

The Bajagua Project: Finding a Solution to the San Diego-Tijuana Sewage Crisis*

TABLE OF CONTENTS

I.	INTRODUCTION	1040
	A. <i>Population Growth and Maquiladora Expansion</i>	1041
	B. <i>Tijuana's Sewage Infrastructure</i>	1043
	C. <i>Sewage Impacts</i>	1046
	D. <i>A Preview of the Solution</i>	1048
II.	HISTORICAL DEVELOPMENTS AND LESSONS LEARNED	1050
	A. <i>The South Bay Ocean Outfall</i>	1052
	B. <i>The National Environmental Policy Act Litigation</i>	1057
	C. <i>IBWC Violation of Federal and State Laws</i>	1060
III.	A COMPREHENSIVE SOLUTION	1067
IV.	THE USIBWC: LEGAL OBSTACLES.....	1072
	A. <i>The Lack of Congressional Funding for the Fee-for-Services Contract</i>	1074
	B. <i>The Lack of Congressional Funding for Preliminary Studies</i>	1079
	C. <i>The Competition in Contracting Act</i>	1080
	D. <i>The Lack of Mexican Support</i>	1083
V.	SOVEREIGN IMMUNITY	1086
VI.	THE SEPARATION OF POWERS DOCTRINE.....	1087
VII.	CONCLUSION	1089

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I. INTRODUCTION

Raw and partially treated sewage from Mexico continues to flow from the Tijuana River and into the San Diego region with no immediate end in sight. This decades-old problem¹ persists despite numerous international agreements between Mexico and the United States aimed at resolving it,² the spending of hundreds of millions of dollars on treatment and conveyance facilities,³ and the passing of legislation intended to provide a comprehensive, binational solution.⁴ At first glance, reaching the basic goals of treating the sewage and eliminating the risks to human health seems simple. However, diplomatic, technological, political, and legal disputes have resulted from every effort to resolve the issue.⁵ Such disputes have delayed progress and have ultimately prevented the implementation of an effective solution.⁶

1. Untreated sewage from the Tijuana region has flowed into the Pacific Ocean since the late 1920s. At that time Tijuana was approaching a population of approximately 5000 people. Then the city installed its first public sewerage system, which consisted of a small collection system and septic tank that primarily served the downtown region. The effluent from this tank was discharged through a dry wash into the Tijuana River, ultimately emptying into the Pacific Ocean. JON JAMIESON, RAW SEWAGE TO RECLAIMED WATER: THE HISTORY OF SEWERAGE SYSTEMS IN THE METROPOLITAN SAN DIEGO—TIJUANA REGION 26 (2002). The following definitions of effluent are illustrative for purposes of this Comment: (1) “A discharge of pollutants into the environment, partially or completely treated or in its natural state. Generally used in regard to discharges into waters.” (2) “Municipal sewage or industrial liquid waste (untreated, partially treated, or completely treated) that flows out of a treatment plant, septic system, pipe, etc.” U.S. Environmental Protection Agency, *Terminology Reference System*, at http://oaspub.epa.gov/trs/trs_proc_qry.navigate_term?p_term_id=171&p_term_cd=TERM (last updated Mar. 31, 2003).

2. See *infra* note 57 and accompanying text.

3. For instance, approximately \$184 million was spent by the United States International Boundary and Water Commission (USIBWC) on the construction of the South Bay International Wastewater Treatment Plant (IWTP). JAMIESON, *supra* note 1, at 160. The IWTP, which began operations in April 1997, was specifically built to help alleviate cross-border sewage problems, but was only designed to treat sewage to advanced primary levels. *Id.* at 160–61. For a definition of advanced primary treatment, see *infra* note 67. Construction of the South Bay Ocean Outfall (SBOO) came at a price of \$160 million, a cost shared by the USIBWC and the city of San Diego. JAMIESON, *supra* note 1, at 180. The SBOO is a large pipe that runs beneath the ocean floor and eventually discharges effluent from the IWTP into the Pacific Ocean. The IWTP and the SBOO are collectively referred to as the publicly owned treatment works. These facilities are discussed at length in this paper. For further discussion of the IWTP, see *infra* text accompanying note 59–68. For further discussion of the SBOO, see *infra* Part II.A.

4. See Tijuana River Valley Estuary and Beach Sewage Cleanup Act of 2000, 22 U.S.C. § 277d-43 (2000).

5. For a discussion of various wastewater treatment technologies, as well as debates over which technology should be implemented in treating cross-border sewage, see *infra* Parts II.B, III. Legal disputes are discussed in Parts II and IV. For political disputes, see *infra* Part VI.

6. Professor John Minan of the University of San Diego School of Law recently addressed this issue. See John H. Minan, *Recent Developments in Wastewater Management in the Coastal Region at the United States-Mexico Border*, 3 SAN DIEGO INT’L L.J. 51

In the meantime, the Tijuana region generates approximately fifty million gallons of sewage per day (mgd),⁷ an increase of forty-five mgd since the late 1950s.⁸ This drastic increase in sewage production is in large part due to the rapid population and economic growth that Tijuana has experienced over the past few decades.⁹

A. Population Growth and Maquiladora Expansion

The massive growth of Mexican border cities can be traced back to the early 1940s.¹⁰ The onset of World War II resulted in farm labor shortages throughout the western and southwestern United States.¹¹ The Bracero program¹² was developed by the U.S. and Mexican governments to fill this shortage “by allowing large numbers of Mexican nationals to migrate to the United States to engage in seasonal agricultural employment.”¹³ Although it has been largely ignored, this Mexican labor

(2002). Professor Minan examines the Tijuana River Valley Estuary and Beach Cleanup Act of 2000, California’s lawsuit against the USIBWC, and the Bajagua project. *Id.* at 66–80. Professor Minan’s conclusions are cited and discussed throughout this Comment. For further information about Professor Minan, see *infra* note 253.

7. Minan, *supra* note 6, at 52. This is a conservative estimate. Other sources indicate that the Tijuana Region generates as much as seventy million gallons of sewage per day. *Addressing Sewage Treatment in the San Diego-Tijuana Border Region: Implementation of Title VIII of P.L. 106-457: Hearing Before the Subcomm. on Water Res. and Env’t of the House Comm. on Transp. and Infrastructure*, 107th Cong. 2 (2001) [hereinafter *Hearing*] (testimony of Congressman Duncan Hunter).

8. JAMIESON, *supra* note 1, at 111.

9. Demographic information reported by a division of the United Nations which provides population estimates in five-year increments indicates that Tijuana’s population nearly doubled from 1990 to 2000. The population in 1990 was 761,000; by 2000 it had increased to 1,297,000. POPULATION DIVISION, UNITED NATIONS, WORLD URBANIZATION PROSPECTS: THE 2001 REVISION 262 (2002).

10. See PETER N. KIRSTEIN, *ANGLO OVER BRACERO: A HISTORY OF THE MEXICAN WORKER IN THE UNITED STATES FROM ROOSEVELT TO NIXON* 12–13 (1977).

11. *Id.* at 12–13. Farm labor supply was reduced in part by the passage of the Selective Service and Training Act of 1940 and manpower requirements of the armed services. *Id.* at 12. The allure of higher paying and more stable jobs in the defense industry was also a contributing factor. *Id.*

12. “Bracero” means “day-laborer” in Spanish. George C. Kiser & Martha Woody Kiser, *Introduction* to *MEXICAN WORKERS IN THE UNITED STATES: HISTORICAL AND POLITICAL PERSPECTIVES* 1, 4 (George C. Kiser & Martha Woody Kiser eds., 1979). It comes from “brazos,” the Spanish word for arms, and conveys the idea of hiring men who use their arms in performing physical labor. Jorge A. Vargas, *U.S. Border Patrol Abuses, Undocumented Mexican Workers, and International Human Rights*, 2 *SAN DIEGO INT’L L.J.* 1, 13 n.33 (2001).

13. Christopher P. Brown & Stephen Mumme, *Applied and Theoretical Aspects of Binational Watershed Councils (Consejos de Cuencas) in the U.S.-Mexico Borderlands*, 40

support was significant in contributing to the Allied victory.¹⁴

However, by the early 1960s the Bracero program began to conflict with U.S. foreign policy. President Kennedy openly criticized the program for “adversely affecting the wages, working conditions and employment opportunities of our own agricultural workers.”¹⁵ President Johnson agreed¹⁶ and unilaterally terminated the program in 1964.¹⁷

Despite the program’s cancellation, thousands of Mexican workers continued to flow towards the border believing that they would, as had been the case for over two decades, be hired by U.S. employers.¹⁸ When this did not occur, the populations of Mexican border cities such as Tijuana, Ciudad Juárez, Nuevo Laredo, and Ciudad Reynosa dramatically increased.¹⁹

The primary concern for Mexican policymakers at that point was to create new jobs within Mexico in order to offset the loss of Bracero jobs.²⁰ Accordingly, Mexico implemented the National Border Development

NAT. RESOURCES J., 895, 897 (2000). The sudden entry of the United States into the war after the Japanese attacked Pearl Harbor in December 1941 convinced many U.S. officials that the labor shortage was a serious problem. KIRSTEIN, *supra* note 10, at 13. As such, the United States entered into negotiations with Mexico to devise a plan for the importation of Mexican labor. *Id.* While Mexico was initially skeptical of the idea because of the long history of exploitation of Mexican laborers by American employers under previous programs, the two countries eventually reached agreement in 1942. George C. Kiser & Martha Woody Kiser, *Editors’ Introduction* to MEXICAN WORKERS IN THE UNITED STATES: HISTORICAL AND POLITICAL PERSPECTIVES, *supra* note 12, at 67, 67–68.

14. Vargas, *supra* note 12, at 13. As U.S. nationals returned home after the war, millions of braceros and their families were deported back to Mexico. *Id.* at 14. Even so, various economic conditions, grower concerns, and the outbreak of the Korean conflict enabled the program to continue through the 1950s. Kiser & Kiser, *supra* note 13, at 69. Over the program’s twenty-two-year lifetime, more than 4.5 million Mexican workers were brought to the United States for temporary employment. *Id.* at 67.

15. KIRSTEIN, *supra* note 10, at 104.

16. Kiser & Kiser, *supra* note 13, at 69.

17. Vargas, *supra* note 12, at 15–16. Ironically, this resulted in an even greater reliance on Mexican labor, as the number of illegal Mexican workers entering the United States skyrocketed. Kiser & Kiser, *supra* note 13, at 69. The Ambassador of Mexico had warned this would happen:

[T]he absence of an [international labor] agreement would not end the problem but rather would give rise to . . . [t]he illegal introduction of Mexican workers into the United States, which would be extremely prejudicial to the illegal workers and . . . would also unfavorably affect American workers, which is precisely what the legislators of the United States are trying to prevent.

Mexican Embassy, *Why the Bracero Program Should Not Be Terminated*, in MEXICAN WORKERS IN THE UNITED STATES: HISTORICAL AND POLITICAL PERSPECTIVES, *supra* note 12, at 120–21.

18. Vargas, *supra* note 12, at 15–16.

19. *Id.* at 16. Unfortunately, this in turn caused extreme shortages of food, water, shelter, and transportation in the affected border cities. *Id.*

20. George C. Kiser & Martha Woody Kiser, *Editors’ Introduction* to MEXICAN WORKERS IN THE UNITED STATES: HISTORICAL AND POLITICAL PERSPECTIVES, *supra* note 12, at 257, 257; see also Manuel García y Griego, *The Importation of Mexican Contract*

Program (Programa Nacional Fronterizo or PRONAF),²¹ which encouraged foreign-owned corporations, primarily from the United States, to operate manufacturing assembly plants on Mexican soil.²²

Since PRONAF's inception, these plants, known as maquiladoras,²³ have spread along the U.S.-Mexico border, including into Tijuana.²⁴ The problem with maquiladora expansion has been two-fold. First, there is an increase in organic waste associated with accompanying population increases.²⁵ Second, a substantial amount of industrial waste is generated from the factories themselves, which can cause additional stress on Tijuana sewage treatment facilities.²⁶

B. Tijuana's Sewage Infrastructure

Due primarily to a lack of financial resources, the city of Tijuana has had difficulties keeping up with the demands of its population growth.²⁷

Laborers to the United States, 1942–1964: Antecedents, Operation, and Legacy, in THE BORDER THAT JOINS: MEXICAN MIGRANTS AND U.S. RESPONSIBILITY 49, 77 (Peter G. Brown & Henry Shue eds., 1983) (stating that the termination of the labor program prompted Mexican policymakers to create new employment opportunities).

21. Vargas, *supra* note 12, at 16. The program is also referred to as the Border Industrialization Program. Kiser & Kiser, *supra* note 20, at 257.

22. Kiser & Kiser, *supra* note 20, at 257. Implementation of PRONAF appears to have been a drastic measure. It received criticism from within Mexico as an abandonment of attempts to control direct foreign investment and limit foreigner-owned land. Griego, *supra* note 20, at 77. “That Mexican political elites would knowingly embark upon such a program is in part a reflection of how seriously they viewed the elimination of the safety valve afforded by the labor program.” *Id.*

23. Maquiladora reflects the Spanish word “maquila,” which is the portion of flour retained by a miller as payment for grinding a client’s grain. Brown & Mumme, *supra* note 13, at 897 n.11.

24. For example, in the early 1970s there were approximately 290 businesses associated with PRONAF along the border, with a total employment of about 31,000. 117 CONG. REC. 39,454 (1971). By 1998, however, Tijuana alone had more than 2500 businesses associated with international trade incentives. JAMIESON, *supra* note 1, at 173. The city experienced a 1000% increase in maquila-related employment from 1970 to 1988, with total employment estimated at 100,000 in 2000. Brown & Mumme, *supra* note 13, at 898. Reports suggest that trends of industrialization will continue, as employment numbers are projected to increase to between 500,000 and 720,000 by 2025. *Id.*

25. JAMIESON, *supra* note 1, at 45, 173.

26. *Id.*

27. For instance, in 1961 the city of Tijuana postponed construction of a canal and stabilization ponds near Rosarito due to a lack of funds. As a result, raw sewage was discharged into the Arroyo San Antonio de los Buenos and, ultimately, the Pacific Ocean about five miles south of the border. *Id.* at 72–73. Another example occurred in 1972 when plans for a tertiary treatment facility to be constructed three miles south of the border had to be postponed for the same reason. *Id.* at 95. One last example can be seen

Recent studies indicate that only about eighty-five percent of Tijuana's population is connected to the existing sewer system.²⁸ Furthermore, Tijuana's current sewer system often fails, causing massive amounts of untreated sewage to flow into the Tijuana River, which eventually causes beach closures²⁹ and advisories³⁰ from Imperial Beach to

in the cancellation of an extensive two-staged 1975 project that would have ultimately treated sewage for irrigation and industrial purposes. *Id.* at 100. By comparison, a \$46.4 million loan provided by the Inter-American Development Bank allowed the city of Tijuana to move forward with the Integrated Project, which significantly rehabilitated and improved Tijuana's sewerage infrastructure in the mid-1980s. *Id.* at 120–21. Ironically, during the plant's opening ceremonies, it was announced that these improvements "would guarantee that San Diego beaches would never be closed again because of Mexican sewage." *Id.* at 128.

