

DUPLICATE ORIGINAL
INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

Minute No. 288

Ciudad Juarez, Chihuahua
October 30, 1992

**CONCEPTUAL PLAN FOR THE LONG TERM SOLUTION
TO THE BORDER SANITATION PROBLEM OF THE NEW RIVER
AT CALEXICO, CALIFORNIA - MEXICALI, BAJA CALIFORNIA**

The Commission met in the offices of the Mexican Section in Ciudad Juarez, Chihuahua at 1 p.m. on October 30, 1992, to consider a conceptual plan for the long-term solution to the New River border sanitation problem at Calexico, California - Mexicali, Baja California.

The Commissioners referred to recommendations from the IXth United States/Mexico Binational Commission meeting of September 9, 1991 chaired by United States Secretary of State James A. Baker III and Secretary of Foreign Relations of Mexico Fernando Solana. On that occasion the representatives of both Governments agreed that priority attention should be given to the clean-up of the New River and instructed the International Boundary and Water Commission to identify, in the earliest possible time, a framework for solution of the problem.

The Commissioners alluded to the recommendations in Minute No. 264 entitled, "Recommendations for Solution of the New River Border Sanitation Problem at Calexico, California/Mexicali, Baja California Norte," dated August 26, 1980, which are directed at elimination of domestic and industrial wastewater discharges in the New River at the international boundary, as well as implementation of long-term actions for final disposal of these wastewaters and their conveyance away from the international boundary.

Similarly, the Commissioners pointed out the agreement of the two Governments in Commission Minute No. 261 entitled, "Recommendations for the Solution to the Border Sanitation Problems," dated September 24, 1979, which establishes the common criteria to be considered by the Commission to provide an adequate solution to these problems.

The Commissioners made note that the New River originates approximately 22 miles (35.3 kilometers) south of the international boundary and follows a northerly course through Mexicali, B.C. After crossing the international boundary at Calexico, CA, the river channel continues past farmlands and several communities in the Imperial Valley to discharge to the Salton Sea, approximately 60 miles (96 kilometers) north of the United States/Mexico boundary.

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The Commissioners referred to the fact that the Government of Mexico has constructed rehabilitation works and expanded the sewage collection system of the City of Mexicali intended to meet the quality standards established in Minute No. 264. In this context, they agreed that the jointly financed works under Minute No. 274 entitled, "Joint Project for the Improvement of the Quality of the Waters of the New River in Calexico, California - Mexicali, Baja California," dated April 15, 1987, improved the quality of the waters in the New River at Calexico - Mexicali. These works consisted of: a) acquisition of sewer system cleaning equipment; b) rehabilitation of two pumping stations; and c) construction of a new pumping station.

The Commissioners agreed that in spite of the major effort of the Government of Mexico to rehabilitate and expand the sewage system in Mexicali, the accelerated urban growth has surpassed the coverage capacity of these works such that there are still discharges into the New River of partially treated or untreated industrial and domestic wastewaters that then cross the international boundary.

The Mexican Commissioner informed that the Secretariat of Social Development, the National Water Commission and the government of the State of Baja California had presented to the Mexican Section a number of works and measures proposed or underway. These works and measures have been reviewed in principle by Principal Engineers Conrad G. Keyes, Jr. and Luis Antonio Rascon Mendoza of the United States and Mexican Sections, respectively, who concluded that together these form a conceptual plan for the long-term solution to the New River border sanitation problem.

