dam in 1935, the supply of water ranged from damaging floods during the snow-melt season to extremely low flows in the late summer and fall. These natural events acted to limit the use which Mexico was able to make of Colorado River water to an estimated annual maximum historical use of about 750,000 acre-feet (af). When negotiations on a water treaty commenced with Mexico in 1928, the United States offered Mexico 750,000 af/yr delivered to meet demands.⁴ This

*Presented to a meeting of the American Association for Advancement of Science, San Francisco, California, March 1, 1974.

**Chief Engineer, Colorado River Board of California.

1. Minute No. 242. Reprinted in this issue at p. 2. The "Minute" form is a record of the International Boundary and Water Commission, United States and Mexico.

2. Since the writing of this article, H.R. 12165, 93d Cong., 2d Sess. (1974) has been enacted as Pub. L. No. 93-320, 88 Stat. 266 (1974) [Ed.].

3. H.R. 12384 & S. 3094, 93d Cong., 2d Sess. (1974).

4. H.R. Doc. No. 359, 71st Cong., 2d Sess. 44 (1930), quoted in *Hearings on the Treaty*

quantity, by being regulated, was more valuable than unregulated flows then being received by Mexico. The Mexican negotiators did not accept the principle of a limitation based on maximum historical usage and countered with a request for 3.6 million acre-feet a year (maf/yr). Because of the intractable positions of the United States and Mexico, negotiations were abandoned.

Following the control of the river's flows through completion of Hoover Dam in 1935 and the commencement of storage in Lake Mead, Mexico began to greatly expand its usage of Colorado River water. The State Department initiated the renewal of negotiations for water treaties with Mexico, covering both the Colorado River and the Rio Grande, by a letter of December 29, 1939.⁵ The State Department also consulted with the Committee of Fourteen, composed of two representatives from each of the seven Colorado River Basin States, which had been formed in 1938 to consider basinwide problems.

As discussions progressed, the United States presented an offer of 0.9 maf/yr of stored Colorado River water, to be released on demand to Mexican users. Early in 1942, the United States' offer was amended to 1.15 maf/yr, but with the delivery to be from "any source whatsoever."⁶ Mexico countered these offers with a demand for 2 maf/yr, and insisted on having one agreement covering both the Colorado River and the Rio Grande, rather than having separate treaties.⁷ Since the United States is the basic source of Colorado River water, while Mexico is the source of a large part of the waters used by the United States in the Lower Rio Grande Valley, Mexico believed she could obtain better terms on the Colorado by considering the two rivers together in one treaty. It was also significant that the Chairman of the Senate Foreign Relations Committee in the 1940's was Senator Tom Connally of Texas, a state which would benefit greatly from an agreement with Mexico on the Rio Grande.

After extensive negotiations, an agreement was signed in February 1944, covering the Colorado and Tijuana Rivers and the Rio

with Mexico Relating to the Utilization of the Waters of Certain Rivers Before the Senate Comm. on Foreign Relations, 79th Cong., 1st Sess., pt. 4, at 1307 (1945) [hereinafter cited as 1945 Hearings].

5. Letter from Under Secretary of State Sumner Welles to Mexican Ambassador F. Castillo Nájera, December 27, 1939, in [1940] 5 Foreign Relations of the U.S. 1029 (1961).

6. Memorandum from U.S. Dep't of State to the Mexican Embassy, February 11, 1942, [1942] 6 Foreign Relations of the U.S. 547, 548 (1963).

7. Memorandum from the Mexican Ambassador to U.S. Dep't of State, March 27, 1942, *id.* at 549-50.

Grande.⁸ The most important provision of the Treaty, with respect to the Colorado River, is the allotment to Mexico of a guaranteed annual quantity of 1.5 maf/yr.⁹ The State Department defended this agreement by stating that up to 750,000 af/yr would come from irrigation return flows below Imperial Dam and would probably go to Mexico irrespective of any treaty.¹⁰ Another State Department argument for the Treaty was that the amount guaranteed to Mexico was less than its Colorado River use in 1943, which was estimated, by the State Department, to be 1.8 maf.¹¹

California, with some support from Nevada, vigorously opposed the Treaty because it gave too much water to Mexico. The Upper Basin States and Arizona supported the Treaty as they wanted to limit Mexico before her increasing uses invaded their share of Compact-apportioned water.

