Introduction

FOREWORD

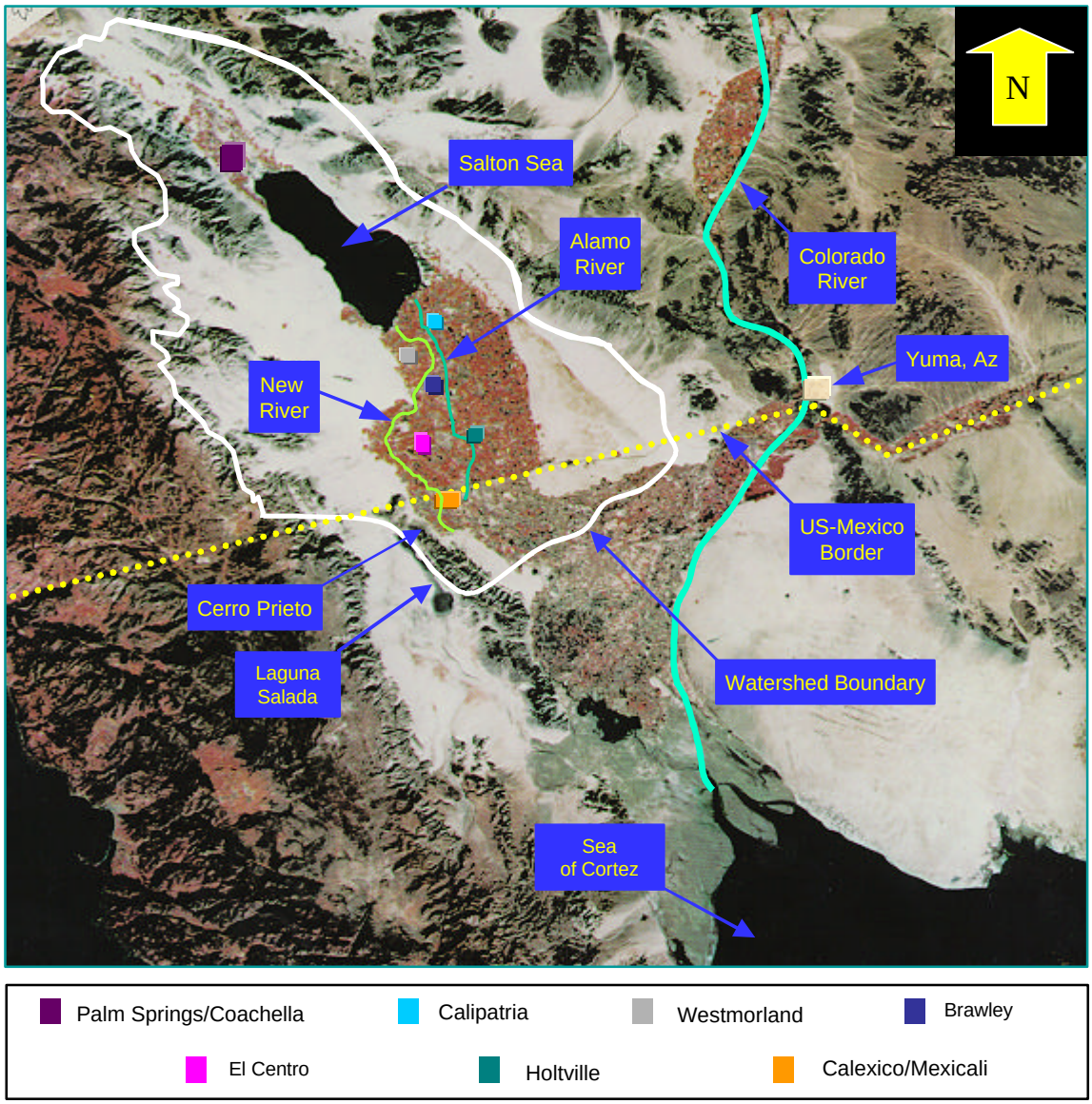
The present day channel of the New River was created in 1905-07 when the Colorado River washed out diversionary works, and the entire Colorado River flow coursed into the Salton basin creating the New and Alamo River channels and the present Salton Sea, thus the name "new" river. The New River channel that was created is approximately 60 miles in length and up to 2/3 of a mile in width within the United States. Within Mexico this natural channelway is discernible for about 13 miles. Following its creation, the New River has been primarily used to convey agricultural drainage from the Imperial and Mexicali Valleys with the inception of irrigated agricultural production in the early 1900's. It also has conveyed treated sewage, and most importantly, raw sewage largely originating from the border city of Mexicali in Mexico. It would not seem an exaggeration to refer to the New River as the most severely polluted river of its size within the United States.

