

# THE EARLY YEARS (PRE 1975)

## MUCH DISCUSSION, BUT LITTLE ACTION

Under provisions of the 1944 Water Treaty with Mexico, the governments of the United States and Mexico agreed to give preferential attention to the solution of all border sanitation problems. The International Boundary and Water Commission<sup>1</sup> (IBWC) was first authorized by the two governments to study pollution of the New River from Mexico.

Studies to correct the New River problem in 1947 and 1948 resulted in the recommendation by IBWC that a joint plant be constructed in the United States to treat the sewage of the cities of Calexico<sup>2</sup> and Mexicali. This proposed project was deferred for further independent studies by the Mexican government to determine the feasibility of constructing a plant in Mexico for treatment of Mexicali sewage only. Following completion of independent studies, it was recommended that a joint plant be constructed on the International Boundary, situated partially in Mexico and partially in the United States, to treat the sewage of both Mexicali and Calexico. It was the opinion of the U.S. IBWC that the cost of wastewater works constructed for treatment of Mexicali sewage along with the costs of operation and maintenance of such works be borne entirely by Mexico.

In 1955, the Government of Mexico suggested the construction of a wastewater treatment plant at a site 2.4 miles south of the International Boundary, and tentatively recommended that Calexico sewage also be treated at the Mexican plant, but that Calexico pay an amount commensurate with its quantity of sewage. Calexico indicated it was unable to participate in a joint plant in Mexico and expressed a preference for separate plants built in each country. In 1956, the Mexican Government announced its intention to construct sewage treatment facilities in Mexico to serve the City of

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<sup>1</sup> The International Boundary Commission (IBC) was created on March 1, 1889 by a Treaty between the United States and Mexico. A 1944 treaty created the International Boundary and Water Commission, which replaced the IBC. The IBWC has primary responsibility for coordinating transboundary water issues and border sanitation projects affecting both the U.S. and Mexico. Both the United States and Mexico have commissioners appointed to IBWC. Within Mexico, IBWC is called "Comision Internacional de Limites y Aguas" (CILA).

<sup>2</sup> Calexico is a border city of over 25,000 people (January 1997). The New River courses from the City of Mexicali, Mexico, through the Calexico city limits and onward some 60 miles to its terminus in the Salton Sea.

Mexicali. No final date for completion of construction was given.

On December 13, 1957, the California Regional Water Quality Control Board, Colorado River Basin Region (Regional Board)<sup>1</sup>, adopted Resolution No. 57-27 generally requiring cleanup of all California waterways discharging to the Salton Sea.<sup>2</sup> Accordingly, it became increasingly important to press for cleanup of untreated sewage discharged to the New River from Mexicali. Both the United States Embassy in Mexico and the U.S. Section of IBWC increased representations to the Mexican Government for New River cleanup. The Mexican authorities responded with plans for construction of sewage treatment facilities pending availability of funds. Shortly thereafter, some funding was apparently appropriated (at least one occasion), but it had to be diverted for other emergencies.

On November 30, 1961, the Regional Board adopted Resolution No. 61-21 entitled Pollution of Fresh Waters by Raw Sewage from Mexicali, Mexico. This Resolution entreated the U.S. State Department to “...exercise every power and facility under its jurisdiction to obtain a successful correction of Mexicali’s raw sewage disposal, at the earliest possible date, such that this problem of pollution and nuisance from Mexicali is brought to a conclusion.”

Although Mexico recognized its responsibility for treatment of sewage discharges to New River, it was not until late 1961 when assurance was received from the Mexican Ministry of Foreign Relations that funds would be available to begin work on sewage treatment facilities on or about January 1, 1962.

On March 30, 1962, Carlos Rubio Parra, State Director of Public Works for the State of Baja California, announced that Governor Esquivel (Governor of Baja California) would discuss financing a sewage treatment facility for Mexicali.<sup>3</sup> The announcement further stated that sewage pipes were

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<sup>1</sup> The Regional Board is the California State agency responsible for water pollution control within the Colorado River and Salton Sea watershed of California. The office headquarters were formerly located in Indio, California, but were moved to Palm Desert, California in 1976.

<sup>2</sup> The Salton Sea is a landlocked body of water located below sea level. It is California’s largest inland waterbody, and of great importance as a wildlife refuge and recreational attraction.

<sup>3</sup> Mexicali and Tijuana are the largest cities within the State of Baja California in Mexico. Tijuana is also located on the border and also presents a severe water pollution issue for California.

being installed, and that sewage would be pumped to oxidation ponds south of the City and reused for irrigation. The estimated cost of the project was 25 million pesos (then equivalent to \$2,000,000 U.S. dollars). The project was scheduled for completion in 1963.