California also made a major issue of water quality during the Senate hearings. Senator Downey of California questioned the usability of the water supply going to Mexico if the State Department estimates of return irrigation flows were correct.¹² He made a remarkably accurate prediction in 1945 by stating that because of the ambiguity in the Treaty concerning water quality, Mexico would come back in 25 or 30 years and demand better quality water. State Department representatives, their consultants, and Senate supporters denied that there was any ambiguity in the Treaty. They stated that water quality was extensively discussed, and that Mexico fully understood that the Treaty required them to take irrigation return flows irrespective of the salinity of those return flows.¹³ In response to a question at the hearings before the Senate Foreign Relations Committee, the State Department consultant said the United States could deliver water to Mexico under the Treaty, as much as 500,000 to 750,000 af/yr, even if it would not have any value for irrigation purposes. The State Department pointed out that the specific provisions that were included in the Treaty to insure that Mexico must accept return flow and drainage water are in Articles 10 and 11.¹⁴

8. Treaty with Mexico Respecting Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, February 3, 1944, 59 Stat. 1219 (1945).

9. *Id.*, art. 10(a), 59 Stat. at 1237.

10. Testimony of R. J. Tipton, Consulting Engineer, Int'l Boundary & Water Comm'n, U.S. Section, in *1945 Hearings*, pt. 2, at 340-41.

11. Statement of L. M. Lawson, Commissioner, Int'l Boundary & Water Comm'n, U.S. Section, in *1945 Hearings*, pt. 1, at 149, 151.

12. Statement of Senator Sheridan Downey in *1945 Hearings*, pt. 4, at 1103-64.

13. Testimony of R. J. Tipton, in *1945 Hearings*, pt. 2, at 343.

14. Testimony of R. J. Tipton, in *1945 Hearings*, pt. 2, at 341-42.

Article 10 states that Mexico's allotment included water from "any and all sources" and would be "for any purpose whatsoever." Article 11 states that "waters shall be made up of the waters of the said river whatever their origin."

In testimony before the Mexican Senate, the Mexican negotiators were telling a different story. One of the Mexican negotiators said it was understood between the two countries that the water delivered to Mexico must be of good quality. He stated that Mexico could demand water similar in quality to that which she was currently using. Recognizing the difficulty of this demand, he said that Mexico would not object to receiving water similar to that used by the United States at Imperial Dam, the last diversion point in the United States.¹⁵ The Mexican Senate unanimously ratified the Treaty in September 1944.¹⁶

In addition to the arguments on the merits of the Treaty, it was apparent that other foreign policy issues were major factors in the Administration's support for the Treaty. On the last day of the Senate hearings, Assistant Secretary of State Acheson put the Treaty in the larger context of maintaining the Latin America good neighbor policy and world peace.¹⁷ The latter was apparently a reference to the United Nations organizational conference being held in San Francisco. In April 1945, the Senate ratified the Treaty by a vote of 76 to 10.¹⁸ Of the 14 basin state senators, only the two California senators and one Nevada senator voted against the Treaty.¹⁹

DRAINAGE FROM WELLTON-MOHAWK PROJECT IN ARIZONA

Between 1945 and 1961, there were no major problems with respect to the river, as the salinity of the water delivered to Mexico at the Northerly International Boundary was generally within 100 parts per million (ppm) of the water at Imperial Dam. In 1947, the Wellton-Mohawk Project in southwestern Arizona was authorized by Congress to deliver water for the irrigation of 75,000 acres.²⁰ It was

15. "El Tratado de los 3 Ríos ante el Senado." *Opina la Secretaria de Relaciones; el Criterio de México: Amplia Exposición del ING. Fernández MacGregor; Análisis técnico del ING. Orive Alba; Estudio de Objeciones*, El Universal (Mexico City), August 1, 1945, at 1, reprinted in S. Doc. No. 98, 79th Cong., 1st Sess. 16 (1945).