The early history of New River pollution is sketchy, but it is believed to be closely aligned with population growth. In 1920, the total population of Mexicali was only 6,200 people. In 1955, it was estimated that raw sewage from approximately 25,000 people was being discharged into the New River from Mexicali. In 1975, the population jumped to over 100,000 people. The present population of Mexicali is reported as 438,377 by Mexico, but some believe it is much greater—approaching 1 million. A focal point of early complaints regarding New River pollution was odor. In the early fifties, the stench of the river near the boundary, particularly at night, was oftentimes overpowering. Beginning around 1956, the flows of the New River at the boundary increased considerably due to development of agricultural drainage return flows from Mexicali Valley. This dilution water temporarily alleviated the odor problem, but in the sixties the problem became increasingly noticeable as sewage loading increased with the population. Similarly, due to the recent industrial growth in Mexicali, industry is now believed to also be an increasingly significant source of New River pollution.

At present, the New River flow is approximately 200 cubic feet per second (cfs) at the United States/Mexico International Boundary. Its flow at the outlet to the Salton Sea is approximately 800 cfs, which makes it one of the two main tributaries to the Salton Sea--the other main tributary being the Alamo River. These surface waters are within the Salton Sea watershed,

which is a transboundary watershed that includes the Coachella and Imperial Valleys in the United States and a portion of the Mexicali Valley in Mexico. Figure I-1, below, shows the watershed and its major metropolitan areas.

Figure I-1: Salton Sea Transboundary Watershed



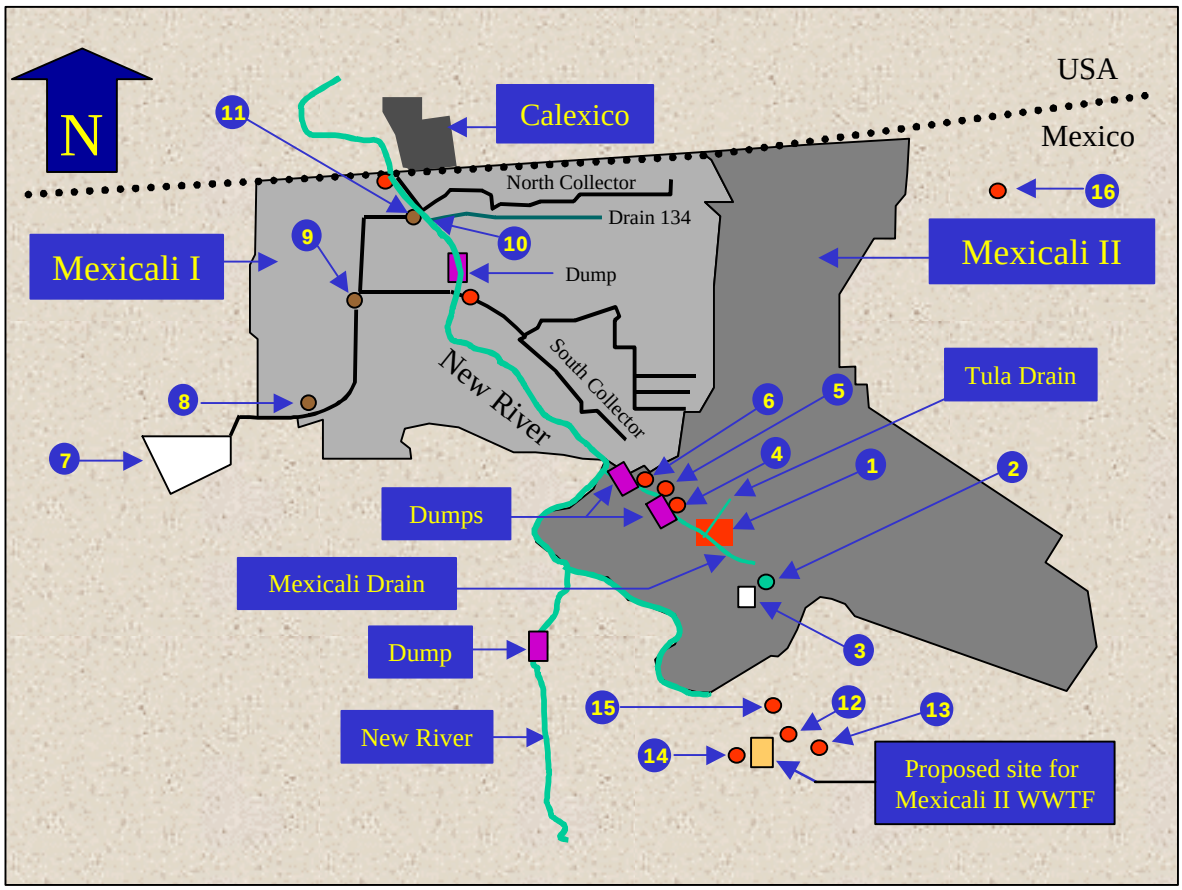
The history of New River pollution is rife with frustration and anger. As the pollution became increasingly noticeable in the 1960's, affected United States communities demanded prompt action from Mexico and responsible U.S. agencies to clean up the river, and became upset when it was not forthcoming. Under the intense attacks, the responsible Mexican and United States officials were pressured into making promises they could not fulfill, further fueling the fires of discontent. That the magnitude involved in correcting the New River problem had been grossly underestimated clearly did not help matters. It was not until the mid 1980's that the extent of the problem was finally recognized, and Mexico and the United States began to work cooperatively to address the problem.