On October 3, 1962, the Regional Board Chair appeared before the California Subcommittee on Bay and Water Pollution of the Assembly Interim Committee on Natural Resources, Planning, and Public Works, and requested assistance in the abatement of pollution by Mexicali. The Chair made the following statement:

*“For years our Regional Board and other local agencies have urged various United States Federal agencies to do what they can to end the Mexicali discharge of raw sewage and brewery wastes into California. To date, these requests have resulted in only vague promises and no action. It is our understanding that the Mexican Government has now lowered the priority for correction of this discharge. We therefore consider it necessary to bring this problem to your attention.”*

On October 22, 1962, a conference was held in El Centro<sup>1</sup> to address establishment of an effective program to obtain correction of raw waste discharges from the City of Mexicali, Mexico. J.F. Friedkin<sup>2</sup>, U.S. IBWC Commissioner, was present at the conference and explained the role of IBWC in solving border sanitation problems as follows:

*“The International Boundary and Water Commission was established to settle border disputes. The Commission is composed of two commissioners, one each from the United States and from Mexico. As more intensified development took place along the border, it also became necessary to settle issues on water and flood control. Thus the word ‘water’ was included in the Commission title. In the late thirties, sanitation problems became included in the Commission’s agenda.*

*“The Commission’s work is to receive complaints from the public, to investigate facts concerning the complaints, and to recommend necessary corrective actions to*

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<sup>1</sup> El Centro is the largest city in California’s Imperial County, and is located approximately 10 miles north of Calexico.

<sup>2</sup> Joseph F. Friedkin served as U.S. IBWC Commissioner from April 1, 1962 to February 1, 1986.

*the respective federal governments. In the case of joint ventures along the border, when agreements are reached between the two governments, the Commission provides cost estimates and other necessary information. When correction requires construction in one country only, the Commission's efforts mainly involve persuasion, urging, and recommendations.*

*"The Mexican Government has given repeated attention to the problem of providing a sewage treatment plant for Mexicali. They have made engineering plans for the project. Their present such plans are for construction of a sewage treatment plant in Mexicali in 1963. In order to ensure fulfillment of these plans, we must continue to urge them into action. Since Mexico's funds are limited, its policy is to assign first priority to water supply, with sanitation as a second priority.*

*"The Commission will continue to urge Mexico to move ahead with its plans for construction. However, it is necessary to understand the great problems which face Mexico, none the least of which is the lack of sufficient funds to provide for construction of many necessary projects.*

*"The Regional Board and the people of the area involved must continue to urge the Department of State, and keep in touch with the Commissioner as to what the Commission can do from the Federal level. It is most necessary to impress upon Mexican authorities the urgent and critical need for this sanitation project and to keep urging the State Department from both local and California State levels.*



Figure 1: New River at International Boundary in 1962

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*"It is necessary to bring to the forefront the tremendous growth of Imperial Valley and Salton Sea with their great recreational values and potentials. Great emphasis should be placed upon the necessity to protect the present beneficial water uses, and to make it possible for development. In this one respect, the Regional Board's Executive Officer's report should be strengthened as much as possible.*

*"The Board must substantiate the need for urgency of the project. The Commission will submit the report to the State Department, and request that it pursue this item through diplomatic channels. This is the first approach. A second approach is for the Calexico Chamber of Commerce to urge on a local basis.*

*"The Board and Calexico residents must continue urging the Commissioner, and continue pressuring our government in Washington. Correction of such a sanitation problem is one of the main jobs of the Commissioner."*

On November 4, 1962, the following New River pollution problems were cited in a Resolution adopted by the Isaak Walton League of America, Inc.:

- Bacterial levels over 100,000 times the Imperial County<sup>1</sup> contact standards.
- Recorded cases of typhoid fever to children playing in the New River.
- Production of foul odors in the Calexico area.
- Plainly visible sewage solids.
- Impossibility of utilizing the river as a recreational site.

The Resolution stated that these problems were attributed to the discharge of raw sewage and brewery waste from Mexicali. The Resolution requested the United States Congress to cooperate with allied agencies in the rapid achievement of critically needed emergency relief from pollution originating in the City of Mexicali, Mexico, and in attaining a timely permanent solution to said long-standing international problem.

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<sup>1</sup> Imperial County, located in the southeastern corner of California, encompasses all of the United States New River flow and about 3/4 of the Salton Sea. The remaining portion of the Salton Sea is within Riverside County, California.