16. S. Doc. No. 249, 79th Cong., 2d Sess. 4 (1946).

17. Statement of Assistant Secretary of State Dean Acheson, in *1945 Hearings*, pt. 5, at 1760.

18. 91 Cong. Rec. 3491 (1945).

19. The Hoover Dam Documents 164 (2d ed. R. Wilbur & N. Ely 1948), printed as H. Doc. No. 717, 80th Cong. 2d Sess. (1948).

20. Gila Reclamation Project Relocation Act, July 30, 1947, ch. 382, 61 Stat. 628 (1947), 43 U.S.C. § 613-613e (1970).

constructed by the United States Bureau of Reclamation and completed in 1952. In 1961, the district commenced operation of a system of drainage wells which discharged saline water into the Colorado River below the last United States diversion but above the Mexican diversion. The drainage water included a substantial proportion of highly saline ground water that had been concentrated through reuse during the previous half-century. Initially, it had a salinity of around 6,000 ppm which resulted in a sharp increase in the salinity of the water delivered to Mexico, from an average of around 800 ppm in 1960 to more than 1500 ppm in 1962. Mexico raised strenuous objections to receiving the drainage waters.

Although the Wellton-Mohawk drainage was the primary cause of the increase in salinity, a sharp reduction in river flows to Mexico at around the same time also had an impact. Beginning in 1961, releases into Mexico were sharply reduced in anticipation of storage in Lake Powell behind the newly constructed Glen Canyon Dam.²¹

Although the United States had intended that Mexico must receive return flows below Imperial Dam under the Treaty, it had not been anticipated that there would be return flows as high in salinity as the Wellton-Mohawk drainage or that there would be such a precipitous rise in the salinity of the waters delivered to Mexico. Consequently, after the winter of 1961-62, the United States undertook certain provisional measures to minimize the impact of the high salinity drainage returns from Wellton-Mohawk. The United States also entered into negotiations with Mexico to arrive at a practical solution. The State Department asked each of the governors of the seven Colorado River Basin States to appoint two members to a reconstituted Committee of Fourteen in order to advise the State Department in connection with the salinity problem.²²

INTERIM SALINITY AGREEMENTS

A. Minute 218

Extensive negotiations were conducted between 1962 and 1965 and, in November 1965, a five-year agreement was incorporated in

21. This loss of dilution water can be emphasized by two figures: for the 10-year period from 1951 to 1960 the average delivery to Mexico at the Northerly International Boundary was 4.2 maf/yr, while for the succeeding 10-year period from 1961 to 1970, the flow averaged only 1.5 maf/yr.

22. Telegram from L. H. Hewitt, Commissioner, Int'l Boundary & Water Comm'n, U.S. Section, to Governor Edmund Brown of California, March 29, 1962. John Teerink, Director of the California Dep't of Resources, and I are the two California members of the Committee.

Minute 218.²³ Under Minute 218, the United States took the following actions at a cost of \$12 million:

(1) Constructed an extension of the Wellton-Mohawk Drain so that drainage water could either be bypassed around Morelos Dam or mixed with other Colorado River waters above Morelos Dam, at the option of Mexico.

(2) Constructed additional drainage wells in the Wellton-Mohawk Project which allowed selective pumping of the most saline waters at times when Mexico would be bypassing Wellton-Mohawk drainage water, and allowed the pumping of higher quality ground water at times when Mexico would be using Wellton-Mohawk water.

(3) Replaced a portion of the bypassed Wellton-Mohawk water which resulted in the release of approximately 40,000 acre-feet of mainstream water per year from Imperial Dam in excess of the 1.5 million acre-feet per year guaranteed by the Treaty.

Under the measures taken by the United States, the quality of the water delivered to Mexico was improved from average annual values of about 1500 ppm in 1962 to 1240 ppm in 1971.