28. Dean J. Gibson & Ana Maria Lemus, San Diego State Univ. Inst. for Reg'l Studies of the Californias, *Map 5: Sewage Infrastructure, in SAN DIEGO-TIJUANA INTERNATIONAL BORDER AREA PLANNING ATLAS 17, 17* (2000), available at <http://www-rohan.sdsu.edu/~irsc/atlas/text/seweng.html>. Tijuana's sewage system initially relies on a series of small sewage collectors in the central and eastern portions of the city. These connect to two main collectors: Ponente 1st etapa (West Interceptor) and Orente 1st etapa (East Interceptor). The sewage is then channeled into a single reinforced concrete conveyer to Pump Station 1, which is located near the U.S.-Mexico border. The pump was placed at the area's low point so that gravity would propel sewage to the pump. The sewage is then pumped to a concrete conveyance canal linked to the treatment facility at San Antonio de los Buenos, which was constructed in 1987. There are two smaller pump stations in the western canyons that collect sewage from communities that are not hooked up to the main collection areas. Playas de Tijuana, a community to the west of Tijuana, also pumps sewage to San Antonio de los Buenos. JAMIESON, *supra* note 1, at 128–31.

29. A closure occurs when a sign placed at a public beach informs the public that the area is closed to swimming or water contact because of water contamination. Closures result from *reported* sewage spills that impact, or may impact, water quality at a public beach. SAN DIEGO COUNTY DEP'T OF ENVTL. HEALTH, SAN DIEGO COUNTY BEACH CLOSURES AND ADVISORIES IN 2002, at 1 (2002), http://www.co.san-diego.ca.us/deh/lwq/beachbay/pdf/2002_beach_closure_advisory_sum.pdf [hereinafter CLOSURES AND ADVISORIES]. There were 129 sewage spills in San Diego County from 2000 to 2002, resulting in 522 days of beach closures. SAN DIEGO COUNTY DEP'T OF ENVTL. HEALTH, SAN DIEGO COUNTY BEACH CLOSURE REPORT: 3 YEAR SUMMARY 1 (2000–2002), http://www.co.san-diego.ca.us/deh/lwq/beachbay/pdf/3_yr_sum_00-02a.pdf (2002) [hereinafter 3 YEAR SUMMARY]. These figures do not include sample results from "chronic" locations where the "presence of known on-going sources of contamination require[s] signs to remain posted . . . to protect public health." *Id.* The San Diego County Department of Environmental Health designated the shoreline at the outlet of the Tijuana River chronically contaminated due to ongoing sewage contamination. CLOSURES AND ADVISORIES, *supra* note 29, at 1 n.1. In 2002, San Diego County led California in the total number of sewage spills as well as in the total volume of sewage spilled. HEAL THE BAY, 13TH ANNUAL BEACH REPORT CARD 3 (2003), available at <http://www.healthebay.org/brc/annual/2003/pdfdocs/fullreport.pdf>.

30. "An advisory or warning is the placement of signs at a public beach that warns the public against swimming and/or water contact due to the increased risk of illness. An advisory/warning is the consequence of bacteria levels in monitoring results exceeding State standards." CLOSURES AND ADVISORIES, *supra* note 29, at 1. While the source of the bacteria is usually unknown, it may include animal and human feces, soils, and decaying plant matter. *Id.* Animal and human wastes often enter coastal waters via sewer overflows, discharges of untreated or partially treated wastes from sewage-treatment plants and sanitary sewers, septic system failures, and stormwater runoff from

Coronado.³¹ For instance, in April 2002, sewage spilled into the Tijuana River on three different occasions, closing beaches in Imperial Beach for nine days.³² The problem has become so pervasive that since 1993 the city of San Diego “has continuously declared a local emergency regarding the escalated discharge of sewage across the international border.”³³

urban, suburban, and rural areas. MARK DORFMAN, NATURAL RES. DEF. COUNCIL, TESTING THE WATER 2002: A GUIDE TO WATER QUALITY AT VACATION BEACHES 1 (2000). Pursuant to state law, the California Department of Health Services (DHS) promulgated monitoring requirements for total coliform, fecal coliform, and enterococcus bacteria. CAL. HEALTH & SAFETY CODE § 115880(c)(2) (West Supp. 2003); see CAL. CODE REGS. tit. 17, § 7958 (2003). There were 542 bacterial exceedance advisories in San Diego County from 2000 to 2002, resulting in 3392 days under advisory. See 3 YEAR SUMMARY, *supra* note 29, at 1. For a further discussion of San Diego County’s beach monitoring program, see *infra* note 34.

31. For recent data on these discharges, see sources cited *supra* note 29. An earlier example occurred in late 1984 when heavy rains eventually led to the spilling of 3.5 million gallons of sewage. Beaches extending from the border north to Coronado were quarantined by the San Diego County Department of Environmental Health. JAMIESON, *supra* note 1, at 117. Another example occurred in 1980, also due to heavy rainfall. Floods caused extensive damage to Tijuana’s sewage infrastructure and approximately twenty-two million gallons of raw sewage flowed into the Tijuana River. Beaches from the border to Silver Strand were quarantined throughout the summer. *Id.* at 111. The city of Imperial Beach borders Mexico. National City is directly north, followed by Coronado. For a map of these cities, the South Bay generally, and the locations of the various treatment plants discussed in this Comment, see AGUA CLARA LLC, BAJAGUA WASTEWATER TREATMENT AND WATER RECLAMATION PROJECT, FINAL ENVIRONMENTAL INFORMATION DOCUMENT 1-11 fig.1.1 (1999).

32. SAN DIEGO COUNTY DEP’T OF ENVTL. HEALTH, SAN DIEGO COUNTY 2002 BEACH CLOSURE & ADVISORY REPORT 2 (2002), available at http://www.co.sandiego.ca.us/deh/lwq/beachbay/pdf/2002a_beach_closure_advisory_report.pdf (indicating that approximately 10.5 million gallons of sewage spilled into the Tijuana River as a result of the first spill, approximately 80,000 gallons of sewage leaked from a broken pipe during the second spill, and an unknown amount of sewage flowed into the Tijuana River during the third spill).

33. CITY OF SAN DIEGO, RESOLUTION No. R-295986: RESOLUTION OF THE CITY OF SAN DIEGO ENDORSING THE DEVELOPMENT OF A PRIVATELY FUNDED MEXICAN FACILITY FOR SECONDARY TREATMENT OF EFFLUENT FROM THE SOUTH BAY INTERNATIONAL WASTEWATER TREATMENT PLANT 1 (adopted Jan. 22, 2002). In response to the current crisis and in anticipation of its continued growth, the U.S. EPA and the Comision Estatal de Servicios Publicos de Tijuana (CESPT) began a comprehensive study known as the Tijuana and Playas de Rosarito Potable Water and Wastewater Master Plan. This study is intended to develop an integrated strategy to improve potable water services, wastewater collection, and wastewater sanitation in the border region. See CAMP DRESSER & MCKEE, ENVIRONMENTAL ASSESSMENT, DRAFT TIJUANA AND PLAYAS DE ROSARITO POTABLE WATER AND WASTEWATER MASTER PLAN 1-2 (2003). This strategy will play a critical role in resolving the current and future Tijuana-San Diego sewage crisis. However, because of the sheer magnitude of cross-border sewage problems, the study is outside the scope of this Comment.

C. Sewage Impacts

While San Diego's beach monitoring program³⁴ provides some public notice of contamination, it by no means guarantees public safety.³⁵ People who engage in recreational activities in sewage-contaminated water are at risk of contracting a number of infectious illnesses and diseases.³⁶ In addition, the sewage spills have had a direct adverse

34. Current federal law does not require states to administer monitoring programs or notify the public when water quality standards are violated. Accordingly, there is a great deal of variation in testing procedures and beach closure standards among the state and local governments that do conduct monitoring. DORFMAN, *supra* note 30, at 29, 33. The Beaches Environmental Assessment and Coastal Health Act of 2000 will change this by requiring states to adopt uniform water quality and performance standards established by the EPA by April 10, 2004. 33 U.S.C. § 1313(i)(1)(A) (2000). In addition, the Act authorizes the EPA to award program grants to aid states, territories, and other municipalities in the development of monitoring programs. *Id.* § 1346(b). California did not have mandatory testing programs for its beaches until 1997. DORFMAN, *supra* note 30, at 33. Since that time, the state's beach monitoring and safety programs have been further developed by the Clean Beaches Initiative and passage of Assembly Bills 411 and 1946 (both now codified in the California Health and Safety Code). *Id.* at 24. One provision of AB 411 mandates that water samples "be conducted on at least a weekly basis, from April 1 to October 31," at beaches that are both (1) visited by more than 50,000 people annually and (2) located near a storm drain that flows in the summer. CAL. HEALTH & SAFETY CODE § 115880 (4)(A)(B) (West Supp. 2003). This time period is sometimes referred to as AB 411. HEAL THE BAY, *supra* note 29, at 2. While AB 411 is a step in the right direction, those who are active in the ocean during the winter or at less frequented beaches during the summer still receive inadequate warning and protection. This is the case in San Diego County. During AB 411, the San Diego County Department of Environmental Health (DEH), in conjunction with five other local wastewater authorities, collects weekly water samples from more than 110 shoreline locations. San Diego County Department of Environmental Health, *Recreational Water Monitoring Program*, at <http://www.co.sandiego.ca.us/deh/lwq/beachbay/rech20monitor.html> (last visited Aug. 20, 2003) [hereinafter *Water Monitoring Program*]. However, during the winter, DEH reduces the monitoring program by about seventy-two percent, and beaches in the northern portion of the county do not receive timely information. HEAL THE BAY, *supra* note 29, at 2. Fortunately, the majority of the problematic beaches in southern San Diego are still monitored during the winter. *Id.*

35. For one, the public does not always heed posted warning signs. Vandals may also remove signs, leaving beaches temporarily without posted warnings. DEP'T OF ENVTL. HEALTH, COUNTY OF SAN DIEGO, COUNTY OF SAN DIEGO: OCEAN ILLNESS SURVEY RESULTS, AUGUST 1997–DECEMBER 1999, at 10 (2000). Also, beach monitoring programs do not directly test for the presence of viruses because current testing methods are either prohibitively expensive or logistically infeasible. HEAL THE BAY, *supra* note 29, at 1.

36. Polluted waters contain several disease-causing organisms called pathogens. DORFMAN, *supra* note 30, at 33. Pathogens present in sewage include various bacteria, viruses, protozoa, and worms. OFFICE OF WATER, U.S. ENVTL. PROT. AGENCY, BEFORE YOU GO TO THE BEACH . . . 2 (1997), available at http://www.cdc.gov/healthyswimming/pdf/epa_beachbro.pdf. Bacterial pathogens can cause gastroenteritis, typhoid fever, septicemia (infections in the bloodstream), dysentery and cholera. *Water Monitoring Program*, *supra* note 34. Diseases associated with viral pathogens include gastroenteritis, severe respiratory disease, fever, rashes, paralysis, aseptic meningitis, myocarditis, respiratory and gastrointestinal infection, and infectious hepatitis (liver malfunction). *Id.* Protozoa can cause cryptosporidiosis and giardiasis (including diarrhea and abdominal

impact on San Diego's tourism industry³⁷ and on the Tijuana River estuary, a national estuarine research reserve.³⁸ The San Diego County Department of Environmental Health considers the estuary's shoreline chronically contaminated due to ongoing sewage discharges.³⁹

The problems associated with these adverse impacts begin with Tijuana's elevated position relative to San Diego. The Tijuana River flows naturally downward from Tijuana and across the border.⁴⁰ It then passes through the Tijuana River estuary and into the Pacific Ocean. Perhaps more importantly, near-shore ocean currents aid in bringing the effluent northward during the winter and spring seasons.⁴¹ Sewage can also be carried into the San Diego region during summer months by the energy produced from southern hemisphere storms.⁴² These currents play

cramps), and dysentery. OFFICE OF WATER, *supra*, at 2. Worms are associated with digestive disturbances, vomiting, relentless coughing, chest pain, fever, and diarrhea. *Id.* "Gastroenteritis, which can also be caused by bacteria, is a common term for a variety of diseases that can cause symptoms such as vomiting, diarrhea, stomach ache, nausea, headache, and fever." DORFMAN, *supra* note 30, at 5. Even those that do not go to the beach may contract illnesses by eating contaminated seafood. However, harmful biological pathogens are generally eliminated when seafood is properly cooked. Thus, health concerns relating to sewage contamination generally only arise in the consumption of raw seafood. Telephone Interview with Robert Romaine, Senior Environmental Health Specialist, Department of Environmental Health, San Diego County (June 12, 2003).

37. JAMIESON, *supra* note 1, at 153-54. The significance of this threat becomes apparent in looking at California's general dependence on tourism. Tourist expenditures in the state's coastal counties in 1997 were approximately \$37.6 billion, providing 387,530 jobs. DORFMAN, *supra* note 30, at 9. A 1999 study conducted by the Public Research Institute of San Francisco State University estimated the total economic impact that visits to California beaches have on the national economy. The study indicates that in 1998, the employment created by tourism at California's beaches generated \$63 billion in revenue. PHILIP KING, S.F. STATE UNIV., *THE FISCAL IMPACT OF BEACHES IN CALIFORNIA* 9, 11 tbl.1.8 (1999). Further, after calculating total direct, indirect, and induced employment, the study found that California's beaches created over 880,000 jobs nationally in 1998. *Id.* at 9, 11 tbl.1.8.

38. U.S. ENVTL. PROT. AGENCY & INT'L BOUNDARY AND WATER COMM'N, FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE INTERNATIONAL BOUNDARY AND WATER COMMISSION INTERNATIONAL WASTEWATER TREATMENT PLANT AND OUTFALL FACILITIES S-1 (1994) [hereinafter FINAL EIS]. Human and industrial wastewater has an especially adverse impact on the estuary because it dilutes salinity levels to the extent that indigenous species find the waters inhospitable. John Altomare, Comment, *Stemming the Flow: The Role of International Environmental Law in Seeking a Solution to the Sewage Treatment Crisis at the Tijuana-San Diego Border Region*, 21 CAL. W. INT'L L.J. 361, 365 (1990).

39. CLOSURES AND ADVISORIES, *supra* note 29, at 1 n.1.

40. Minan, *supra* note 6, at 53.

41. *Id.* at 56.