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## THE FIRST PUMPING AND TREATMENT FACILITIES

In February 1963, it was learned that the one million pesos (\$80,000 U.S. dollars) allotted for construction of the Mexicali sewage treatment facilities had been withdrawn. The Mexico Section of the IBWC attempted to have the funds replaced and still expressed hope that the project could be completed by December 1963. Mexico's engineers for the project stated that their plan included pumping plants, a long outfall line, and a large area for oxidation ponds south of Mexicali. They further stated that the ponds were designed to provide secondary treatment, and the effluent would be used for agricultural purposes and would not be discharged to the New River.

Assembly Joint Resolution No. 27, dated March 12, 1963, which was modified after the November 4, 1962, Isaak Walton League Resolution, was submitted to and passed by the California State Assembly, but was later defeated in the State Senate. The intent of the Resolution was to bring the New River problem to the attention of the Congress and President of the United States.

On August 13, 1964, Mexican officials announced that construction of treatment facilities would begin. The project plans were to pump sewage to a natural ground depression 15 kilometers south of Mexicali for treatment and reuse for irrigation.<sup>1</sup> The project was to be completed within one year. However, by January 1, 1965, a U.S. IBWC engineer estimated that construction of the Mexicali treatment facilities was only 30 percent complete. The scheduled date of completion, which was contingent upon funding, was estimated to be December 1965. But in January 1965, funding was suspended from the project. The Mexican engineers were confident, however, that other funding would soon become available and construction would be completed in 1965.



Figure 2: Construction of Pumping Plant No. 2 underway (Dec 1964)

<sup>1</sup> This location was scrapped, and shortly thereafter an alternative location west of the city and approximately 8 kilometers southwest from the river's entry into the United States was selected. The treatment plant design called for primary and secondary lagoons. All sewage would have to be pumped to the location.

On February 15, 1965, the Imperial County Board of Supervisors adopted a Resolution requesting that *"...any and all action possible be taken that a sewer treatment plant be constructed for domestic and industrial wastes from the City of Mexicali, Baja California, Mexico..."*

No funding was made available to complete construction of the Mexicali sewage treatment facilities during 1965. Mexican officials expressed hope that funds would be appropriated during 1966 to complete the project. Approximately 7 million pesos (\$560,000 U.S. dollars) had been spent on the construction already completed, and it was estimated that about 36 million pesos (\$2.9 M U.S. dollars) more would be needed to complete the work. It was estimated that should the funding become available, the construction would require 18 months.

As of June 1966, funding was still unavailable. The Mexican government was aware of the situation and promised to take special steps to ensure prompt completion. The IBWC considered that *"...the prospects for early completion of the Mexicali works are favorable."* However, essentially no work was done during 1966; the project was estimated to be only 20 to 30 percent complete.

On January 16, 1967, the Mexican government informed the United States Government that funds for the Mexicali sewage disposal system were included in the 1967 budget. Completion of the project was seemingly assured by at least 1968.

During 1968-69, there was concern expressed about industrial waste and septic tank discharges to the New River from Mexicali. Complaints were also registered of visible foam at the boundary and relatively extreme amounts of methylene blue active substances (detergent) detected in the water. Mention was made of discharges of wastewater from a soap factory<sup>1</sup>.

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<sup>1</sup> This soap factory, named La Jabonera Del Pacifico, was located within Mexicali's Anderson-Clayton industrial complex and was closed around 1980.

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As of May 1969, the Mexicali sewage treatment project was about 70 percent complete. Pumping Plant No. 2 was apparently approaching completion, and work on Pumping Plant No. 1 was underway<sup>1</sup>. The Mexican authorities reported that progress was slow due to a shortage of funds, and that much of the available funding was used to replace low quality pipe which had been laid previously. A total of 5,500,000 pesos (\$440,000 U.S. dollars) had been allotted for the project and additional funds were proposed for 1970.

On May 5, 1969, Imperial County officials reported the existence of Salmonella B and C bacteria in the New River, *"...which represents a considerable health hazard to the County, and especially to persons utilizing the Salton Sea for water contact sports and even fishing..."*. The salmonella was attributed to vast amounts of disease-carrying sewage dumped into the New River from Mexicali.

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<sup>1</sup> Two major pump stations were to be utilized to convey sewage to the lagoons. Pumping Plant No. 2, located about one mile south from the International Boundary, was designed for conveyance of sewage from the North Collector. Pumping Plant No. 1, located about two miles southwest of Pumping Plant No. 2, was designed for conveyance of sewage from the South Collector and the sewage from Pumping Plant No. 2 (see Figure I-2, page xi for reference).