Minute 218 was entered into for a specific period and was due to expire in November 1970.²⁴ Accordingly, the United States and Mexico commenced negotiations with the purpose of arriving at another five-year agreement. However, Mexican officials did not want to enter into a new long-term agreement in November 1970, since a new administration was taking office in December 1970.

Negotiations commenced in 1971 with the new Echeverría administration. The United States, supported by the Committee of Fourteen, proposed a new minute, which would have provided Colorado River water having the same salt concentration as would exist were the Wellton-Mohawk Project and all other projects in the United States below Imperial Dam in salt balance. This means that the tonnage of salt in drainage water originating from lands below Imperial Dam in the United States and delivered to Mexico would not exceed the tonnage of salt in the water applied to these lands.

Although the United States negotiators thought they were near agreement with Mexico in November 1971, Mexico finally rejected the United States proposals, and negotiations were discontinued pending the results of a forthcoming meeting between Presidents Nixon and Echeverría. In the interim, the two countries agreed to continue operations under Minute 218.²⁵

23. 4 Int'l Legal Materials 545 (1965), 55 Dep't State Bull. 555 (1965). Operations under Minute 218 commenced on November 16, 1965.

24. Minute No. 218, art. 8, 4 Int'l Legal Materials at 546, 55 Dep't State Bull. at 557.

25. U.S. Dep't of State Press Release No. 263, November 15, 1971, 65 Dep't State Bull. 674 (1971).

B. Minute 241

On June 15 and 16, 1972, Presidents Nixon and Echeverría met and, following the meetings, issued a joint communiqué dated June 17, 1972.²⁶ With respect to the Colorado River, President Echeverría gave the essence of the current Mexican position as wanting water under the 1944 Treaty to be of the same quality as the water at Imperial Dam.²⁷ President Nixon replied that "this was a highly complex problem that needed careful examination of all aspects."²⁸ He said that he was prepared to:

- (a) undertake certain actions immediately to improve the quality of water going to Mexico;
- (b) designate a special representative to begin work immediately to find a permanent, definitive and just solution of this problem;
- (c) instruct the special representative to submit a report to him by the end of [the] year;
- (d) submit this proposal, once it has the approval of [the U.S.] Government to President Echeverría for his consideration and approval.²⁹

The immediate action referred to by the President was formalized as Minute 241 of the International Boundary and Water Commission on July 14, 1972,³⁰ and replaced Minute 218. This agreement was based on the salt balance concept and provided that the United States discharge 118,000 af/yr of Wellton-Mohawk drainage waters below Morelos Dam. The United States agreed to substitute additional Colorado River water and waters pumped from wells on the Yuma Mesa for this water, on an interim basis, so that the total deliveries exceeded the 1,500,000 af/yr guaranteed by the Treaty. Actions by the United States under Minute 241 included the discharge of 119,490 af of Wellton-Mohawk drainage water and the substitution by the United States of an equal amount of water during 1972-73. This action resulted in reductions in the average annual salinity of waters made available to Mexico from 1242 ppm in 1971 to 1140 ppm for the year ending June 30, 1973.³¹

Under Minute 241, Mexico requested the United States to discharge the balance of the Wellton-Mohawk drainage waters, (95,550 af) below Morelos Dam which was charged to Mexico's 1.5 maf/yr deliveries. As a result, the water diverted at Morelos Dam for the year

26. 1972 Public Papers of the Presidents No. 203, at 684.

27. *Id.* at 685.

28. *Id.*

29. *Id.*

30. 67 Dep't State Bull. 198 (1972).

31. Int'l Boundary & Water Comm'n, Report on Operations for Solution of the Colorado River Salinity Problem Under Minute No. 241 (Nov. 1973).

ending June 30, 1973, had an average salinity of 980 ppm, which was about 130 ppm higher than the mean salinity of water arriving at Imperial Dam for the same period.

"PERMANENT AND DEFINITIVE SOLUTION"
TO THE INTERNATIONAL SALINITY PROBLEM

On August 16, 1972, President Nixon designated former Attorney General Herbert Brownell, Jr., as his special representative and gave him the task of finding a permanent solution to the Mexican salinity problem.