42. E-mail from Clay Clifton, Department of Environmental Health, Land & Water Quality Division, County of San Diego, to Author (June 30, 2003) (on file with

a major role in creating hazards to human health and in closing San Diego area beaches.

At this point, it is certain that, in the near future, untreated and partially treated sewage discharged from Tijuana will continue to pose increased threats to human health, the environment, and the economy on both sides of the border.⁴³ As a result, there is an urgent need for a comprehensive solution to this sewage crisis. This solution must include the construction of a secondary treatment facility with the capability to treat as much sewage as possible and not only what is required under current bilateral agreements between the United States and Mexico.⁴⁴

D. A Preview of the Solution

In passing the Tijuana River Valley Estuary and Beach Sewage Cleanup Act of 2000 (Tijuana River Act),⁴⁵ Congress has established a foundation for the most comprehensive solution to date. The Act calls for the construction of a privately funded secondary treatment⁴⁶ facility built on Mexican soil.⁴⁷ Under the Act, the United States federal government, acting by way of the U.S. International Boundary and Water Commission (USIBWC),⁴⁸ is to enter into a twenty-year fee-for-services contract with the owner of the Mexican facility.⁴⁹ The Act represents a significant change in policy⁵⁰ regarding the sewage issue. Previous efforts to resolve the problem had focused on improving treatment capabilities at the existing International Wastewater Treatment Plant (IWTP),⁵¹ which is a facility located just north of the international

author) (explaining that while current information is limited, ocean monitoring data, satellite images, and lifeguard reports indicate that south swells can transport effluent plumes from Mexico into the United States).

43. This is inevitable considering that the population of Tijuana is expected to increase from 1.3 million in 2000 to nearly 1.8 million by 2010. POPULATION DIVISION, *supra* note 9, at 262. For a discussion of the health risks and adverse economic impact of sewage-contaminated water, see *supra* notes 36–37.

44. Pursuant to an international agreement with Mexico, the U.S. federal government has committed to treat twenty-five mgd of sewage to secondary levels at a treatment facility on the U.S. side of the border. Minute No. 283 of the International Boundary and Water Commission: Conceptual Plan for the International Solution to the Border Sanitation Problem in San Diego, California/Tijuana, Baja California, July 2, 1990, U.S.-Mex., T.I.A.S. No. 11735, *available at* <http://www.ibwc.state.gov/Files/minutes/minute283.pdf> [hereinafter Minute 283].

45. 22 U.S.C. § 277d-44 (2000).

46. For a definition of secondary treatment, see *infra* note 61.

47. § 277d-44(a)(1).

48. For a discussion of the USIBWC, see *infra* note 63.

49. § 277d-44(c).

50. Minan, *supra* note 6, at 69–70.

51. See AGUA CLARA LLC, *supra* note 31, at S-3 (indicating that the IWTP is located on the northern side of the U.S.-Mexico border); see also Memorandum of Points and

border and owned and operated by the USIBWC.⁵²

This Comment will argue for the implementation of a Mexico-based treatment facility as required by the Tijuana River Act. As will be shown, current treatment facilities are wholly inadequate. The IWTP consistently fails to meet state and federal water quality standards, and the treatment site cannot account for Tijuana's future population growth.

Currently, the only proposal that meets the provisions of the Tijuana River Act is the Bajagua project.⁵³ This project is the superior alternative for a number of key reasons. However, these benefits are best understood after examining the alternatives, as well as the developments that have led to the current legal and political deadlock. These developments and alternatives are discussed in Part II. An in-depth analysis of the Bajagua project will follow in Part III. For now, it is necessary to note that the Bajagua project calls for the construction of a privately funded fifty mgd secondary treatment plant in Mexico.⁵⁴ This facility will account for the future growth of the Tijuana region and the accompanying increase in sewage production. Furthermore, it will also be capable of providing more advanced treatment for purposes of water reclamation.

Parts IV and V will explain the legal hurdles that must be overcome in implementing the Bajagua project. Logically divided into two subdivisions, the first category of hurdles stems from the fact that construction of a treatment facility in Mexico requires either the negotiation of a new binational agreement or the amendment of an existing agreement with the Mexican government. The USIBWC, the federal agency responsible for entering into international agreements with Mexico, has vehemently resisted such negotiations. Thus, the arguments made by the USIBWC in this respect must be dealt with and overcome. These arguments include the Competition in Contracting Act's mandates against sole sourcing, the claim that there is a lack of Mexican support for the project, and the claim that there is a lack of funding to initiate both preliminary studies and the Bajagua project itself.⁵⁵

Authorities in Support of Motion of the People of the State of California for Entry of Proposed Consent Decree at 1, *Surfrider Found. v. Ramirez* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441) (indicating that the USIBWC operates a sewage treatment facility at the IWTP).

52. *Id.*

53. Minan, *supra* note 6, at 70.

54. AGUA CLARA LLC, *supra* note 31, at 1-17.

55. See 41 U.S.C. § 253 (2000) (generally requiring that executive agencies obtain open competition when contracting for property or services); USIBWC's Response to Second Supplemental Brief in Support of Motion to Allow Agua Clara LLC to

The second subdivision of legal problems stems from the foundational tenets of our legal system, specifically the separation of powers doctrine and the recognition of sovereign immunity.

Finally, it should be noted that while sewage discharged from San Diego-based treatment facilities clearly contributes to the region's water quality and environmental health problems,⁵⁶ discussion of these discharges is outside the scope of this Comment.

II. HISTORICAL DEVELOPMENTS AND LESSONS LEARNED

Mexico and the United States realized the severity of cross-border sewage problems decades ago. Accordingly, the two nations entered into a number of international agreements aimed at resolving the dilemma.⁵⁷ One of the most significant of these agreements, Minute 283, was signed in July 1990.⁵⁸ Under Minute 283, Mexico and the United States agreed to build an international treatment facility in the United States, just north of the international border.⁵⁹ The United States

Participate Amicus Curiae and Opposition of USIBWC to Request for Judicial Notice Regarding Second Supplemental Brief at 4, 6, *Ramirez* (No. 99-CV-2441) (arguing that (1) the Tijuana River Act "cannot be construed as legislative authority for the USIBWC to sole-source" the fee-for-services contract, and (2) Mexico is not a Bajagua project supporter); *see also* sources cited *infra* notes 214, 239 (indicating that the USIBWC contends it is unable to negotiate treaty minute negotiations and implement the Tijuana River Act because of a lack of congressional funding).

56. For statistics regarding San Diego-based sewage discharges, see San Diego Environmental Protection Agency, *Sewage Spill Data*, at <http://www.swrcb.ca.gov/rwqcb9/programs/sso/sso%20data.html> (last visited Aug. 20, 2003).

57. For a description of minutes, see *infra* note 63; *see also* Minute 283, *supra* note 44. *See generally* Treaty Between the United States of America and Mexico Respecting Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, Feb. 3, 1944, U.S.-Mex., 59 Stat. 1219 (pronouncing the intent of both countries to provide preferential attention to the solution of all border sanitation problems that relate to beneficial uses); Minute 261 of the International Boundary and Water Commission: Recommendations for the Solution to the Border Sanitation Problems, Sept. 24, 1979, U.S.-Mex., 31 U.S.T. 5099 (addressing border sanitation problems related to cross-border waters); Minute 270 of the International Boundary and Water Commission: Recommendations for the First Stage Treatment and Disposal Facilities for the Solution of the Border Sanitation Problem at San Diego, California-Tijuana, Baja California, Apr. 30, 1985, U.S.-Mex., T.I.A.S. No. 11267 [hereinafter Minute 270] (providing for the construction of Mexican sewage treatment facilities); Minute 296 of the International Boundary and Water Commission: Distribution of Construction, Operation and Maintenance Costs for the International Wastewater Treatment Plant Constructed Under the Agreements in Commission Minute No. 283 for the Solution of the Border Sanitation Problem at San Diego, California/Tijuana, Baja California, Apr. 16, 1997, U.S.-Mex., *available at* <http://www.ibwc.state.gov/Files/Minutes/Min296.pdf> [hereinafter Minute 296] (distributing the financial cost of the International Wastewater Treatment Plant).

58. Minute 283, *supra* note 44.

59. *Id.* at 5. The commissioners of both the United States and Mexican sections of the International Boundary and Water Commission felt that this facility (and its

agreed to treat⁶⁰ twenty-five mgd to “secondary”⁶¹ standards.⁶² The agreement further prescribed that the USIBWC⁶³ would design, construct, and operate the treatment facility.⁶⁴ In 1994 the USIBWC and the EPA

accompanying pipeline system) “would permanently and definitively resolve the existing border sanitation problem.” *Id.* at 4–5. However, “[t]his new agreement clearly was not a comprehensive solution because it did not address wet-weather stormwater flows, the inadequacy of the San Antonio plant, or the need for more capacity beyond the agreed upon twenty-five mgd.” Minan, *supra* note 6, at 62. For a description of the International Boundary and Water Commission, see *infra* note 63. For a brief description of the San Antonio de los Buenos treatment facility, see *supra* note 28. Minute 283 was a long time coming, as Congress had already authorized the construction of an international wastewater treatment plant three years earlier. Minan, *supra* note 6, at 62. Congressional authorization is found in the Water Quality Act of 1987. 33 U.S.C. § 1251.

60. Wastewater treatment methods involve either unit operations (the application of physical forces) or unit processes (the removal of contaminants via chemical or biological reactions). METCALF & EDDY, INC. ET AL., *WASTEWATER ENGINEERING: TREATMENT AND REUSE* 11 (4th ed. 2003). Current technology combines unit operations and unit processes to provide the following levels of treatment: preliminary, primary, advanced primary, secondary, and advanced (or tertiary). *Id.* Preliminary treatment involves the removal of large objects such as “rags, sticks, floatables, grit, and grease that may cause maintenance or operational problems.” *Id.* Primary treatment usually involves the use of sedimentation to remove “a portion of the suspended solids and organic matter from the wastewater.” *Id.* For a definition of advanced primary treatment, see *infra* note 67. For a definition of secondary treatment, see *infra* note 61. For a definition of advanced or tertiary treatment, see *infra* note 173.

61. In secondary treatment, “[b]iological processes are added to break down organic matter in the primary effluent by oxidation and production of bacterial biomass. Biological waste treatment systems, based on bacterial decomposition of organic matter, can be classified as activated sludge, waste stabilization ponds . . . , and trickling filters.” U.S. ENVTL. PROT. AGENCY, *PROGRESS IN WATER QUALITY: AN EVALUATION OF THE NATIONAL INVESTMENT IN MUNICIPAL WASTEWATER TREATMENT* 2-27 tbl.2-2 (2000). Secondary treatment standards, which involve effluent limitations for suspended solids, chemical and biological oxygen demand, and pH levels, are prescribed by the Clean Water Act. 40 C.F.R. § 133.102 (2001).

62. Minute 283, *supra* note 44, at 4.

63. The IBWC was established by an international convention between the United States and Mexico in 1889. It consists of a U.S. section and a Mexican section. Treaty provisions that call for joint action or agreements by the two governments are handled by or through the U.S. Department of State and the Secretariat of Foreign Relations of Mexico. The IBWC applies the rights and obligations assumed by each government under broad treaties. It does this through smaller more specific agreements (subject to approval by each government), which are recorded as minutes. Once signed by both governments, the minutes are binding. International Boundary and Water Commission, *About the IBWC*, http://www.ibwc.state.gov/Files/About_us.pdf (last visited Aug. 20, 2003).

64. Mexico is required to contribute to the costs of construction as follows: Under Minute 270, the Mexican government committed to the construction of a number of sanitary wastewater treatment and disposal facilities. Minute 270, *supra* note 57. However, Minute 283 established that a portion of those funds would be reallocated to construction of the IWTP: “The cost corresponding to Mexico [for construction of the IWTP] shall be in an amount . . . equal to that which would have been used in the

solidified plans to build the IWTP and accompanying outfall facilities.⁶⁵

These plans began to materialize when the USIBWC completed construction and began operation of the IWTP in 1997.⁶⁶ However, because the plant only treats to “advanced primary”⁶⁷ levels, the IWTP does not live up to the mandates of Minute 283.⁶⁸ As will be shown below, the USIBWC’s inability to meet secondary treatment standards is at the core of the current legal and political impasse. The crucial developments that led to the USIBWC’s violation of federal and state laws are discussed below. More importantly, however, these developments provide critical lessons as to how a comprehensive solution may be accomplished.

A. The South Bay Ocean Outfall

The South Bay Ocean Outfall (SBOO) may pose the most serious obstacle to protecting San Diego beaches from the environmental and health risks of Tijuana’s sewage. The SBOO discharges partially treated sewage into an ocean current that could bring the sewage to shore. As such, a comprehensive solution must be prepared to address the SBOO in the future.

As mentioned above, the IWTP treats twenty-five mgd of Tijuana’s sewage to advanced primary levels. After receiving treatment at the IWTP, the effluent flows through the South Bay Land Outfall (SBLO)⁶⁹

construction, operation and maintenance of the treatment plant planned for the Rio El Alamar.” Minute 283, *supra* note 44, at 6. This amount was later fixed at \$16.8 million, to be paid to the United States in ten annual payments. Minute 296, *supra* note 57, at 4.

65. For the specific documents and evaluations that resulted in this decision, see *infra* Part II.B. For a discussion of these outfall facilities, see *infra* Part II.A.

66. JAMIESON, *supra* note 1, at 160.

67. Advanced primary treatment generally involves a process whereby suspended solids and organic matter are removed from wastewater by the application of chemicals or filtration devices. METCALF & EDDY, INC. ET AL., *supra* note 60, at 11. Under optimal circumstances, the application of chemicals can result in the removal of 80% to 90% of the total suspended solids (TSS), 50% to 80% of the biochemical oxygen demand (BOD), and 80% to 90% of the bacteria. *Id.* at 497. However, conservative estimates suggest a BOD-removal efficiency of 50%. U.S. ENVTL. PROT. AGENCY, *supra* note 61, at 2-26 n.1, 2-27. BOD is a measurement that allows scientists to compare the relative polluting strength of different organic substances. The widest application of the BOD test, however, is for measuring waste load concentrations to (influent load) and discharged from (effluent load) [treatment facilities] and evaluating the BOD-removal efficiency of these treatment systems.

Id. at 1-5. For an in-depth discussion of BOD, see *id.* at 2-10.

68. Recall that Minute 283 calls for the construction of a *secondary* treatment facility. See Minute 283, *supra* note 44, at 5.