Figure 3



Figure 4



Figure 5



Figure 6

Figures 3 through 6: Construction of Mexicali's sewage collection and treatment system underway (Jun 1969)



On May 28, 1969, in response to Regional Board staff concerns addressed in April 1968, the U.S. IBWC acknowledged that the following situations pertinent to the New River in Mexico existed:

"1. Foam

*Reports of inspections by our engineers in May 1968 and in subsequent months indicated some foam at times of inspection. The new treatment plant is expected to alleviate this problem.*

"2. Chemicals

*In early 1968, there were some waste chemicals in the New River waters, but our investigation disclosed that these were not due to industrial wastes but to the effluent from geothermal wells, which because of an accident in the ponding dikes, flowed for a short time into New River. This was immediately corrected.*

"3. Industrial Wastes

*Our investigations in May and June 1968, disclosed that there were some plant wastes, including breweries,<sup>[1]</sup> discharging to New River. We have protested to Mexican authorities and they advise that the soap and chemical plants have been instructed to dispose of wastes by means other than New River or treat their wastes prior to discharge.*

"4. Septic Tank Trucks

*We confirmed your report that septic tank trucks were dumping into New River at the Boundary, and in May 1968, protested to the Mexican Commissioner. In July 1968, our Field Engineer confirmed that such operations had been stopped. We learned, however, that there had been some dumping again in October 1968, and we again protested to Mexico. The Mexican authorities then designated dumping*

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<sup>1</sup> One major brewery discharged to New River. It permanently closed around 1970 due to an unresolved labor strike.

*areas in Mexico beyond the limits of the drainage to New River for the trucks. Since then, our inspections have reported no dumping."*

On June 25, 1969, United States authorities inspected the progress of construction on Mexicali's sewage treatment project and reported that:

- Pumping Station No. 2 was in the final stages of completion.
- Pumping Station No. 1 was in the initial stages of construction (funding was available).
- Most of the sewer lines were completed, though it could not be ascertained just how much of the city was actually served by feeder sewer lines to the pond site.
- No construction of the oxidation ponds had begun, awaiting a final grant from the Mexican Federal Government.
- An outfall line serving the southeast portion of Mexicali was incomplete and awaiting funding from State of Baja California sources.

The outflow of sewage from the oxidation ponds (estimated to be about 42 cfs) was to be used for irrigation. Mexican officials predicted that the whole system would be operational by mid-1970, pending availability of funds for the oxidation ponds.

On July 6, 1970, United States officials again inspected progress on the Mexicali sewage treatment project and reported that:

- Considerable progress had been made on Pumping Plant No. 1.
- The oxidation ponds were under construction.
- Mexican officials indicated that the entire system would be operational by November, 1970.
- No further progress had been made on intercepting raw sewage discharges from scattered subdivisions: the Mexican authorities stated that a collection system for these discharges would be dependent upon state rather than federal funding, and that no funds were presently available.

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Figure 7



Figure 8



Figure 9



Figure 10



Figure 11

Figures 7 through 11: Pumping Plant/Treatment System Construction (Jul 1970)

In 1972, the State Water Resources Control Board (State Board)<sup>1</sup> requested aid from the United States Environmental Protection Agency (EPA)<sup>2</sup> in ending the Mexicali discharge of raw sewage to the New River. The State Board summarized the current problem as follows:

*“Mexicali has had stabilization ponds under construction for 20 years. The pond effluent would be used for irrigation purposes. We are informed that the City of Mexicali intends to complete its ponds shortly; however, the pond capacity corresponds to a population equivalent to 100,000 people, the population of Mexicali when construction began 20 years ago. The present population of Mexicali is approximately 300,000 people.”*

In July 1972, it was reported that the Mexicali sewage disposal project was complete, thus eliminating an estimated 70 percent of the sewage flow into the New River. Additional collection works were under construction. These works reportedly would eliminate an additional 15 percent of the sewage from Mexicali, and were scheduled for completion by December 31, 1972. This would result in elimination of 85 percent of the sewage. Elimination of the remaining 15 percent would require additional collection lines, which the Mexican authorities advised would be dependent upon funding, but should be completed by December 31, 1973.<sup>3</sup> An estimated \$4 million U.S. dollars had been spent by Mexico on the entire project to date.