A federal task force consisting of policy and working level representatives from a number of the major departments of government, including Interior, State, Agriculture, Environmental Protection Agency and Office of Management and Budget, was formed to assist Mr. Brownell. The Task Force developed possible solutions, evaluated them, and presented the results to Mr. Brownell. He also met with the Committee of Fourteen periodically to seek their advice on possible solutions. Mr. Brownell completed his report on time and submitted it to the President by December 31, 1972.³² The Colorado River Basin States supported the concepts of the Brownell report subject to several important conditions.

Several months after receipt of the Brownell report, President Nixon appointed Mr. Brownell as a special ambassador, and negotiations commenced between him and the Mexican representatives in the spring of 1973. Ambassador Brownell continued to meet and discuss the negotiations with the Committee of Fourteen. Although the Committee members supported the thrust of the proposed agreement with Mexico, they continued to state that the agreement would require certain actions on the part of the Federal Government in order to avoid damage to the Basin States. The Committee of Fourteen was unable to obtain firm assurances from responsible members of the Government that actions satisfactory to the states would be taken.

Senators and congressmen from the seven Basin States were also concerned that certain terms of the agreement could be detrimental to the water interests of the states. On July 20, 1973, all 14 senators and 36 congressmen from the seven Basin States signed a letter to President Nixon, asking that final negotiations with Mexico not take place until there was substantial agreement with the basin states on a number of issues. They also asked for a meeting with President Nixon.

32. 1974 U.S. Code Cong. & Ad. News 1872.

Ambassador Brownell met with the Committee of Fourteen on August 18 to discuss the issues that had been raised by the states, senators, and congressmen. Although agreement was not reached with the states on the outstanding issues, Brownell stated that he intended to try to reach an agreement with Mexico. The key unsettled issues will be discussed later in this paper.

In his negotiations with Mexico, Mr. Brownell had to consider a number of conflicting views. The most significant are summarized below:

(a) The United States agencies represented on the federal task force had differing solutions to the problem. For example, the State Department desired a negotiated settlement in order to avoid further conflict with Mexico and the possibility of having to agree to some third party solution, such as the World Court, while the Office of Management and Budget wanted an inexpensive solution.

(b) The seven Basin States were anxious to work with the Federal Government to achieve a solution to this vexing problem. They did not object to deliveries by the United States of water in excess of 1,500,000 af/yr on a temporary basis in order to have a practical solution to the problem. However, the Basin States have opposed any permanent commitment to Mexico of water deliveries beyond that required by the Treaty.

(c) Mexico's basic position was that it was entitled to the same quality water as Imperial Valley receives just across the border from Mexicali Valley. Mexican representatives also believed that they were entitled to substantial compensation for damages caused by saline Wellton-Mohawk waters since 1961.

After extensive negotiations, an agreement was reached between Ambassador Brownell and the Secretary of Foreign Relations of Mexico, Emilio O. Rabasa, in the latter part of August and was approved by the two Presidents on August 30, 1973, and subsequently incorporated in Minute 242 of the International Boundary and Water Commission.³³

ANALYSIS OF THE "PERMANENT" SOLUTION

Although not fully spelled out in the Minute, the Administration has stated that the following "measures" would be undertaken to comply with Minute 242:

(1) construction of a major desalting plant and appurtenant works for Wellton-Mohawk drainage waters scheduled to be completed by December 1978,

33. Reprinted in this issue at p. 2.

- (2) extension of the Wellton-Mohawk drain by 53 miles to the Gulf of California scheduled to be completed by December 1976,
- (3) lining or construction of a new Coachella Canal in California scheduled to be completed by April 1977,
- (4) reduction in Wellton-Mohawk District acreage, and improved Wellton-Mohawk irrigation efficiency scheduled for completion by December 1978.³⁴