The Mexican Commissioner pointed out that these works and measures contemplate construction and rehabilitation of facilities to collect, treat, and dispose of the Mexicali wastewaters. In this manner, two separate sanitation systems, Mexicali I and Mexicali II, would be created in the mid-term, along with a general program of actions to eliminate the discharges into the New River of untreated or partially treated domestic and industrial wastewaters. The Mexican Commissioner described the proposed works and measures in the two referenced systems as follows:

Mexicali I Zone

The Mexicali I sanitation system consists of a sewage collection network that handles the wastewaters in two major collectors, the North Collector which discharges into Pumping

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Plant No. 2 upper sump and the South Collector which discharges into Pumping Plant No. 1. There are also three smaller collectors which function as follows: Francisco Villa Collector, which discharges to Pumping Plant No. 1A; the Left Bank Collector which discharges into the lower sump of Pumping Plant No. 2; and the Right Bank Collector, which discharges into the Braulio Maldonado Pumping Plant which lifts the sewage to Pumping Plant No. 2.

Discharges from Pumping Plant No. 2 are conveyed to Pumping Plant No. 1 by two parallel 36-inch (91 cm) diameter asbestos cement class A-5 pressure lines extending 0.57 mi (895 m). These lines then connect to a collector which conveys these waters by gravity for 1.62 mi (2,600 m) with diameters of 54 in (137 cm), 60 in (152 cm) and 72 in (183 cm) for final gravity discharge of its waters at Pumping Plant No. 1.

Pumping Plant No. 1 also receives flows from the South Collector and discharges the wastewaters in two parallel asbestos cement class A-5, 36-in (91-cm) diameter pressure lines for 3.11 mi (5,000 m) to the Mexicali stabilization lagoons located southwest of the city.

Also, Pumping Plant No. 1A discharges wastewaters to this treatment system by means of a 24-in (61 cm) diameter PVC line extending 1.45 m (2,334 m).

Finally, the Mexicali I sanitation system consists of a stabilization lagoon system that discharges into an agricultural drain, thence to the international drain which conveys the effluent by gravity to the New River at the international boundary. The referenced existing lagoon system is designed to serve a population of 376,250 and for a wastewater discharge of 22.34 million gallons per day (980 liters per second). The Mexicali I collection system coverage is shown on the location map enclosed as Figure No. 1.

The appropriate authorities in Mexico are putting into practice a specific industrial wastewater discharge control program which contemplates construction of pretreatment systems or modifications to production processes to eliminate the negative impact of these wastewaters on the waters of the New River or any other receiving body.

Further, the appropriate authorities in Mexico are developing a general sanitation program to relocate irregular human settlements and to eliminate clandestine dumping of solid wastes along the New River banks. Also, the program contemplates construction of erosion control works in specific areas

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through reforestation of lands, pavement of streets, and canalization or elimination of agricultural drains in urban areas which now operate as open wastewater drains.

In conformance with the above, the conceptual plan for the Mexicali I Zone includes the following works and measures:

- 1) Rehabilitation and replacement of sewage lines to cover the design population.
- 2) Rehabilitation of the North Collector to include works that would intercept uncontrolled discharges of wastewaters in Drain No. 134 and convey these by gravity to Pumping Station No. 2.
- 3) Rehabilitation of the New River left and right bank collectors to include an increase in capacity by replacing the present 18-in (46 cm) diameter lines with 30-in (76 cm) lines.
- 4) Acquisition of a sufficient number of sewer line system cleaning trucks, which through their operation in a continuous program permit maintenance of the sewer line conveyance efficiency.
- 5) Application and implementation of a preventative maintenance program for the sanitation system that considers availability of standby pumping equipment and necessary spare parts in components that need them.
- 6) Control untreated slaughterhouse discharges into the New River, incorporating them with prior treatment into the municipal sanitary system.
- 7) Pretreatment, in accordance with Mexican laws in force, of wastewaters generated by industries before discharge into sanitation systems or receiving bodies to include a short-term prohibition of discharges of untreated wastewaters into the New River or its tributaries by previously identified industries.
- 8) Improvement of the operation and maintenance of the lagoon treatment system located in southwest Mexicali.

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- 9) Put into effect in the earliest time possible, a program to characterize the influent into the treatment system planned in this area to identify those substances which would reduce the efficiency of the treatment system and thereby impede the goal of eliminating untreated or partially treated domestic and industrial wastewaters in the New River at the international boundary. The results of this program and that information relating to procedures that Mexican authorities can use for this purpose which can be obtained in the United States will be shared by the two Governments through the Commission.