A binational inspection of the Mexicali sewage treatment facilities was conducted on August 21, 1972, and the following findings were reported:

- Two sewage pumping stations were in operation.
- Two of the six sewage stabilization ponds were full, and a third was being filled.
- Construction of additional sewage interceptors was underway and would be operational by January 1, 1973, according to Mexican officials.

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<sup>1</sup> The State Board is responsible for water pollution control and water rights within the State of California. The State Board oversees water quality control among nine Regional Boards within the State.

<sup>2</sup> EPA is the United States federal agency responsible for environmental protection at the national level.

<sup>3</sup> These overly optimistic estimates did not materialize, largely because of multitudes of unanticipated problems leading to chronic failure of portions of the sewage collection system.

As of June 1973, the South Collector (one of the two largest sewage collector systems in Mexicali) was still not constructed, although the interceptor collecting sewage from two subdivisions was completed. Work was suspended on the South Collector until suitable pipes<sup>1</sup> could be located. Several interceptors were under construction, which would divert additional sewage flows to the stabilization ponds. All of the above projects were fully financed and upon completion would reportedly result in the elimination of all sewage into the New River from Mexicali sources. Effluent from the ponds was to be used to form a recreational lake for Mexicali.

During October 1974, several requests were made suggesting that President Ford discuss the Mexicali sewage discharge into New River with President Echeverria of Mexico during an upcoming meeting. This suggestion was made in a Regional Board letter dated October 17, 1974, along with the following observation:

*“During the past few decades, and also presently, the raw sewage from the City of Mexicali is discharged through several outfall pipes directly into New River. Sewage solids are clearly visible in New River, in the Calexico area.”*

On April 23, 1975, State Board staff reported the following aerial observations of the Mexicali Valley<sup>2</sup>:

*“Heretofore the Mexicali Municipal Disposal Plant had been blamed for the pollution in New River. From the air it appears this is an erroneous assumption. Two major sources of pollutants showed up. The first and probably most serious was the garbage and trash disposal area for Mexicali (Mexico).<sup>[3]</sup> All garbage and trash was being dumped in a large depressed area in the flood plain of the river. A large lake, black in color, existed in the middle of the dump area. A channel connecting the lake and the river had been constructed which permitted the lake to drain as garbage and trash were shoved into the lake.*

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<sup>1</sup> Most of the pipe used during this period was apparently concrete.

<sup>2</sup> Around this time, the lagoon noted in the above photograph was apparently the City’s principal garbage dump location.

<sup>3</sup> This dump, located in the Bella Vista area, closed shortly after July 1975. The closure may have resulted from complaints by the U.S. A new municipal dumpsite was opened further upstream in the New River floodplain, but apparently did not become known to U.S. agencies until 1983.

*“The second major source of pollution was a bright red discharge entering the river through a pipe, of unknown origin.<sup>[1]</sup> Several industrial sites were located within a mile or so of this discharge.*

*“In addition to these two sources of pollution, it appeared that many smaller and intermittent discharges were coming from homes, yards, and businesses that backed onto the river. Pictures taken on this flight will be prepared for the Regional Board.”*



Figure 12: Overview of Mexicali (Jul 1975)



Figure 13: Slaughterhouse discharge into New River (Jul 1975)



Figure 14: Discharge from Drain 134 into New River (Jul 1975)

<sup>1</sup> The bright red discharge described was later determined to be a discharge of blood and related wastes from a city slaughterhouse. This slaughterhouse remained in operation until some time around 1993, when it closed.

On May 30, 1975, California Assembly Joint Resolution 30 was introduced memorializing the President and the Secretary of State to seek an executive agreement with the Mexican government to provide assistance in implementing wastewater treatment in Mexican cities which discharge wastes into international streams. This Resolution was passed by the Assembly on March 15, 1976.

On June 4, 1975, the City of El Centro, California, adopted Resolution No. 75-20 expressing support for the City of Brawley's contention that, until the necessary steps were taken by the City of Mexicali to divert the flow of its untreated or partially treated sewage into the New River, the construction of secondary treatment facilities by the City of Brawley would be a waste of taxpayers' money. Shortly thereafter, the City of Calipatria went on record formally protesting the discharge of pollutants into the New River by the City of Mexicali.<sup>1</sup>



Figure 15: Discharge from North Collector into Drain 134 (Jul 1975)<sup>2</sup>

<sup>1</sup> All of these California cities are located within 40 miles of Mexicali in/near the New River watershed (see map shown in Figure I-1, page x).

<sup>2</sup> Drain 134 is a significant tributary to New River, which courses through the heart of the City. During the 90's, the open drain was replaced with an underground pipeline.

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