69. The SBLO is an underground concrete pipe that is 12,300 feet long, 114 inches in diameter, and delivers effluent from the IWTP to the SBOO. JAMIESON, *supra* note 1, at 144. The SBLO was fully funded by the USIBWC and completed in March 1994. *Id.* at 152. The United States committed to building this pipeline, as well as the SBOO, in Minute 283. Minute 283, *supra* note 44, at 6.

and the SBOO until it is finally discharged into the Pacific Ocean. The SBOO is eleven-feet wide in diameter and runs westward underneath the ocean floor for about 3.5 miles until it discharges the effluent at a depth of ninety-three feet.⁷⁰ The outfall was a necessary addition to the border treatment facilities because the United States has stringent requirements for discharging effluent into receiving waters.⁷¹ The purpose of discharging effluent at these depths is to help ensure that the effluent does not return to shore.⁷²

The city of San Diego (City) was responsible for the planning and construction of the SBOO and began the environmental review process pursuant to the California Environmental Quality Act (CEQA).⁷³ However, construction of the SBOO was delayed in 1994 when the Surfrider Foundation (Surfrider)⁷⁴ brought suit against the City for failing to comply with the environmental impact report (EIR)⁷⁵ standards mandated by CEQA.⁷⁶ Surfrider contended that the City was circumventing

70. JAMIESON, *supra* note 1, at 179–80.

71. *Id.* at 142.

72. DEV. & ENVTL. PLANNING DIV., CITY OF SAN DIEGO, SOUTH BAY TUNNEL AND OCEAN OUTFALL: ENVIRONMENTAL IMPACT REPORT 3.0-1 (1995).

73. CEQA requires governmental agencies to conduct environmental impact reports (EIRs) for proposed projects in order to help ensure that the environment is not adversely impacted. CAL. CODE REGS. tit. 14, § 15003 (2003).

The EIR is the primary means of achieving the Legislature's considered declaration that it is the policy of this state to "take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state." The EIR is therefore "the heart of CEQA." [It] is an "environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." . . . If CEQA is scrupulously followed, the public will know the basis on which its responsible officials either approve or reject environmentally significant action, and the public, being duly informed, can respond accordingly to action with which it disagrees.

Laurel Heights Improvement Ass'n v. Regents of the Univ. of Cal., 764 P.2d 278, 282–83 (Cal. 1989) (in banc) (citations omitted).

74. "The Surfrider Foundation is a non-profit environmental organization dedicated to the protection and enjoyment of the world's oceans, waves and beaches for all people, through conservation, activism, research and education." Surfrider Foundation, *Surfrider Mission & Principles*, at <http://www.surfrider.org/mission.htm> (last visited Aug. 20, 2003).

75. For a description of the function and importance of the EIR, see *supra* note 73.

76. *Surfrider Found. v. City of San Diego*, No. D026312 (Cal. Ct. App. Aug. 21, 1997). Surfrider contended that the City (1) failed to comply with CEQA's procedural requirements for a focused EIR, (2) failed to comply with CEQA's substantive requirements because the City's focused EIR neither adequately described the project, its significant environmental effects, and its growth-inducing and cumulative impacts nor provided a basis for the finding that there would be no significant environmental effects

CEQA's statutory protections by not disclosing potentially adverse effects to the city council and the public.⁷⁷

This litigation was considered necessary because the City planned to proceed with construction of the SBOO even though the full impact of the South Bay gyre remained uncertain.⁷⁸ The South Bay gyre is a predominantly counterclockwise ocean current⁷⁹ off the coast of San Diego and is present approximately eighty-seven percent of the time.⁸⁰ The complaint sought to enjoin construction of the SBOO until independent studies determined that the gyre would not transport sewage from the outfall into the San Diego region.⁸¹

Surfrider's concerns stemmed from the fact that the City's own engineers and expert consultants recommended further analysis of the gyre before proceeding with construction.⁸² These expert consultants informed the City that the "potential for onshore transport of the effluent plume was not addressed [in the engineers' study of the outfall]. The selected diffuser site is located on the inshore side of a current gyre that could bring effluent ashore in this area."⁸³ Experts from the Scripps Institution of Oceanography, who have studied the gyre since the late 1960s, reached similar conclusions. Doctors Douglas Irman, Pearn P. Niiler, and Scott Jenkins of Scripps found that sewage discharged from the outfall will rise to the surface in significant quantities, impact South Bay beaches in undiluted amounts, and pose threats of contamination and disease.⁸⁴

from the operation of the outfall, and (3) did not provide an adequate statement of overriding considerations. Appellant's Opening Brief at 49, 61, 78, 82, Surfrider Found. v. City of San Diego (No. D026312).

77. Appellant's Opening Brief at 2, Surfrider Found. v. City of San Diego (No. D026312).

78. Interview with Marco Gonzalez, Chairman, San Diego Chapter of the Surfrider Foundation and Senior Attorney, San Diego BayKeeper, in San Diego, Cal. (Aug. 12, 2002).

79. I ENG'G-SCI., INC., TIJUANA OCEANOGRAPHIC ENGINEERING STUDY: OCEAN MEASUREMENT PROGRAM 2-7 (1988).

80. *Id.* at 1-1. These currents flow onshore at Imperial Beach and then turn north and flow alongshore for 10.6 miles to Coronado. At this point, they turn and flow offshore to the west for almost ten miles and then to the south to complete the circle. Appellant's Opening Brief at 21, Surfrider Found. v. City of San Diego (No. D026312).

81. Appellant's Opening Brief at 89, Surfrider Found. v. City of San Diego (No. D026312).

82. Engineers hired by the City concluded that "[t]he existing current meter data needs to be examined to determine the potential for plume impingement from the South Bay outfall on the Point Loma outfall and the near-shore areas, and whether plume impingement will affect the ability of the ocean outfalls to meet receiving water standards." ENG'G-SCI., INC., TIJUANA OCEANOGRAPHIC ENGINEERING STUDY: PHASE III MEASUREMENT PROGRAM 4-1 (1989).

83. KINNETIC LABS., INC., MARINE ENVIRONMENTAL IMPACTS OF THE PROPOSED SECONDARY TREATMENT SYSTEM 5-45 (1991) (citation omitted). Other experts hired by the City—Kinnetic Laboratories in conjunction with CWP Geosciences—stated that the "South Bay alternative is not desirable because the gyre condition could periodically allow effluent to circulate back into the nearshore areas, thereby inhibiting dispersion of the effluent." Appellant's Opening Brief at 22, Surfrider Found. v. City of San Diego (No. D026312).

84. Appellant's Opening Brief at 21–22, Surfrider Found. v. City of San Diego

Despite these warnings, the trial court ruled that the City had complied with CEQA procedures and the appellate court affirmed.⁸⁵ As such, the SBOO was constructed and began discharging effluent into the Pacific Ocean in 1999.⁸⁶ However, in subsequent litigation with the USIBWC, Surfrider eventually achieved its goal of reviewing the gyre's impact.⁸⁷ This litigation will be discussed in greater detail below. At this point, it should be noted that Surfrider entered into a consent decree with the USIBWC.⁸⁸ The consent decree calls for a thorough investigation⁸⁹ as to

(No. D026312). Under normal circumstances, a process called "initial dilution" results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

STATE WATER RES. CONTROL BD., CAL. ENVTL. PROT. AGENCY, CALIFORNIA OCEAN PLAN: WATER QUALITY CONTROL PLANT, OCEAN WATERS OF CALIFORNIA 25 (2001).

85. In March 1996, the trial court ruled:

(1) "the City did not abuse its discretion in approving the Focused Environmental Impact Report"; (2) "there is substantial evidence to support the City's finding that there will not be significant effects on the environment from the South Bay Ocean Outfall"; (3) "the City's statement of overriding considerations [was] adequate"; and (4) "the City appropriately followed CEQA procedures."

Appellant's Opening Brief at 9-10, *Surfrider Found. v. City of San Diego* (Cal. Ct. App. Aug. 21, 1997) (No. D026312) (quoting Ruling Re: Petition for Writ of Mandate at 1-2, *Surfrider Found. v. City of San Diego*, No. 690027 (Cal. Super. Ct. 1996)) (alteration in original).

86. JAMIESON, *supra* note 1, at 179.

87. Consent Decree at 10-11, *Surfrider Found. v. Ramirez* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441) (current Surfrider-USIBWC consent decree).

88. *Id.*

89. Under phase one of the investigation, the parties will designate an expert to evaluate whether current monitoring programs provide enough data to determine whether the SBOO is the cause of the bacterial exceedances. *Id.* at 11. If current monitoring is insufficient in this regard, the USIBWC, in conjunction with a private contractor and physical oceanographer, will submit recommendations for phase two, which includes the design of a monitoring program that can identify the cause of the bacterial exceedances. *Id.* at 14. The deadline for submission of a draft report of phase one is April 15, 2004, and the deadline for submission of the final draft is June 15, 2004. Notification of Deadline Extension Pursuant to Section XIV.B of the Surfrider-IBWC Consent Decree at 2, *Ramirez* (No. 99-CV-2441). The development of a new ocean monitoring technology known as CODAR, which was developed by joint efforts of the Scripps Institute of Oceanography and the city of Imperial Beach, will most likely be used in phase two. CODAR is a radar system that transmits radio waves across the ocean's surface and then processes the return signal. In doing so, scientists can map both surface and underwater currents. Furthermore, scientists can see how these currents move in real time. Leslie Wolf Branscomb, *Imperial Beach, Scripps Team in Bid to Solve Beach Pollution*, SAN

whether effluent discharged from the SBOO is the source of bacterial exceedances⁹⁰ recorded at various monitoring stations⁹¹ off the coast of southern San Diego and northern Baja. The impact of the gyre will be evaluated in these studies as well.⁹² These studies are currently underway.

The results of these studies may have a profound impact on the future of current treatment facilities. If it is found that the SBOO has caused environmental impacts along San Diego's beaches, the release point of the outfall may have to be moved out of the gyre's reach at astronomical cost. These developments must be taken into account in order to provide a comprehensive solution to the Tijuana sewage dilemma. As will be noted below, the Bajagua project, which includes water reclamation capabilities, is the only alternative that accounts for this problem. Reclaiming the water is an extremely efficient solution because it will reduce the amount of effluent discharged from the SBOO and provide a much-needed resource.

DIEGO UNION-TRIB., Jan. 30, 2002, at B1.

90. The consent decree defines bacterial exceedances as collected samples that contain bacteria which exceed any of the fecal or total coliform density limitations established by the Water Quality Control Plan for Ocean Waters of California (also known as the California Ocean Plan). Consent Decree at 5, *Ramirez* (No. 99-CV-2441) (current Surfrider-USIBWC consent decree). The specific limitations are as follows:

- (1) Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).
- (2) The fecal coliform density based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.

STATE WATER RES. CONTROL BD., *supra* note 84, at 4. These limitations apply to a zone extending from the coastline out one thousand feet into the ocean or to a depth of thirty feet, whichever is further from the coastline. It also includes kelp beds and areas designated by the Regional Board for water contact sports that are outside the zone. *Id.* For more information on the California Ocean Plan, see *infra* note 133.

91. These monitoring stations were set up under the Receiving Water Monitoring Program instituted pursuant to the September 15, 1999 Memorandum of Understanding No. IBM 99-34 between the city of San Diego and the USIBWC. The City takes water samples at the stations, analyzes them, and then sends monthly and annual reports to the USIBWC. Consent Decree at 6-7, *Ramirez* (No. 99-CV-2441) (current Surfrider-USIBWC consent decree).

92. *Id.* at 12. Other possible causes of the bacteria exceedances that will be considered include the following: (1) partially treated and raw sewage discharged from Punta Banderas, Mexico, (2) sanitary system overflows at Playas, Mexico, (3) raw sewage discharged into the Tijuana River, and (4) sanitary sewer overflows and nonpoint source pollution in southern San Diego. *Id.* at 11-12.

B. The National Environmental Policy Act Litigation

The National Environmental Policy Act litigation discussed below is useful in understanding Tijuana's present sewage circumstances because it illustrates significant historical developments. More importantly, however, it provides a key lesson concerning the various alternatives and technologies available in attempting to adequately treat sewage.

As mentioned earlier, Minute 283 provided the basis for the construction of the IWTP.⁹³ Under the agreement, the USIBWC is required to treat twenty-five mgd of sewage to secondary levels.⁹⁴ The National Environmental Policy Act of 1969 (NEPA)⁹⁵ mandates that federal agencies, such as the USIBWC, "identify and develop methods and procedures . . . which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations."⁹⁶ In other words, federal agencies must evaluate all feasible alternative courses of action when making decisions that significantly impact the environment.⁹⁷ To comply with NEPA,

93. See *supra* text accompanying notes 57–68; see also Minute 283, *supra* note 44, at 5. The IWTP began operating in 1997. It initially discharged its effluent through sewage facilities at Point Loma because the SBOO had not yet been completed. The infrastructure that conveyed the effluent to Point Loma facilities was designed only for emergency purposes. As such, the IWTP could only discharge thirteen mgd. Once the SBOO was completed, the IWTP began treating its intended twenty-five mgd to advanced primary levels. JAMIESON, *supra* note 1, at 160, 162.

94. See *supra* text accompanying notes 58–68; see also Minute 283, *supra* note 44, at 5.

95. 42 U.S.C. § 4321 (2000). The purposes of NEPA include the following:

To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

Id.

96. *Id.* § 4332. "[NEPA] requires federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions." U.S. Environmental Protection Agency, *National Environmental Policy Act (NEPA)*, at <http://www.epa.gov/compliance/nepa/index.html> (last updated Apr. 8, 2003).

97. When the agency makes recommendations about actions that significantly impact the environment, the proposal must include the following:

the environmental impact of the proposed action, . . . any adverse environmental effects which cannot be avoided should the proposal be implemented, . . . alternatives to the proposed action, . . . the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term

federal agencies prepare statements known as environmental impact statements (EISs).⁹⁸

In 1994, the USIBWC issued a final environmental impact statement (FEIS).⁹⁹ Pursuant to NEPA, the FEIS evaluated various plans to deal with the escalating cross-border sewage problem and ultimately identified the IWTP and ocean outfall facilities as the preferred alternative.¹⁰⁰ More importantly however, the FEIS proposed using an activated sludge technology to attain secondary treatment levels.¹⁰¹

After large solids are removed from the wastewater during primary treatment, an activated sludge technology is one method that can be used to remove remaining pollutants and achieve secondary treatment standards.¹⁰² This generally involves “a biological process that uses microorganisms to remove dissolved organic matter from the wastewater. At the end of this process, the microorganisms fall to the bottom of the secondary sedimentation tanks and are collected.”¹⁰³ This by-product, which accumulates at the bottom of the tank, forms a sludge that must be removed on a regular basis. The treated effluent will then “be chlorinated, if necessary, to kill disease-causing organisms and

productivity, and . . . any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

42 U.S.C. § 4332(C)(i)–(v).

98. U.S. Environmental Protection Agency, *supra* note 96.

99. FINAL EIS, *supra* note 38.

100. *Id.* at S-13. Three other main options were considered. Under the no action alternative, the United States would have built no new treatment facilities. *Id.* at S-5. The standby interceptor project (also known as the return to sender alternative) would have intercepted Tijuana’s wastewater as it crossed the border and pumped it back into Tijuana’s limited sewage system. *Id.* at S-10 to S-11. Neither of these options was viable for two reasons. First, significant health and environmental concerns would continue unabated. *Id.* at S-11, S-12. Second, the EPA and the USIBWC are required to “work within the framework of international treaties and agreements with Mexico.” U.S. ENVTL. PROT. AGENCY & INT’L BOUNDARY AND WATER COMM’N, PUBLIC RECORD OF DECISION FOR THE FINAL ENVIRONMENTAL IMPACT STATEMENT FOR INTERNATIONAL BOUNDARY AND WATER COMMISSION: INTERNATIONAL WASTEWATER TREATMENT PLANT AND OUTFALL FACILITIES, SAN DIEGO COUNTY, CAL. 5 (1994) [hereinafter 1994 RECORD OF DECISION]. In other words, because the United States committed to a twenty-five mgd treatment facility in Minute 283, the no action and return to sender alternatives would violate a binational agreement. The third alternative considered in the FEIS—IWTP on the Tia Juana street site—was similar to the alternative actually chosen except that it called for a different site location. FINAL EIS, *supra* note 38, at S-10. This alternative was not recommended, however, because it would have resulted in “greater adverse environmental impacts.” *Id.* at S-12.