- 10) Utilization to the maximum extent possible of the effluent from the treatment lagoon system in southwest Mexicali for irrigation of farmlands and an immediate beginning of technical and financial feasibility analyses, under Commission supervision for works that would permit for the benefit of Mexico, disposal of the effluent some distance from the international boundary. The reuse or disposal of treated wastewaters should meet water quality standards that will not endanger the health and well-being of inhabitants in the United States and Mexico in this area and thus avoid the progressive deterioration of drainage waters that flow in the channel of the New River.

- 11) Place into immediate effect plans by Mexico to relocate unregulated settlements, for erosion control works, and eliminating clandestine dumping of solid wastes along the banks of the New River or its tributaries.

The location of the works described in the above points is shown in Figure No. 2.

Mexicali II Zone

The Mexicali II sanitation system is located southeast of the central part of the city and covers an area of Mexicali's present and future urban and industrial growth. Presently, this area is served by an aerated lagoon treatment system called "Sistema de Tratamiento Gonzalez Ortega." The system's

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capacity is insufficient to serve present flows and those estimated in the immediate future. A sewage collection and final disposal system that will serve the estimated population in this area is under final design and partly under construction.

A number of industries are located in the Mexicali II system coverage area. As in the case of the Mexicali I area, the appropriate authorities in Mexico are putting into practice a specific industrial discharge controls program which contemplates construction of pretreatment systems or modifications to production processes to eliminate the negative impact of the discharge of these wastewaters on the waters of the New River and Alamo River, which also flows northwards across the boundary and is located in an area of future urban growth which covers construction of a new port of entry 6.9 mi (11 km) east of the existing port of entry at Calexico and Mexicali.

At the same time, the Mexicali II system contemplates canalization or elimination of agricultural drains in urban areas which now operate as open wastewater drains.

The Mexicali II Zone covers an area shown on Figure No. 3.

In furtherance of the above, the conceptual plan for this area includes the following works and measures:

- 1) Rehabilitation and installation of sewage lines to serve the design population.
- 2) Acquisition of a sufficient number of sewer line system cleaning trucks, which through their operation in a continuous program, permit maintenance of sewer line conveyance efficiency.
- 3) Elimination of all discharges of untreated wastewaters that could flow into the Alamo River by incorporating them into the Mexicali II sanitation system.
- 4) Installation of gravity collectors to replace open air agricultural drains and construct pumping stations to convey domestic and industrial wastewaters for treatment in the new treatment system, giving the first priority to the Mexicali Drain.
- 5) Application and implementation of a comprehensive preventative maintenance program for the

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sanitation system that considers availability of standby pumping equipment and necessary spare parts in components that need them.

- 6) Construction of a new treatment system which will provide service to the Mexicali II sanitation system and permit reuse of its effluent. The planning of this treatment system contemplates financing mechanisms necessary to implement a comprehensive construction, operation and maintenance program for these facilities.
- 7) Immediate initiation of technical and financial feasibility analyses for works that would permit, for the benefit of Mexico, reuse or final disposal of the effluent from the treatment system and eventual disposal away from the international boundary of that effluent that cannot be reused. The reuse or disposal of those treated wastewaters shall be such that they do not endanger the health and well-being of inhabitants of the United States and Mexico and in that area and thus avoid the progressive deterioration of the drainage waters that flow in the channel of New River.
- 8) Pretreatment, in accordance with Mexican laws in force, of wastewaters generated by industries before discharge into the sanitation system or receiving bodies, to include a short-term prohibition of discharges of untreated wastes to the New River or its tributaries from previously identified industries.
- 9) Put into effect in the earliest time possible, a program to characterize the influent into the treatment system planned for this area to identify those substances which would reduce the efficiency of the treatment system and thereby impede the goal of eliminating untreated or partially treated domestic and industrial wastewaters in the New River at the international boundary. The results of this program and that information relating to procedures that Mexican authorities can use for this purpose that can be obtained in the United States shall be shared by the two Governments through the Commission.