Although this report was prepared to specifically cover Mexico's pollution of the New River, it also bears mention that the track record of New River pollution control within the United States has not always been a great deal better. Even into the 1960's some United States cities were still discharging raw sewage into the river. Three Imperial County dumps were located in the floodplain of the New River (and still are) and until rechannelization of the river were just as bad as similar dumps in Mexicali. Further, for a long time New River pollution from Mexico seemed a ready excuse for polluters on the United States side desiring to continue business as usual. To some extent, the feeling that the New River is as good a place as any to dump anything and everything still prevails for some people on both sides of the border.

For sewage service purposes, the Mexicali metropolitan area is divided into the Mexicali I and Mexicali II areas. Mexicali I includes most of the old, well established neighborhoods to the west, and the existing sewage collection and treatment system in the city, excluding the Gonzalez-Ortega system. In terms of wastewater treatment facilities (WWTF), Mexicali I refers to the existing Zaragoza lagoons. The Mexicali II service area includes the new residential and industrial development to the east and the Gonzalez-Ortega lagoons. However, in terms of WWTFs, Mexicali II refers to the proposed new WWTF. This proposed WWTF is to be located to the south of Mexicali and would treat the sewage from the Mexicali II service area, including the sewage currently being handled by the Gonzalez-Ortega lagoons.

Much of the recent history of New River pollution in Mexico deals with the main sewage infrastructure (e.g., pumping plants and principal sewer lines) within the Mexicali I area and the discharges of wastes from the industrial facilities in Mexicali. Figure I-2, on the next page, shows the Mexicali I and II service areas, key sewage infrastructure, the New River and its main tributaries in Mexicali, and key industries that currently or formerly discharged into the watershed.

Figure I-2: Mexicali Sewage Service Areas and Sewage Infrastructure Network



1. Industrial Area: Hidrogenadora Nacional (Conasupo), Quimica Organica, Quipac, Vitromex
2. Gonzalez-Ortega Lift Station
3. Gonzalez-Ortega Lagoons
4. Kenmex
5. Colector Mexicali II bypass
6. Colector Nutrimex bypass
7. Zaragoza Lagoons
8. Pumping Plant No. 3
9. Pumping Plant No. 1
10. Drain 134
11. Pumping Plant No. 2 and Right Bank Lift Station
12. Hog farm discharge
13. Steel recycling plant
14. Salughterhouse discharge
15. Maseca
16. Fabrica de Papel San Francisco (paper mill)

AUTHOR'S REMARKS

This report provides a general historical overview of New River pollution originating in Mexico. In general, the report follows a chronology of significant events. Viewpoints/opinions of the author and specific explanations are presented with footnotes. Documentation of the pollution prior to 1960 is sketchy, so this overview primarily covers the subsequent period. Photographic documentation prior to 1975 is also sparse.

The California Regional Water Quality Control Board, Colorado River Basin Region, has been actively involved in the cleanup of the New River and has been a significant force in molding the proceedings—both good and otherwise. Thus, to suggest that this document is without bias would be stretching the truth. Quotes can be taken out of context, judging which events are important enough to report is subject to disagreement, and the photographs selected were among many. Nevertheless, I have attempted to present this history in an unbiased fashion, through the extensive use of quotes from letters, reports, and news clippings. The photos speak for themselves.

The origins of photos used cannot be absolutely verified, other than Regional Board staff involved in the New River issue took most of them. Aerial photos from 1975 originated from State Water Resources Control Board staff. The author and a companion took the photos from August 1975 while not on state business. It is likely that a few photos are copies obtained from the Yuma office of the United States International Boundary and Water Commission (IBWC).

In general, I elected to depersonalize the history by using only the names of elected officials and high ranking appointees, although clearly there are individuals within agencies and citizens who should merit special recognition. The preparation of the recent history was particularly challenging since most of the described events relate to actively involved persons/agencies for which it is important that the spirit of cooperation remain to expedite the river cleanup. Therefore, the recent history contains a less personal viewpoint and more excerpted material. Jose L. Angel, principal engineer at the Regional Board involved in Border pollution control, prepared Chapter 7 of this report.

I did not address general border pollution control efforts unless those events specifically focused on the river or became a strong independent driving force in the river's cleanup. Therefore, there is little or no reference to several very important events—in particular the creation of the North American Free Trade Agreement, the Integrated Environmental Plan for the border area, the Border Environmental Cooperation Commission, California Border Environmental Cooperation Commission, and the North American Development Bank.

CLOSING REMARKS

During the past decade, the willingness of Mexico to accept U.S. economic and technical assistance and work in partnership with U.S. agencies in addressing New River pollution has been key in defining progress in the New River cleanup effort. It took dozens of years and untold efforts to build the current working relationship among the agencies and governments involved in the New River cleanup--a relationship that is crucial in reaching a final solution. Whether the U.S. takes full advantage of this cooperation will determine whether a solution to the problem is achieved. Political instability between competing political parties in Mexico may also have a substantial bearing on future progress.

This report is intended to serve as guidance to those who find themselves involved in the effort to clean up the New River. The report should periodically be updated until the day when the river cleanup is complete.