It is expected that the Wellton-Mohawk drainage waters could be reduced to approximately 178,000 acre-feet per year. The desalting plant would treat approximately 143,000 af/yr. The resulting 100,000 af/yr of product water would be mixed with 35,000 af of untreated Wellton-Mohawk water to produce water with a salinity equivalent to the salinity of the river at Imperial Dam. The reject stream, which will be carried to the Gulf of California, initially will be approximately 43,000 af/yr and is estimated to have a salinity of 9,600 ppm. Estimated cost of the desalting plant and associated works is \$98 million.³⁵

It is anticipated that a new concrete-lined canal will be constructed to replace the first 49 miles of the presently unlined portion of the Coachella Canal. This, together with associated works, is estimated to cost \$21,450,000.³⁶

Mexico receives major new benefits from the new agreements. She receives guaranteed-quality water at Morelos Dam related to the quality of water at Imperial Dam.³⁷ All of the costs in money or water to achieve this quality guarantee is to be borne by the United States.³⁸ Mexico also has the promise of financial assistance with respect to salinity problems, including the installation of tile drainage in the Mexicali Valley.³⁹ In addition, the United States will support efforts by Mexico to obtain financing on favorable terms for the improvement and rehabilitation of Mexicali Valley.⁴⁰ Also at the United States' expense, a concrete-lined canal is to be constructed in Mexico to discharge the saline reject water from the desalting plant.⁴¹

The United States negotiators believe there are considerable tangible benefits to the United States. The agreement eliminates the

34. Office of Saline Water & Bureau of Reclamation, U.S. Dep't of the Interior, Colorado River International Salinity Control Project, Special Report 9 (1973).

35. *Id.* at 18.

36. *Id.*

37. Minute No. 242, art. 1(a). Reprinted in this issue at p. 2.

38. *Id.*, arts. 2, 4.

39. *Id.*, art. 7.

40. *Id.*

41. *Id.*, art. 4.

possibility of long years of acrimonious controversy between the two countries. The agreement does not require any payments to Mexico for past damages. Since the agreement is described as a permanent solution, presumably Mexico has waived any future rights to press for monetary damages. Mexico agreed to permanently accept 140,000 acre-feet per year of their Treaty right at the Arizona-Sonora boundary. This is largely drainage water with a salinity considerably higher than that of the Colorado River. Although Mexico has accepted this water for years and utilized it, there was apparently no obligation on Mexico's part to accept the waters at this location until this agreement was signed. Although the United States will reduce the salinity of the Wellton-Mohawk drainage waters under the new agreement, Mexico has agreed that other drainage waters below Imperial Dam will continue to be accepted as part of the U.S. Treaty obligation. In summary, the negotiators believe that the concessions made by the United States are in terms of money, not water. However, this is not entirely true, as the 43,000 af/yr reject stream from the desalting plant will not be included as part of 1,500,000 af obligation and will have to be replaced.

The Colorado River Basin States consider that the agreement with Mexico was entered into largely on the basis of international comity and that the Colorado River Basin States should not be expected to bear any greater burden as a result of the new agreement with Mexico than that to be borne by the rest of the nation. The basin states consider that the following commitments are necessary in order to prevent any damages to the basin states.

A. Colorado River Basin Salinity Control Program

Assurance of support from the Administration is needed for contemporaneous authorization of a Colorado River Basin Salinity Control Program, together with the works that are required specifically by Minute 242. This legislation has as its purpose control of the salinity above Imperial Dam for the benefit of users in the United States. It will also benefit Mexico. Mr. Brownell has stated that unless the United States controls the salinity at Imperial Dam, in the future we will have a new salinity problem with Mexico.^{4 2}

The Mexican Government apparently believes that the United States has committed itself to a program to control the river's salinity upstream from Imperial, for Foreign Minister Rabasa made the

42. Testimony of Herbert Brownell, Special Representative of the President, in *Hearings on H.R. 12165 Before the Subcomm. on Water & Power Resources of the House Comm. on Interior & Insular Affairs*, 93d Cong., 2d Sess., ser. 93-45, at 107 (1974).

following statement to the press in Mexico City when the agreement was announced on August 30, 1973:

... the final result will be that the Mexicali farmers will have forever—they and their children and their children's children—water whose average annual salinity will never exceed 1010 ppm, which is perfectly acceptable.⁴³

B. Prompt Construction of Necessary Works

It is necessary that the United States promptly construct the new Coachella Canal and Wellton-Mohawk desalting plant in order to carry out the intent of the agreement with Mexico. Failure of Congress to appropriate funds or the Administration to release any appropriated funds means that the United States would continue to deliver 118,000 af/yr to Mexico above the 1,500,000 af guaranteed annual quantity. This water would come from the supplies whose rights belong to the seven Colorado River Basin States or to entities within these states.