101. FINAL EIS, *supra* note 38, at S-6 to S-7.

102. U.S. Environmental Protection Agency, *International Wastewater Treatment Plant, Long Term Treatment Options Supplemental EIS Fact Sheet*, at <http://www.epa.gov/region09/water/iwtp/eltseisfact.html> (last updated Jan. 27, 1998).

103. U.S. Environmental Protection Agency, *International Wastewater Treatment Plant Project Update*, at <http://www.epa.gov/region09/water/iwtp/iwtp396.html> (last updated Oct. 17, 1996).

dechlorinated to remove potentially toxic chlorine prior to disposal to the Pacific Ocean.”¹⁰⁴

The USIBWC issued a record of decision that solidified its plan to proceed with the IWTP and the activated sludge proposals set out in the FEIS,¹⁰⁵ and the EPA certified that the USIBWC met NEPA requirements.¹⁰⁶ However, the San Diego chapter of the Sierra Club¹⁰⁷ sued, claiming that NEPA procedures had not been followed.¹⁰⁸ Surfrider then intervened in the lawsuit. Specifically, these organizations claimed that the USIBWC violated NEPA procedures by failing to adequately evaluate biological ponding technologies for secondary treatment.¹⁰⁹ These technologies work by allowing “sedimentation and decomposition of wastewater pollutants by natural processes. Algae or mechanical aeration devices can accelerate treatment by the ponds.”¹¹⁰ Completely mixed-aerated (CMA) ponds and advanced integrated pond systems are two types of ponding technologies.¹¹¹

104. *Id.*

105. 1994 RECORD OF DECISION, *supra* note 100, at 1, 19.

106. *Id.* at 11.

107. The Sierra Club is a grassroots environmental organization with chapters throughout the United States and Canada. It was founded in 1892 and currently has approximately 700,000 members. Sierra Club, *Sierra Club History*, at <http://www.sierraclub.org/inside> (last visited Aug. 20, 2003).

108. Notice of Filing of Public Comments Regarding Proposed Consent Decree and Notice of the United States’ Withholding of Its Consent to Proposed Consent Decree at 8, *Surfrider Found. v. Bernal* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441).

109. *Id.* The State Water Resources Control Board provided funding for an evaluation of the merits and feasibility of an advanced integrated pond system. 1994 RECORD OF DECISION, *supra* note 100, at 14. However, the evaluation found that this alternative technology was “too speculative” and that the urgency of chronic border pollution did not allow for the time that would be necessary to implement such technology. *Id.*

110. U.S. Environmental Protection Agency, *supra* note 102.

111. CMA ponds are more efficient than advanced integrated pond systems (AIPS). The AIPS planned for the South Bay would have required a total area of approximately 102 acres, while the CMA technology would only require a total area of approximately thirty-six acres. ENVTL. PROT. AGENCY & INT’L BOUNDARY AND WATER COMM’N, FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT: LONG TERM TREATMENT OPTIONS FOR THE SOUTH BAY INTERNATIONAL WASTEWATER TREATMENT PLANT 1-4 to 1-5 (1999) [hereinafter FINAL SUPPLEMENTAL EIS]. Furthermore, the AIPS alternative would have conflicted with San Diego County’s land use designations. *Id.* at 1-6. CMA ponds treatment works as follows: Influent from the primary treatment facility enters the system at the bottom of the first pond through an oxygenated digester pit. This influent slowly rises and passes through a sludge blanket, where beneficial bacteria start to break down the pollutants in the wastewater. Larger particles are trapped and settle to the bottom, where they are further digested by bacteria. After the wastewater flows through the blanket, it circulates through the pond’s other digester pits, where bacteria continue

The USIBWC eventually agreed to evaluate this type of technology, resulting in a 1995 settlement of the NEPA lawsuit.¹¹² The USIBWC later issued its findings in its final supplemental environmental impact statement, identifying the CMA ponds as the preferred alternative for secondary treatment at the IWTP.¹¹³ The CMA ponds technology is superior to activated sludge systems because it is more reliable; produces less sludge; has the lowest capital, maintenance, and operation costs; can be implemented in a more expeditious manner; and has had stronger public support.¹¹⁴

A critical lesson must be learned from the NEPA litigation: A comprehensive solution to the cross-border sewage crisis *must* adopt CMA ponding technology, as it is the most economically efficient and environmentally sound technology to date. This point will be further elaborated in Part III, which provides an in-depth explanation as to why the Bajagua project surpasses other alternatives. However, the crux of the current impasse must first be discussed.

C. USIBWC Violation of Federal and State Laws

As discussed above, the USIBWC finished construction of the IWTP in 1997.¹¹⁵ However, recall that the USIBWC failed to meet its obligations under Minute 283 because the plant did not treat the twenty-five mgd to secondary levels.¹¹⁶ In 1997, the USIBWC and the EPA agreed to begin operating the IWTP despite the plant's deficiencies.¹¹⁷ Thus, a two-stage plan was developed, whereby primary treatment would begin immediately and secondary treatment technology would be implemented at a later date.¹¹⁸ This decision was made in part because it

to break down pollutants. Sludge accumulates at the bottom of these pits. The wastewater then flows to a second pond. The upper portion of this pond is mixed with mechanical aeration. Additional wastes settle in the unaerated bottom portion of the pond. The effluent then flows out of the upper portion of the pond and can be discharged through an ocean outfall. Notice of Filing of Public Comments Regarding Proposed Consent Decree and Notice of the United States' Withholding of Its Consent to Proposed Consent Decree at 14–15, *Bernal* (No. 99-CV-2441).

112. Notice of Filing of Public Comments Regarding Proposed Consent Decree and Notice of the United States' Withholding of Its Consent to Proposed Consent Decree at 8, *Bernal* (No. 99-CV-2441).

113. FINAL SUPPLEMENTAL EIS, *supra* note 111, at 1-6.

114. *Id.*

115. See *supra* text accompanying note 66.

116. See *supra* text accompanying notes 67–68.

117. U.S. ENVTL. PROT. AGENCY & INT'L BOUNDARY AND WATER COMM'N, PUBLIC RECORD OF DECISION FOR THE FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE INTERNATIONAL BOUNDARY AND WATER COMMISSION: SOUTH BAY INTERNATIONAL WASTEWATER TREATMENT PLANT INTERIM OPERATION 1 (1997) [hereinafter 1997 RECORD OF DECISION].

118. BILL SHUSTER, TIJUANA RIVER VALLEY ESTUARY AND BEACH SEWAGE

was clear that the massive debate over secondary treatment technology¹¹⁹ would continue to delay progress.¹²⁰ Another factor in this decision was the need to help alleviate the sewage crisis as quickly as possible and provide some treatment of Mexican wastewater.¹²¹ In other words, treatment of twenty-five mgd to advanced primary levels was better than no treatment at all.

In November 1996, the California Regional Water Quality Control Board (Regional Board) issued a national pollution discharge elimination system (NPDES) permit, which provided waste discharge requirements for the IWTP.¹²² NPDES permits serve as a means of ensuring that individual dischargers, such as the USIBWC, comply with the general effluent limitations¹²³ promulgated under the Clean Water Act.¹²⁴ In

CLEANUP ACT OF 2000, H.R. REP. NO. 106-842, pt. 1, at 4 (2000).

119. See *supra* Part II.B.

120. Minan, *supra* note 6, at 65.

121. 1997 RECORD OF DECISION, *supra* note 117, at 1.

122. Cal. Reg'l Water Quality Control Bd., San Diego Region, Order No. 96-50: Waste Discharge Requirements for the International Boundary and Water Commission, U.S. Section 9 (1996).

123. In 1972, Congress amended the Clean Water Act (formally known as the Federal Water Pollution Control Act) because it had been "inadequate in every vital aspect." *Env'tl. Prot. Agency v. California*, 426 U.S. 200, 203 (1976). Two primary changes were made to remedy these inadequacies. *Id.* at 204. The first focused on establishing stringent point source effluent limitations. *Id.* Effluent limitation is defined in the Clean Water Act as "any restriction established by a State or the Administrator [of the U.S. Environmental Protection Agency] on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into [the nation's waters]." 33 U.S.C. § 1362(11) (2002). Point sources are "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, . . . or vessel or other floating craft, from which pollutants are or may be discharged." *Id.* § 1362(14). Thus, one goal was and continues to be the creation of federal and state standards for specific dischargers and polluters based on current science and technology. The second focuses on enforcing those limitations against dischargers and polluters. *Env'tl. Prot. Agency*, 426 U.S. at 205. This is accomplished through NPDES permits. See *infra* note 124.

124. *Env'tl. Prot. Agency*, 426 U.S. at 205. The NPDES permitting process is specifically provided for in section 402 of the Clean Water Act. 33 U.S.C. § 1342. The Act authorizes the Administrator of the EPA to issue NPDES permits. *Id.* However, state governments may also administer NPDES permits "upon EPA approval of the State's proposal to administer its own program." *Env'tl. Prot. Agency*, 426 U.S. at 208. This authority is set out in section 402(b) of the Act. 33 U.S.C. § 1342(b)(1)-(9). Once the EPA delegates that authority to the state, that state is responsible for issuing permits and enforcing any violations. *Id.* "On May 14, 1973, the Acting EPA Administrator approved the State of California's request to administer its own NPDES permit program . . ." *Env'tl. Prot. Agency*, 426 U.S. at 209. The California State Water Quality Control Board and affiliated regional boards administer the state's NPDES program under the Porter-Cologne Water Quality Control Act. See CAL. WATER CODE § 13160 (1992)

addition, Congress had authorized \$239.4 million in order to fund the construction of both primary and secondary treatment facilities.¹²⁵ However, because the USIBWC and the EPA opted for the two-stage implementation plan, the USIBWC could not meet its waste discharge requirement of treating the twenty-five mgd to secondary levels. Accordingly, the Regional Board issued a cease and desist order that temporarily delayed meeting those requirements.¹²⁶

However, problems began to arise when the USIBWC spent the vast majority of its funding on the IWTP and failed to build a secondary treatment plant.¹²⁷ These problems were compounded by the fact that Congress capped funding for both the primary and secondary treatment facilities at the IWTP site at \$239.4 million.¹²⁸ As a result, the EPA and the USIBWC requested additional funding to construct a CMA ponds secondary treatment facility at the IWTP site.¹²⁹ However, Congress rejected this request, citing as its justification the USIBWC's failure to implement secondary treatment facilities with the original \$239.4 million appropriation.¹³⁰ With no money left to construct a secondary facility, the USIBWC was soon operating its treatment facilities in violation of the Clean Water Act¹³¹ and its NPDES permit.¹³² The USIBWC has also been operating in violation of both the California Ocean Plan¹³³ and the

(providing that the state board is authorized to exercise any powers delegated by the Clean Water Act).

125. Notice of Filing of Public Comments Regarding Proposed Consent Decree and Notice of the United States' Withholding of Its Consent to Proposed Consent Decree at 7, *Surfrider Found. v. Bernal* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441).

126. See Cal. Reg'l Water Quality Control Bd., San Diego Region, Cease and Desist Order No. 96-52 (1996). The cease and desist order amended the USIBWC's compliance schedule by requiring a record of decision for secondary treatment technology by May 1, 1999 and complete construction of secondary treatment facilities by December 31, 2000. *Id.* at 1.

127. The bulk of these funds, approximately \$230 million, was spent on construction of the IWTP and its outfall facilities. Letter from J. Charles Fox, Assistant Administrator, U.S. Environmental Protection Agency, to James T. Walsh, Chairman, Appropriations Subcommittee on VA, HUD, and Independent Agencies (Apr. 14, 2000) (on file with author). A secondary treatment facility could not be built with the limited remaining funds. The proposed CMA ponds treatment facility would cost an estimated \$44 million. Minan, *supra* note 6, at 65-66.

128. BILL SHUSTER, TIJUANA RIVER VALLEY ESTUARY AND BEACH SEWAGE CLEANUP ACT OF 2000, H.R. REP. NO. 106-842, pt. 1, at 4 (2000)

129. FINAL EIS, *supra* note 38, at 3-9.

130. H.R. REP. NO. 106-842, pt. 1, at 4.

131. See 33 U.S.C. § 1311(b)(1)(B) (2000) (requiring that publicly owned treatment facilities comply with secondary treatment effluent limitations).

132. The USIBWC could not meet the compliance schedule set out by the cease and desist order issued by the Regional Board. After two time extensions, the USIBWC still could not come into compliance and was directed to complete secondary treatment facilities. At that point the USIBWC was in violation of its NPDES permit. Minan, *supra* note 6, at 76.