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The location of the works described in the above points is shown in Figure No. 4.

The Commissioners considered that if the actions and works proposed for the Mexicali I and the Mexicali II systems are carried out within approximately five years in the above-described manner, discharges of untreated or partially treated domestic and industrial wastewaters to waters of the New River will be eliminated. At the same time, the Commissioners made note that the responsible authorities of the Government of Mexico require at least six months from the day that this Minute is approved by the two Governments to be able to conclude necessary internal arrangements to determine the sources of financing which could include funds from Mexican private enterprise in order to develop the specific plans and work schedules that will be presented to this Commission for approval in a signed Minute that will include a work schedule for execution of the components of the conceptual plan described above. The Commissioners also noted the information of the U.S. Commissioner that his Government is willing to participate financially in components of the conceptual plan since improvements of the water quality of the New River to levels acceptable to the United States and Mexico is in the interest of both countries.

The Commissioners concluded that regardless of the source of financing, the works planned for the Mexicali I and Mexicali II systems should be designed, constructed, operated, and maintained in a manner that will ensure that no untreated domestic and industrial wastewaters are discharged into the New River or its tributaries and that the effluent from treatment facilities in Mexico have a quality such that the waters of the New River at the international boundary meet the standards that are agreed to by the two Governments in a Commission Minute.

Based on the above considerations, the Commissioners agreed to submit the following recommendations for the approval of the two Governments:

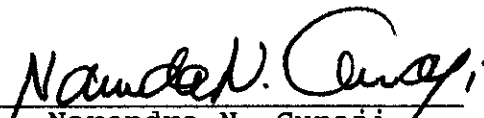
1. The conceptual plan in this Minute shall be approved as the long-term solution to the border sanitation problem of the New River at Calexico, California - Mexicali, Baja California.


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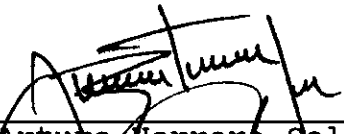
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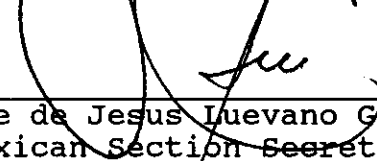
2. In a period of approximately six months from the date that the two Governments approve this Minute, there be presented to the Commission the plans for components of the conceptual plan referenced in this Minute that incorporates the criteria of the two Governments that the works should be designed, constructed, operated, and maintained in a manner that will ensure that no untreated domestic and industrial wastewaters are discharged into the New River or its tributaries and that the effluent from treatment facilities in Mexico have a quality such that the waters of the New River at the international boundary meet standards agreed to by the two Governments in a Commission Minute.
3. The Commission, within 90 days from the date of approval by the Commissioners of the plans referred in Recommendation 2 of this Minute, conclude a new Minute recommending to both Governments the specific projects and schedules of works, and actions contemplated in the conceptual plan, including financing sources. In case that the course of action recommended by the Commission provides that the problem be jointly corrected by both Governments, this matter will be handled in accordance with Minute No. 261.
4. In accordance with Articles 2, 20, 24, and 25 of the 1944 Water Treaty, the design, construction, operation, and maintenance of the treatment plants and major collectors be considered as works constructed and used in fulfillment of the provisions of this treaty and are, therefore, under the supervision of the Commission, and under the jurisdiction of the Mexican Section.

The meeting adjourned.


Narendra N. Gunaji
United States Commissioner


Manuel R. Ybarra
U.S. Section Secretary


J. Arturo Herrera Solis
Commissioner for Mexico


Jose de Jesus Luevano Grano
Mexican Section Secretary