C. Replacement of Reject Water Delivered to Gulf

The United States must assume the responsibility for permanent replacement of the reject water from the desalting plant. If these waters are not replaced, it means that there will be permanent additional deliveries to Mexico in excess of the guaranteed 1,500,000 af/yr of approximately 43,000 af/yr, which would reduce supplies available to the Basin States by a like amount.

D. Power Source

It is estimated that approximately 35 megawatts will be required to operate the desalting plant,⁴⁴ and there will be additional power requirements for the protective ground-water pumping program. It is essential that the power necessary for meeting the needs of Minute 242 not be provided by taking power away from existing Southwest power users and forcing them to obtain replacement power in a difficult market with considerably higher costs. This new demand for power must be met by development of new power sources.

43. Report of press conference in *El Universal* (Mexico City), August 30, 1973. When correction is made for the method of analysis for salinity used in Mexico, which is different from that used in the United States, and the 115 ppm differential between Imperial Dam and Morelos Dam is added, the 1010 ppm referred to in the quote is equivalent to the current salinity at Imperial Dam.

44. Office of Saline Water & Bureau of Reclamation, *supra* note 34, at 12; 1974 U.S. Code Cong. & Ad News 1851.

E. Ground-Water Pumping Near San Luis

Mexico recently installed the capacity to pump approximately 160,000 acre-feet per year of ground water by installing wells from one to five miles of the southerly United States-Mexico boundary. Unless the United States installs its own ground-water pumping system, the Mexican wells will pump a substantial quantity of ground water originating in the United States. Studies made by the United States indicate that it will be necessary to pump approximately 140,000 acre-feet per year in the United States over and above current pumping within five miles of the border in order to protect against the loss of surface and ground water to Mexico. The Mexican wells are located so as to have the maximum impact on the United States waters. It was reported that Mexico refused to accept any waters drawn from the United States by the San Luis well field as a charge against its treaty allotment. Mexico also refused to limit the amount of water pumped by its San Luis well field to an amount that would have a negligible impact on the United States water supply. The new Minute allows for further negotiations between the two countries on the border ground-water problem.

F. Legal Issues

Questions have been raised with respect to the legality of Minute 242. For example, Governor John D. Vanderhoof of Colorado said:

The agreement contained in this Minute constitutes either an amendment to or an enlargement of the Mexican Water Treaty of 1944. While it may be within the power of the President to modify or enlarge upon an international treaty without the consent of Congress, Section 2 of Article II of the United States Constitution seems to indicate otherwise. That section states that the President shall have the power to make treaties, but only upon the advice and consent of the Senate. In the case in hand, such consent has not been given.⁴⁵

G. No Impairment of Colorado River Basin States Rights

Confirmation is needed from the Administration that nothing in the agreement will impair the rights of the Colorado River Basin States to continue to utilize their Colorado River water rights within the constraints of the "Law of the River."

45. Address by Governor Vanderhoof, 30th Ann. Sess., Colorado River Water Users Association, Las Vegas, Nevada, Nov. 26, 1973.

IMPLEMENTATION OF MINUTE 242

The necessary actions with respect to Minute 242 are projected by federal officials to occur in the following manner. During the period until Congress enacts legislation to implement the quality guarantee portion of the agreement, Mexico will receive about the same quality of water from the United States that it has been receiving since Minute 242 was in effect, which requires the bypass of 118,000 af/yr of Wellton-Mohawk drainage water and the substitution therefor of water released from Imperial Dam and pumped ground water from the Yuma Mesa. During this period, Mexico will continue to bypass the remaining part of the Wellton-Mohawk drainage water to obtain even lower salinity.