133. The California Ocean Plan was adopted by the State Water Resources Control

San Diego Basin Plan.¹³⁴

Accordingly, in November 1999, Surfrider sued the USIBWC for its continuing failure to come into compliance with state and federal law.¹³⁵ After approximately one year of negotiations,¹³⁶ the parties formulated a schedule for compliance in a formal consent decree.¹³⁷ The parties signed and lodged the proposed consent decree with the court. Under this consent decree, the USIBWC would have been required to complete a secondary treatment project that ensured compliance with all applicable effluent limitations by January 22, 2003.¹³⁸ The USIBWC committed to the mandates of the consent decree with the condition that final approval and entry would “be subject to public comment and consideration of any comments following notice of the lodging of this Consent Decree in the Federal Register.”¹³⁹

During this comment period, the Regional Board and the city of Imperial Beach¹⁴⁰ vehemently objected to the consent decree. The

Board in 1972 and was amended in 1978, 1983, 1988, 1990, and 1997. STATE WATER RES. CONTROL BD., RESOLUTION NO. 2000-108: ADOPTION OF THE PROPOSED AMENDMENTS TO THE CALIFORNIA OCEAN PLAN 1 (2000), <http://www.swrcb.ca.gov/resdec/resltn/2000/rs2000-108.doc>. The state board reviews the plan at least every three years to ensure that water quality standards are adequate and are not allowing degradation of marine life or risk to human health. *Id.*

134. The purpose of the San Diego Basin Plan (also known as the Water Quality Control Plan for the San Diego Basin) is to “(1) designate beneficial uses of the Region’s surface and ground waters; (2) designate water quality objectives for the reasonable protection of those uses; and (3) establish an implementation plan to achieve the objectives.” CAL. REG’L WATER QUALITY CONTROL BD., SAN DIEGO REGION, WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO BASIN PLAN (9) (1994). It was adopted by the Regional Board in 1975 as mandated by the Clean Water Act and the Porter-Cologne Water Quality Control Act. *Id.*

135. The Surfrider Foundation sought injunctive relief pursuant to sections 301 and 402 of the Clean Water Act. *See* 33 U.S.C §§ 1311, 1342. Surfrider sued because the USIBWC discharges effluent through the SBOO that has not been treated to secondary treatment standards and does not meet toxicity standards. Consent Decree at 2, *Surfrider Found. v. Ramirez*, (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441) (current Surfrider-USIBWC consent decree).

136. *See Hearing, supra* note 7, at 56 (statement of Marco A. Gonzalez, Chairman, San Diego Surfrider Foundation).

137. Consent Decree, *Surfrider Found. v. Bernal* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441) (rescinded *Surfrider-USIBWC* consent decree).

138. *Id.* at 5. The consent decree did not mandate the use of any particular secondary treatment technology.

139. *Id.* at 17.

140. Letter from Diane Rose, Mayor, Imperial Beach, to Chairman and Board Members, California Regional Water Quality Control Board, San Diego Region (Dec. 13, 2000) (on file with author). Imperial Beach is the city just north of the U.S.-Mexico border.

Regional Board found that the consent decree was not in the best interest of the State of California¹⁴¹ because it inappropriately extended the time for compliance beyond the extension provided in the cease and desist order.¹⁴² The Regional Board also protested that the consent decree lacked coercive penalties in the event of the USIBWC's continued noncompliance.¹⁴³ Lastly, the Regional Board objected to the force majeure clause¹⁴⁴ contained in the consent decree. The Regional Board stated that the consent decree included "inappropriately vague provisions excusing IBWC from non-performance under a variety of conditions that are unacceptable to the [Regional Board], including IBWC's inability to obtain funding for secondary treatment facilities."¹⁴⁵ The city of Imperial Beach made similar protests.¹⁴⁶ The USIBWC relied heavily on this negative reaction as leverage to withdraw from the Surfrider consent decree.¹⁴⁷

Another development used by the USIBWC to withdraw from the consent decree occurred when Congress rejected the EPA's request for

141. Letter from John H. Robertus, Executive Officer, California Regional Water Quality Control Board, San Diego Region, to S. Randall Humm, Trial Attorney, United States Department of Justice, Environmental Defense Section (Dec. 15, 2000) (on file with author).

142. *Id.* The cease and desist order called for complete construction of secondary facilities by December 31, 2000. *See supra* note 126.

143. *See* Letter from John H. Robertus to S. Randall Humm, *supra* note 141.

144. The original Surfrider consent decree defined a force majeure as an event arising from causes beyond the control of the IBWC . . . which delays or prevents the performance of the IBWC's obligations . . . despite the IBWC's best efforts to fulfill its obligations. The requirement that the IBWC exercise "best efforts to fulfill its obligations" include [sic] using best efforts to anticipate any potential Force Majeure event (1) as it is occurring and (2) following the potential Force Majeure event, such that delay is minimized to the greatest extent possible.

Consent Decree at 8, *Surfrider Found. v. Bernal* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441) (rescinded Surfrider-USIBWC consent decree). The parties could not agree on what events constituted a force majeure event. However, a compromise was reached whereby the USIBWC was permitted to include its contention that a lack of funding and financial ability to comply with the January 2003 deadline constituted a force majeure event. Memorandum of Points and Authorities in Support of Plaintiff's Motion to Enter Consent Decree at 5, *Bernal* (No. 99-CV-2441). Surfrider felt confident that if the USIBWC invoked the clause, Surfrider could prove to the court that the lack of funding was not a circumstance beyond the control of the USIBWC because the San Diego congressional delegation and members of the House Transportation and Infrastructure Committee made clear that if the USIBWC moved forward with Bajagua, the funding cap would be lifted. Letter from Marco A. Gonzalez, Chairman, San Diego Chapter of the Surfrider Foundation, to John H. Robertus, Executive Officer, San Diego Regional Water Quality Control Board, and S. Randall Humm, Trial Attorney, United States Department of Justice, Environmental Defense Section (Sept. 4, 2002) (on file with author).

145. *See* Letter from John H. Robertus to S. Randall Humm, *supra* note 141.

146. *See* Letter from Diane Rose to Chairman and Board Members, *supra* note 140.

147. Notice of Filing of Public Comments Regarding Proposed Consent Decree and Notice of the United States' Withholding of Its Consent to Proposed Consent Decree at 3, *Bernal* (No. 99-CV-2441).

funds to construct the CMA ponds technology selected in the 1999 record of decision.¹⁴⁸ The USIBWC claimed that compliance under the consent decree was based on using this technology for secondary treatment.¹⁴⁹ The court permitted the USIBWC's withdrawal, though there may not have been proper grounds to do so,¹⁵⁰ and the parties reentered negotiations.

In February 2001, the State of California, on behalf of the Regional Board, brought suit against the USIBWC. The State based its claim on the same violations of federal and state law and the same environmental and health concerns as Surfrider.¹⁵¹ In reliance on the Regional Board's vehement opposition to Surfrider's consent decree, Surfrider changed course and instead focused on the ocean monitoring studies discussed above. To Surfrider, it seemed appropriate to leave it to the state to produce more stringent compliance timelines, coercive penalties, and exclusion of the force majeure clause.¹⁵² As before, Surfrider focused on establishing studies that would evaluate the South Bay gyre and the potential for on-shore transport of effluent after discharge from the SBOO.¹⁵³ Surfrider and the USIBWC eventually entered into a consent decree which mandated that the USIBWC conduct proper studies concerning this threat.¹⁵⁴

Ultimately, the State concluded negotiations and also entered into a

148. U.S. ENVTL. PROT. AGENCY & INT'L BOUNDARY AND WATER COMM'N, RECORD OF DECISION FOR THE INTERNATIONAL BOUNDARY AND WATER COMMISSION SOUTH BAY WASTEWATER TREATMENT PLANT: LONG TERM TREATMENT OPTIONS SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT 3 (1999).

149. The USIBWC claimed that in denying funding for secondary treatment, Congress had in effect "suspended implementation of the agencies' ROD and made it impossible for [the USIBWC] 'to complete' by January 22, 2003 a secondary treatment 'project' for the Treatment Plant." See Notice of Filing of Public Comments Regarding Proposed Consent Decree and Notice of the United States' Withholding of Its Consent to Proposed Consent Decree at 23, *Bernal* (No. 99-CV-2441).

150. A federal agency can withdraw its consent to a consent decree if "the comments, views and allegations concerning the judgment disclose facts or considerations which indicate that the proposed judgment is inappropriate, improper or inadequate." 28 C.F.R. § 50.7(b) (2002).

151. First Amended Complaint for Violations of the Clean Water Act and Related State Law Claims at 7, 9, *Surfrider Found. v. Ortega* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441) (claiming violations of the Clean Water Act and the California Porter-Cologne Water Quality Control Act).

152. *Hearing, supra* note 7, at 56 (statement of Marco A. Gonzalez, Chairman, San Diego Surfrider Foundation).

153. See *supra* Part II.A.

154. *Id.*

consent decree with the USIBWC. The parties then jointly lodged the decree with the court in July 2002.¹⁵⁵ However, the consent decree did not appear as though it would bring about a timely resolution to the same issues faced by Surfrider. One of the Regional Board's main criticisms was that the Surfrider consent decree's compliance date of January 22, 2003 inappropriately extended the USIBWC's time for compliance.¹⁵⁶ Rather than providing a more restrictive compliance schedule, the State's consent decree allowed the USIBWC to continue operating the IWTP in violation of state and federal law until December 31, 2007.¹⁵⁷ Furthermore, the State did not incorporate coercive penalties against the USIBWC. The entire "Remedy for Noncompliance" section read as follows: "If USIBWC fails to take an action required by this Decree, the Regional Board may seek appropriate relief from the Court. USIBWC reserves any and all defenses."¹⁵⁸ In addition, the consent decree contained a force majeure clause that excused the USIBWC from liability if noncompliance arose from circumstances beyond its control.¹⁵⁹ Thus, the State facilitated the USIBWC's avoidance of the January 22, 2003 compliance deadline by berating the initial Surfrider consent decree. The State was then willing to enter into an agreement that would permit the USIBWC's noncompliance for an additional five years.

The Regional Board unanimously adopted the State-USIBWC consent decree, finding it to be in the public's best interest.¹⁶⁰ However, Surfrider actively protested adoption of the State's consent decree during the public commenting period.¹⁶¹ Surfrider had a vested interest in ensuring that the State's consent decree was as stringent as possible due to the inclusion of a specific clause in the Surfrider-USIBWC consent decree. This clause stated that if the State and the USIBWC were to enter into a consent decree, both parties would be required to file a stipulation permitting Surfrider to enforce the agreed upon terms.¹⁶² The stipulations would have incorporated the compliance

155. Consent Decree at 18, *Surfrider Found. v. Ramirez* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441) (State-USIBWC consent decree).

156. See Letter from John H. Robertus to S. Randall Humm, *supra* note 141.

157. Consent Decree at 7, *Ramirez* (No. 99-CV-2441) (State-USIBWC consent decree).

158. *Id.* at 9.

159. *Id.* at 12.

160. Memorandum of Points and Authorities in Support of Motion of the People of the State of California for Entry of Proposed Consent Decree at 14, *Ramirez* (No. 99-CV-2441).

161. Letter from Marco A. Gonzalez to John H. Robertus and S. Randall Humm, *supra* note 144 (urging the Regional Board not to approve the proposed State-USIBWC consent decree).

162. Consent Decree at 9–10, *Ramirez* (No. 99-CV-2441) (current Surfrider-USIBWC consent decree).

schedule, including exceptions and limitations, into the original Surfrider-IBWC consent decree.¹⁶³

In January 2003, both the State and the USIBWC moved to enter the consent decree with the court.¹⁶⁴ However, rather than accepting the consent decree, the court directed the parties to include “a mutually-acceptable provision on what constitutes a force majeure event.”¹⁶⁵ After the parties failed to reach an agreement, the court had no choice but to deny the parties’ motions.¹⁶⁶ As a result, the case will be going to trial.¹⁶⁷

At this point, it is necessary to explain exactly how and why the Bajagua project is the superior alternative. However, it is important to note that the Surfrider and State lawsuits do not call for the implementation of the Bajagua project per se. Rather, they are critical in establishing the circumstances and timeline under which the USIBWC must commit to a solution and comply with federal and state law. |

III. A COMPREHENSIVE SOLUTION

The Bajagua project takes a radically different approach to solving cross-border sewage problems by providing for the construction of a fifty mgd secondary treatment facility in Mexico.¹⁶⁸ This facility would serve as an alternative to the IWTP for long-term secondary wastewater treatment. |

The project, proposed by Agua Clara LLC,¹⁶⁹ would require the IWTP to treat twenty-five mgd to primary levels and then pump the effluent via pipelines to the Mexican facility for secondary treatment.¹⁷⁰ The

163. Letter from Marco A. Gonzalez to John H. Robertus and S. Randall Humm, *supra* note 144.

164. Memorandum of Points and Authorities in Support of Motion of the People of the State of California for Entry of Proposed Consent Decree at 5, *Ramirez* (No. 99-CV-2441).

165. E-mail from Sally Spener, Public Affairs Officer, USIBWC, to Author (June 5, 2003) (on file with author).

166. Order Denying Motions For Entry of Consent Decree at 2, *Ramirez* (No. 99-CV-2441).

167. A status conference was held on July 14, 2003. *Id.* The trial date is scheduled for May 3, 2004. Order Setting Pretrial Conference and Trial Date at 1, *Ramirez* (No. 99-CV-2441).

168. AGUA CLARA LLC, *supra* note 31, at 1-1, 1-17.

169. Memorandum of Points and Authorities in Support of Motion to Allow Agua Clara LLC to Participate as Amicus Curiae at 1, *Surfrider Found. v. Bernal* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441). For further information about the Bajagua project, see Bajagua Project, LLC, *Wastewater Treatment and Reclamation Project*, at <http://www.bajagua.com> (last visited Aug. 20, 2003).

170. AGUA CLARA LLC, *supra* note 31, at 1-17 to 1-18.

Mexico-based plant would also have the capacity to treat an additional twenty-five mgd of completely untreated sewage to secondary standards.¹⁷¹ That fifty mgd would then be pumped back to the SBOO for final discharge¹⁷² or, as an alternative, could be treated further to tertiary levels.¹⁷³

The ability to reclaim water¹⁷⁴ is one of the most appealing features of the Bajagua project and is a key reason why it is superior to other alternatives. Water reclamation confers two enormous benefits. First, reports indicate that water resources are extremely scarce along the international border.¹⁷⁵ By treating sewage to advanced levels, Agua

171. *Id.*

172. *Id.* at 1-4.

173. Tertiary treatment involves the “[r]emoval of residual suspended solids (after secondary treatment), usually by granular medium filtration or microscreens. Disinfection [and nutrient removal are] also typically a part of tertiary treatment.” METCALF & EDDY, INC. ET AL., *supra* note 60, at 11. Tertiary treatment systems generally have a BOD removal efficiency of ninety-five percent. U.S. ENVTL. PROT. AGENCY, *supra* note 61, at 2-27 tbl.2-2. For a discussion of BOD as a measurement for waste load concentrations, see *id.* at 1-5. The Bajagua project treatment facilities would attain tertiary treatment levels either through (1) disinfection with gaseous chlorine (if the water were to be used for landscape irrigation or application on agricultural crops not intended for human consumption) or (2) multimedia filtration and chlorination (if the water were to be used for cooling or industrial use). AGUA CLARA LLC, *supra* note 31, at 1-28.

174. See AGUA CLARA LLC, *supra* note 31, at 1-27 (noting that reclaimed water has a number of potential uses, including greenbelt irrigation, agriculture, and various industrial uses). The Bajagua project does not anticipate treating the effluent for human consumption. *Id.* at 1-28. Some municipalities in the United States have implemented “potable reuse” projects that “can turn municipal wastewater into reclaimed water that meets standards established by the Safe Water Drinking Act.” COMM. TO EVALUATE THE VIABILITY OF AUGMENTING POTABLE WATER SUPPLIES WITH RECLAIMED WATER, NAT’L RESEARCH COUNCIL, ISSUES IN POTABLE REUSE: THE VIABILITY OF AUGMENTING DRINKING WATER SUPPLIES WITH RECLAIMED WATER 14 (David A. Dobbs ed., 1998). For a discussion of health studies and controversies regarding potable reuse projects, see generally *id.*

175. This lack of water is an overriding concern in the border region:

Conflicts over access to a clean, cheap and sufficient supply of water are becoming a defining feature of life along the 2,100-mile U.S.-Mexico border and of relations across it. While for many outsiders the border is synonymous with drug trafficking and illegal immigration, when people who live here talk about confrontation between Mexicans and Americans or tension between urban areas and farmers or cooperation to solve problems, the dominant subject is water.

Water Drives the U.S., Mexican Border Economy, U.S. WATER NEWS ONLINE (Jan. 2001), at <http://www.uswaternews.com/archives/arcsupply/1watdri1.html>. The two main sources of Tijuana’s water supply are the Rodriguez Reservoir and an aqueduct connected to the Colorado River. The water is distributed via two main systems: (1) the Mesa de Otay tank and (2) the Aguaje de la Tuna tank and the Colonia Oberera pump station. Approximately eighty-five percent of Tijuana’s population is connected to this water system. The remaining population receives water through deliveries by tank trucks. Nan Velerio et al., San Diego State Univ. Inst. for Reg’l Studies of the Californias, *Map 4: Water Infrastructure*, in SAN DIEGO-TIJUANA INTERNATIONAL BORDER AREA PLANNING ATLAS, *supra* note 28, at 15, 15–16. For a further discussion of water shortage issues, see *infra* note 278.

Clara will be able to provide reclaimed water to maquiladora plants or to other industrial or agricultural businesses.¹⁷⁶ This in turn will allow potable water supplies to be used for other purposes.¹⁷⁷

Second, and perhaps more importantly, the more sewage that is treated for water reclamation purposes, the less effluent will be discharged through the SBOO. Recall that pursuant to Surfrider's litigation with the USIBWC, studies will soon be under way to determine if effluent from the outfall is responsible for exceedances of water quality standards along San Diego's coast.¹⁷⁸ Problems arise because sewage from the Tijuana region can still be toxic even after secondary treatment.¹⁷⁹ Moreover, the South Bay gyre may be transporting this effluent onto San Diego's beaches.¹⁸⁰

As noted above, if this is the case, the remedial costs of altering the SBOO's discharge point in terms of time and capital will be astronomical.¹⁸¹ In the meantime, toxic effluent would continue to

176. AGUA CLARA LLC, *supra* note 31, at 1-27. A preliminary study commissioned by Agua Clara to investigate the demand for reclaimed water in Tijuana suggests a demand of nearly thirteen mgd. *Id.*

177. Minan, *supra* note 6, at 66-67.

178. See Consent Decree at 10-11, Surfrider Found. v. Ramirez (S.D. Cal. filed Nov. 16, 2003) (No. 99-CV-2441) (current Surfrider-USIBWC consent decree).

179. This is due to the large amounts of industrial waste produced from Tijuana's maquiladora industry. See *supra* Part I.A. The EIR, conducted to determine environmental impacts of the SBOO, indicated the following:

The potential impact of the expected elevated toxics/heavy metal content of the treated Mexican effluent is considered potentially significant and not mitigated at this time. Total reliance on future source control in Mexico to pretreat wastewater prior to conveyance to the IWTP is not sufficiently guaranteed to occur such that the impact can be considered mitigated.

DEV. & ENVTL. PLANNING DIV., *supra* note 72, at 5.1-16. Pretreatment is intended to limit the discharge of toxic wastes and other materials (such as metals, organics, pH, fats, oils, and greases) that interfere with the operation of wastewater treatment facilities. AGUA CLARA LLC, *supra* note 31, at 1-30. While Tijuana has a pretreatment program, the necessary facilities have not yet been built. *Id.* at 1-29 to 1-30. Agua Clara has stated that a portion of the revenues generated from water reclamation could be used to implement pretreatment facilities.

180. See *supra* notes 83-84 and accompanying text (indicating that the city of San Diego's expert consultants did not address the potential onshore transport of SBOO effluent and that experts from the Scripps Institute of Oceanography concluded that this effluent would reach San Diego's shoreline in undiluted quantities).

181. The SBOO cost approximately \$160 million to construct. JAMIESON, *supra* note 1, at 180. A boring machine was used to excavate the tunnel. The outfall incorporates a riser structure at the western end of the tunnel, which connects the tunnel pipeline to the ocean floor. Barges were used to install an additional 1.65 miles of seafloor pipeline. These barges then covered the pipeline with 400,000 tons of rock to protect exposed piping from ocean waves and ship anchors. City of San Diego, *South*

impact San Diego's beaches. Thus the Bajagua project, with its water reclamation capabilities, has the added potential benefit of drastically reducing the amount of effluent discharged in such circumstances.¹⁸² No other alternative offers this benefit.

Another critical benefit of the Bajagua project is its use of CMA ponds technology in attaining secondary treatment standards.¹⁸³ The NEPA litigation led to an in-depth cost-benefit analysis of this technology as compared with activated sludge technologies.¹⁸⁴ There were several key findings. First, the CMA ponds technology is more efficient in that it produces a lesser amount of sludge by-product.¹⁸⁵ The significance of this benefit can be seen in relation to the sludge produced at the IWTP. Pursuant to Minute 283, the Mexican government carries the responsibility of disposing of this waste.¹⁸⁶ The Mexican government dumps the sludge on a mesa adjacent to the San Antonio de los Buenos treatment facility near the city of Rosarito.¹⁸⁷ From there it flows downwards into the Pacific Ocean, causing a potentially adverse impact on Baja Malibu, an extremely popular surfing break.¹⁸⁸ Thus, a critical component of any comprehensive solution must be reducing the production of such waste to the greatest possible extent. The Bajagua project offers this benefit.

Bajagua also circumvents the problems surrounding the USIBWC's inability to procure funding for a secondary treatment plant. Under the Bajagua project, the Mexican facility will be constructed through a design-build-operate¹⁸⁹ scheme, with private financing supplied by Agua

Bay Ocean Outfall, at <http://www.sannet.gov/mwwd/general/sobayout.shtml> (last visited Aug. 20, 2003). Thus, it would be extremely costly and time consuming to deconstruct the riser structure and seafloor pipeline, extend the tunnel outside the reach of the South Bay gyre, and then reconstruct these facilities.

182. AGUA CLARA LLC, *supra* note 31, at 1-16 to 1-17.

183. *See id.* at 1-27.

184. *See supra* notes 112-14 and accompanying text (indicating that (1) the NEPA litigation resulted in a settlement whereby the USIBWC agreed to properly evaluate the CMA ponds technology, and (2) based on this study, the USIBWC determined that the CMA ponds technology was superior to activated sludge systems).

185. *See supra* note 114 and accompanying text.

186. Minute 283, *supra* note 44, at 5.

187. *Hearing, supra* note 7, at 13, 14 (testimony of Marco A. Gonzalez, Chairman, San Diego Surfrider Foundation).

188. *Id.*

189. Interview with Gary Sirota, Attorney, Agua Clara LLC, in San Diego, Cal. (Feb. 2, 2003). The design-build-operate scheme is a highly cost-efficient variant of the design-bid-build approach to developing public-private projects. *Id.* Design-bid-build is "[t]he 'traditional' project delivery approach where the owner commissions an architect or engineer to prepare drawings and specifications under a design services contract and separately contracts for construction by engaging a contractor through competitive bidding or negotiating." DESIGN-BUILD INST. OF AM., DESIGN-BUILD MANUAL OF PRACTICE NO. 103: DESIGN-BUILD DEFINITIONS 1 (1996). The problem is that this scheme can create a liability battle if project complications arise (i.e., the designer will claim that the project was negligently constructed while the developer makes similar claims about the design).

Clara.¹⁹⁰ The USIBWC will then enter into a twenty-year fee-for-services contract with Agua Clara.¹⁹¹ Congress has already authorized the appropriation of \$156 million toward this end in the Tijuana River Act.¹⁹²

Another critical benefit of the Bajagua project is its ability to take into account the future growth of the Tijuana region. The Mexican plant would be located either on a 200-acre site in eastern Tijuana or on a 163-acre site just east of the Tijuana River.¹⁹³ The size of these sites allows for the expansion of treatment capacity if needed at a later date.¹⁹⁴ The IWTP site, on the other hand, cannot expand beyond its current seventy-five acres and is limited to the treatment of approximately twenty-five mgd.¹⁹⁵ Accordingly, its ability to account for the future growth of the Tijuana region is severely constrained and, as a result, it is not a viable solution.

Finally, a comparison of the estimated capital costs of each treatment alternative further justifies implementation of Bajagua. The estimated construction costs of the three most viable alternatives include the Bajagua project at a cost of \$103 million,¹⁹⁶ an activated sludge treatment facility located at the Hoffer site, which is adjacent to the IWTP, at a cost of \$93 million,¹⁹⁷ and a CMA ponds treatment facility located at the

Id. Design-build schemes offer an advantage here because one entity is singularly responsible for both design and construction. DESIGN-BUILD INST. OF AM., DESIGN-BUILD MANUAL OF PRACTICE NO. 101: AN INTRODUCTION TO DESIGN-BUILD 2 (1996). Furthermore, under design-bid-build schemes, municipalities hire a consulting engineer who recommends a design solution but does not have an incentive to make it cost effective. Under the design-bid-operate scheme, on the other hand, one engineer's concept is pitted directly against that of another, creating an incentive to assure cost effectiveness. In addition, engineers, developers, and operators ultimately work as a team under a single contract. Thus, if problems arise, they cannot blame each other. See Steven H. Daniels, *A Watershed for Seattle*, DESIGN-BUILD MAG., Oct. 1999, at 27, 32. The design-bid-operate scheme was first used in the U.S. in the construction of Seattle's Tolt River filtration plant in 1995. The popularity of the design-bid-operate approach has increased dramatically due to the tremendous success and cost-effectiveness of that project. Steven H. Daniels, *Master Model Makers*, DESIGN-BUILD MAG., Dec. 2000, at 42, 42-43.

190. Bajagua Project, LLC, *Project Description*, at <http://www.bajagua.com/description.html> (last visited Aug. 20, 2003).

191. *Id.*

192. Tijuana River Valley Estuary and Beach Sewage Cleanup Act of 2000, 22 U.S.C. § 277d-46 (2000); see *infra* notes 224-28 (discussing the appropriations process).

193. AGUA CLARA LLC, *supra* note 31, at 1-9.

194. Minan, *supra* note 6, at 67.

195. *Id.*

196. BILL SHUSTER, TIJUANA RIVER VALLEY ESTUARY AND BEACH SEWAGE CLEANUP ACT OF 2000, H.R. REP. NO. 106-842, pt. 1, at 9 (2000).

197. *Hearing, supra* note 7.

same site for \$44 million.¹⁹⁸ Although Bajagua will require the most capital, it will treat twice as much wastewater as the other two alternatives.¹⁹⁹ Moreover, the inadequacies of the Hoffer site facilities would require the construction of additional treatment facilities in the near future, resulting in greater overall costs.²⁰⁰

While the Bajagua project is the most comprehensive solution to cross-border sewage problems to date, there are a number of legal obstacles that must be overcome before the project can be implemented. The next three Sections will examine these obstacles and explain how they can be overcome.

IV. THE USIBWC: LEGAL OBSTACLES

It is useful to categorize the legal obstacles that stand in the way of implementing the Tijuana River Act and the Bajagua project into two categories. The first set of obstacles stems from the USIBWC's rejection of Bajagua as infeasible and the specific legal arguments supporting this claim. The second set of obstacles, which pose a more serious threat to the implementation of Bajagua, stems from the structure of the United States government and the difficulties associated with forcing the hand of a defiant federal agency. These obstacles will be addressed in Parts V and VI.

The USIBWC has a great deal of power in influencing implementation of the Bajagua project and the Tijuana River Act due to the force of Minute 283.²⁰¹ Recall that this international agreement mandates that the United States treat twenty-five mgd via a secondary treatment facility located in the United States.²⁰² Accordingly, a new international agreement must be negotiated, or in the alternative, Minute 283 must be amended. The Tijuana River Act expressly calls for such treaty negotiations so that efforts to realize the implementation of a Mexican facility can progress.²⁰³ In fact, the Act requests that the Secretary of

198. Minan, *supra* note 6, at 65–66.

199. As noted above, IWTP treatment alternatives would only treat approximately twenty-five mgd. *See supra* note 195 and accompanying text. Bajagua, on the other hand, will treat fifty mgd. *See supra* notes 170–71 and accompanying text. Because Bajagua will treat greater amounts of wastewater, it will also have greater operational costs. Minan, *supra* note 6, at 66.

200. Recall that the IWTP site only treats twenty-five mgd and cannot be expanded beyond its current seventy-five acres. *See supra* note 195 and accompanying text. Because the IWTP cannot account for Tijuana's continuing population growth with this limited capacity, additional treatment facilities will need to be built.

201. *See* Minute 283, *supra* note 44, at 5 (mandating that secondary treatment be carried out *in the United States*).

202. *Id.*

203. Tijuana River Valley Estuary and Beach Sewage Cleanup Act of 2000, 22

State make it his “highest priority.”²⁰⁴ However, the U.S. section of the IBWC is the federal agency responsible for engaging in these negotiations, and thus far it has resisted every effort to further the goals of the Act.²⁰⁵ Thus, progress in Minute negotiations has been stagnant.

The Bajagua project was first proposed to the EPA and the USIBWC in 1998.²⁰⁶ However, these agencies undertook very little evaluation of the Bajagua project.²⁰⁷ Ultimately, these agencies determined that the project was not a “reasonable and feasible method[] for substantially accomplishing the objective of providing long-term treatment.”²⁰⁸ As mentioned above, the USIBWC was prepared to sign a record of decision establishing CMA ponds technology at the IWTP as its choice for achieving compliance.²⁰⁹ However, San Diego’s local congressional delegation, concerned that the USIBWC was in violation of NEPA procedures, informed the EPA and the USIBWC that it would not fund a CMA ponds system at the IWTP site unless proper objective evaluation

U.S.C. § 277d-45(a) (2000).