The intent of the U.S.-Mexican negotiators was to have the necessary enabling legislation enacted prior to July 1974. Upon authorization by Congress, the United States must begin to meet the 115 ppm salinity differential. This will require that all Wellton-Mohawk drainage water be discharged below Morelos Dam without charge against the Treaty to Mexico and that the U.S. substitute Colorado River water from storage. The quantity is expected to decline from 220,000 af the first year to 178,000 af by the fourth year as Wellton-Mohawk Irrigation District efficiencies increase and return flows are decreased. The Federal Government will borrow water from storage in the Colorado River reservoirs in order to make the required releases to Mexico.

The replacement of the first 49 miles of the Coachella Canal is scheduled to be completed in three to four years. This should result in a reduction of seepage losses of approximately 132,000 af/yr. The increased storage in Lake Mead resulting from reducing deliveries to Coachella in an amount equal to the salvaged losses will be credited to the United States. This will reduce the draft on storage to 46,000 af/yr assuming that the Wellton-Mohawk irrigation efficiency and acreage reduction programs have been successful in reducing the Wellton-Mohawk outflow to 178,000 af/yr.

The desalting plant is scheduled to be completed within five years. Once this plant is in operation, water accumulating in storage due to water salvage resulting from the new Coachella Canal will be credited to the United States for the purpose of repaying substitution water borrowed in earlier years. In the mid-1980's, it is anticipated that the Central Arizona Project will be completed and that California will be required to reduce its net diversions from the Colorado River from its current 5.1 maf/yr to 4.4 maf/yr. At that time, it is expected that the Coachella Valley County Water District will commence repay-

ment of the unamortized costs of the canal construction to the extent that it benefits from the new canal.

Congressmen from the seven basin states consider it essential that one bill encompass both the measures to implement the new agreement with Mexico and a basinwide salinity control program. Consequently, on January 21, 1974, Congressman Harold T. Johnson of California and eleven other basin state congressmen on the House Interior and Insular Affairs Committee introduced H.R. 12165.⁴⁶ This bill includes all the items determined to be necessary by the Administration as well as the items determined to be necessary by the states to implement the new agreement with Mexico.

On February 7, 1974, the Administration sent its bill to Congress.⁴⁷ It differs from H.R. 12165 on a number of major issues. Some of these differences are:

1. The basinwide salinity control program upstream from Imperial Dam is omitted from the Administration bill.
2. The Secretary of State is given the key responsibility in the Administration bill, while the Secretary of the Interior is given the key responsibility in H.R. 12165.
3. The authority to install a well field in the Yuma area to balance the ground-water pumping by Mexico, in the event the two countries are unable to reach a ground-water agreement, is omitted from the Administration bill.
4. The Administration bill makes the replacement of the 43,000 af/yr of reject stream from the desalting plant conditional on the augmentation of the Colorado River by 2,500,000 af/yr. H.R. 12165 states that replacement of the 43,000 af/yr is a national obligation.

FUTURE PROSPECTS

Although the title of the latest agreement with Mexico over the Colorado River, Minute 242, is "Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River," it is apparent that many issues remain to be resolved to assure that it is a permanent solution and that new salinity problems do not occur in the future. Briefly stated it will require (a) resolution of the differences between the Administration and the Colorado River Basin States, (b) enactment of major complex legislation by Congress, (c) a salinity control program encompassing natural and man-made sources

46. H.R. 12165, 93d Cong., 2d Sess. (1974) was enacted as Pub. L. No. 93-320, 88 Stat. 266 (1974) [Ed.].

47. H.R. 12834, 93d Cong., 2d Sess. (1974).

of salinity in the entire Colorado River Basin, (d) authorization and expenditure of hundreds of millions of dollars for works in the United States and Mexico over the next several decades, (e) construction of the world's largest desalting plant, and (f) better irrigation practice in both the United States and Mexico.