204. *Id.* The Tijuana River Act states the following:

In light of the existing threat to the environment and to public health and safety within the United States as a result of the river and ocean pollution in the San Diego-Tijuana border region, the Secretary is requested to give the highest priority to the negotiation and execution of a new Treaty Minute, or a modification of Treaty Minute 283 . . . in order that the other provisions of sections 277d-43 to 277d-46 of this title to address such pollution may be implemented as soon as possible.

Id.

205. Brian Bilbray, *Border Commission Stalls Progress on Treating Sewage*, SAN DIEGO UNION-TRIB., June 5, 2003, at B13.

206. INT’L BOUNDARY AND WATER COMM’N & U.S. ENVTL. PROT. AGENCY, DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR THE INTERNATIONAL BOUNDARY AND WATER COMMISSION: SOUTH BAY INTERNATIONAL WASTEWATER TREATMENT PLANT LONG-TERM TREATMENT OPTIONS 1-45 (1998).

207. The manner in which the USIBWC and EPA initially received the Bajagua project in the draft SEIS is illustrative of their resistance to its implementation and the foot-dragging procedures they have employed over the past four years. In first evaluating the project, the federal agencies found the following:

Although an additional water supply source is needed for the City of Tijuana, the Bajagua proposal is currently not endorsed by the Mexican federal government. . . . Until EPA and USIBWC are requested by the federal Mexican government to consider this project, this proposal cannot be included as an alternative Also, Minute 283, which was signed by both the United States and Mexico, specifically calls for construction of a . . . secondary international treatment plant in the United States

Id. at 1-46.

208. *Id.* at 1-45.

209. See FINAL SUPPLEMENTAL EIS, *supra* note 111, at 1-6; see also *supra* Part II.B.

of *all* feasible alternatives proved that it was the best option.²¹⁰

Subsequently, Agua Clara submitted additional technical information to the EPA and the USIBWC.²¹¹ However, after reviewing the documentation, the agencies again found that the project was an “unfeasible and conceptual alternative.”²¹² The agencies cited several specific problems that would have to be overcome before they would consider Bajagua as an alternative. Agua Clara would have to (1) secure new congressional legislation that would authorize and appropriate funding to the USIBWC to fund the fee-for-services contract, (2) secure new congressional legislation that would authorize a sole source contract, and (3) provide explicit evidence of Mexico’s approval of the project.²¹³ These problems are addressed below.

A. The Lack of Congressional Funding for the Fee-for-Services Contract

On numerous occasions the USIBWC has contended that a lack of congressional funding has prevented it from moving forward with the Bajagua project.²¹⁴ For instance, the current commissioner of the USIBWC, Carlos Ramirez,²¹⁵ has stated that the USIBWC lacks the necessary funds to negotiate a new international agreement with Mexico.²¹⁶ Also, in November 2001, Commissioner Ramirez used the lack of funding argument as a basis for circumventing both the Tijuana River Act and congressional intent by attempting to construct an

210. Letter from Brian Bilbray and Bob Filner, Congressmen, to Felicia Marcus, Regional Administrator, U.S. Env’tl. Prot. Agency Region IX (Mar. 17, 1999) (on file with author).

211. See generally AGUA CLARA LLC, *supra* note 31.

212. FINAL SUPPLEMENTAL EIS, *supra* note 111, at 3-8 to 3-9.

213. *Id.* at 3-9. The USIBWC and the EPA asserted two other problems that are noteworthy. First, Agua Clara would have to establish “enforceable legal mechanisms” to ensure compliance with applicable treatment standards. Second, Agua Clara would have to establish provisions to ensure that the treatment plant would continue to operate in the event of bankruptcy. *Id.* at 3-10. Both of these problems do not pose significant obstacles to the implementation of Bajagua and can largely be dealt with in the fee-for-services contract between Agua Clara and the USIBWC, as well as through applicable environmental regulations. Minan, *supra* note 6, at 73–76.

214. See Minan, *supra* note 6, at 75; see also Congressman Bob Filner, Editorial, *Bureaucratic Stall*, SAN DIEGO UNION-TRIB., Nov. 4, 2001, at G2.

215. Carlos Ramirez was appointed commissioner of the USIBWC in July 2001 by President Bush. *Hearing, supra* note 7, at 135 (testimony of Carlos M. Ramirez, Commissioner, International Boundary and Water Commission). Prior to that time, Commissioner Ramirez had been the Mayor of El Paso for two terms (1997–2001) and received both graduate and undergraduate civil engineering degrees from the University of Texas at El Paso. International Boundary and Water Commission, *Office of the Commissioner*, at http://www.ibwc.state.gov/html/body_body_commissioner.htm (last visited Aug. 20, 2003).

216. Leslie Wolf Branscomb, *Sludge Process Reconsidered as Sewage Solution*, SAN DIEGO UNION-TRIB., Nov. 25, 2001, at B1.

activated sludge secondary treatment plant at the Hoffer site.²¹⁷ This appeared to eliminate years of progress because the USIBWC's initial attempt to implement activated sludge technology was the focus of the NEPA litigation back in 1994.²¹⁸ Due to the fact that the USIBWC could not legitimately pursue such an option, it is clear that Commissioner Ramirez's decision was a baseless delay tactic. Indeed, Congress had already expressly stated that it would not lift the construction spending cap at the IWTP and that it would not fund a secondary treatment plant in the United States.²¹⁹

Immediately after Ramirez made his decision, representatives from the Tijuana Valley Water District, the City Council, the Regional Chamber of Commerce, San Diego County, and the U.S. Congress vehemently objected to the USIBWC's new course of action.²²⁰ Since that time, the

217. *Id.*; see also Minan, *supra* note 6, at 75.

218. *Hearing, supra* note 7, at 56, 57 (testimony of Marco A. Gonzalez, Chairman, San Diego Surfrider Foundation). Ramirez's decision also jeopardized two years of negotiations with Surfrider. Surfrider considered withdrawing its consent decree approval with the USIBWC because the agency never disclosed its intention to implement the "decidedly unpopular proposal." *Id.* at 57.

219. The House stated that there are significant concerns which exist regarding the limited capacity of EPA's preferred alternative, the lack of available land on which future capacity could be constructed, and its inadequacy in addressing increasing future cross-border sewage flows in the region. . . . [T]here is at least one private sector proposal to construct in Mexico similar secondary facilities which would have considerably greater potential capacity better suited to the long term sewage treatment needs of the rapidly growing border region.

. . . The conferees thus continue to believe that it would be inappropriate to lift the cap at this time or to permit construction of a limited capacity secondary treatment facility at the IWTP which would not meet long-term sewage treatment needs. The conferees urge EPA to continue working with the IBWC, State Department, and its counterparts in Mexico to encourage and develop such a viable proposal in a timely manner.

H.R. REP NO. 106-988, at 132-33 (2000).

220. See *Hearing, supra* note 7, at 58-61 (statement of Congressman Duncan Hunter) (explaining that Congress already considered and discarded the activated sludge alternative as inferior in terms of cost and capacity and inappropriate in terms of location); see also *id.* at 7-9 (testimony of Art Letter, General Manager, Tijuana Valley County Water District) (arguing that the USIBWC is engaging in bureaucratic processes to delay progress of Bajagua); Letter from Ralph Inzunza, Councilmember, City of San Diego, District Eight, to Carlos Ramirez, Commissioner, USIBWC (Nov. 7, 2001) (on file with author) (expressing strong concern over Ramirez's decision and the lack of progress by the USIBWC to implement the Tijuana River Act); Letter from Greg Cox, First District Supervisor, San Diego County Board of Supervisors, to Carlos Ramirez, Commissioner, USIBWC (Nov. 8, 2001) (on file with author) (expressing the need to "look beyond just providing secondary treatment" and take advantage of the superior

USIBWC has ceased to pursue activated sludge technology at the Hoffer site. However, the argument that there is a lack of funding still poses a significant threat to implementation of the Bajagua project. This is evinced by the force majeure clause contained in the State-USIBWC consent decree. The consent decree defined a force majeure event as “any occurrence arising from causes outside the control of [the USIBWC] that delays or prevents compliance with [the] Decree.”²²¹ As with the original Surfrider-USIBWC consent decree, the USIBWC contended that a lack of funding constituted a force majeure event.²²²

There is no doubt that, at trial, the USIBWC will continue to claim that a lack of congressional funding prevents it from implementing the Tijuana River Act. If the USIBWC is successful in presenting this argument, it would then be able to continue operating the IWTP in violation of state and federal law for an indefinite period of time.²²³

To understand the basis of the lack of funds argument, it is necessary to look at the annual appropriations cycle²²⁴ and, more specifically, at

benefits offered by Bajagua); Letter from Jessie J. Knight, Jr., President and CEO, San Diego Regional Chamber of Commerce, to Carlos Ramirez, Commissioner, USIBWC (Nov. 15, 2001) (on file with author) (expressing concern that the decision will result in protracted delays and directly impact human health, environmental pollution, and water availability).

221. Consent Decree at 9, *Surfrider Found. v. Ramirez* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441) (current State-USIBWC consent decree).

222. *Id.* at 10. In the original *Surfrider-USIBWC* consent decree, the USIBWC contended that a force majeure event included its financial inability to achieve by January 22, 2003 compliance with the Applicable Effluent Standards and Limitations because performance of this obligation is subject to the fiscal and procurement laws and regulations of the United States . . . ; sufficient funds may not be appropriated by Congress; and Congress may not authorize appropriated funds to be available for expenditure

Consent Decree at 9, *Surfrider Found. v. Bernal* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441) (rescinded *Surfrider-USIBWC* consent decree).

223. The Anti-Deficiency Act, which is designed to limit spending by federal agencies and facilitate management of the budget, is relevant here. It provides that federal officers may not involve the “government in a contract or obligation for the payment of money before an appropriation is made unless authorized by law.” 31 U.S.C. § 1341 (2000). However, Congress has the power to eliminate concerns raised by the Anti-Deficiency Act. Minan, *supra* note 6, at 69. It seems clear that Congress did so by enacting the provisions in the Tijuana River Act concerning the amortized fee-for-services contract.

224. The annual appropriations cycle is as follows: (1) The President submits his annual budget for the upcoming fiscal year (October 1 to September 30) to Congress in early February. It recommends spending levels for various federal agencies and programs in the form of “budget authority.” Budget authority permits federal agencies to make obligations that require expenditures. These obligations result in outlays, which are basically payments from the Treasury. (2) Congress adopts a budget resolution, which distributes the total new budget authority and outlays for each fiscal year covered by the resolution among the committees with jurisdiction over spending, including the House and Senate Appropriations Committees. Through this allocation process, the budget

the congressional funding process. Congress funds federal agencies primarily through a formal appropriation process²²⁵ that consists of two sequential steps.²²⁶ First, Congress must enact an authorizing measure that generally creates or continues to fund an existing agency or program and authorizes a subsequent appropriation.²²⁷ Congress took this initial step when it authorized the appropriation of \$156 million to carry out the goals of the Tijuana River Act. Second, Congress must enact an appropriations measure to provide funding for the authorized

resolution sets total spending ceilings for each committee. (3) The House and Senate Appropriations Committees then divide their allocations among their subcommittees (there are thirteen in each house), which hold detailed hearings on the agencies' justifications for the funding. Each House subcommittee is paired with its Senate counterpart, both having jurisdiction over the same agencies and programs. (4) Once these hearings are complete, each subcommittee submits a draft bill to its respective full committee. The full committees may adopt amendments to these bills. (5) The bills are then submitted to their respective floors for action. When the bill is on the floor, Representatives or Senators have an opportunity to propose floor amendments. (6) Meetings follow to negotiate differences between the House- and Senate-passed bills. The bills will then be adopted, rejected, or resubmitted for further consideration. If a bill is rejected or resubmitted then further negotiations ensue. (7) When both houses agree to the entire text of the bill, the measure is sent to the President to be signed. He has ten days to sign or veto the measure. If he takes no action then the bill automatically becomes law at the end of the ten-day period. Much of the cycle is regulated by the Budget Enforcement Act. Sandy Streeter, *The Congressional Appropriations Process: An Introduction*, CONG. RES. SERV. 1, 2-18 (2002).

225. Power over appropriations is granted to the legislative branch by the U.S. Constitution: "No Money shall be drawn from the Treasury, but in Consequence of Appropriations made by Law . . ." U.S. CONST. art. I, § 9, cl. 7. However, the actual appropriations process is derived from specific House and Senate rules. Bill Heniff, Jr., *Overview of the Authorization-Appropriation Process*, CONG. RES. SERV. 1, 1 (2001).

226. The two stage process generally applies to discretionary spending rather than mandatory spending. Discretionary spending provides funds for a wide variety of activities from national defense to education. Mandatory spending provides funds for entitlement programs. Entitlements are statutory requirements that the federal government commit funds to individuals and government units that meet eligibility requirements; examples include Social Security and Medicare benefits. Certain entitlement appropriations do follow the two stage process. Streeter, *supra* note 224, at 11-13.

227. Heniff, *supra* note 225, at 1.

An authorizing measure can establish, continue, or modify an agency or program for a fixed or indefinite period of time. It also may set forth the duties and functions of an agency or program, its organizational structure, and the responsibilities of agency or program officials.

Authorizing legislation also authorizes the enactment of appropriations for an agency or program. . . . The authorization of appropriations is intended to provide guidance regarding the appropriate amount of funds to carry out the authorized activities of an agency.

Id. at 2.

agency or program.²²⁸ Congress has not yet appropriated the budget authority that will allow the USIBWC to make payments under the fee-for-services contract. This point forms the foundation of the lack of funds argument against implementation of the Bajagua project.

Some case law lends support to the contention that a lack of funding allows a federal agency to extend compliance with statutory provisions beyond specified deadlines. In *Environmental Defense Center v. Babbitt*,²²⁹ the Ninth Circuit held that the Secretary of the Interior and the Director of the Fish and Wildlife Service were given an extended period of time to comply with mandates of the Endangered Species Act due to an appropriations act that temporarily limited the necessary funding to carry out their duties.²³⁰ However, *Babbitt* can be distinguished from the present situation. In *Babbitt*, Congress enacted specific legislation that cut back on federal funding that was previously available;²³¹ in the USIBWC's case, Congress has taken no such action.

Moreover, current circumstances indicate that it will be difficult for the USIBWC to show that a present lack of funding precludes implementation of a Mexico-based treatment facility. Congress overwhelmingly supports Bajagua and has indicated that the next immediate step is to negotiate a new international agreement with Mexico.²³² This is reflected in the language of the Tijuana River Act, which directs the USIBWC to negotiate a new treaty minute, enter into the fee-for-services contract with the owner of the Mexican facility, and then “*make payments under such contract.*”²³³

In other words, the USIBWC and Agua Clara must enter into the contract before payments will be made. One of the Act's main purposes is to circumvent the immediate need for congressional funding by allowing the project to be built with private funding. The USIBWC will make amortized payments to the owner of the Mexican facility *over the next 20 years* but requires no appropriation at the present time.²³⁴ As

228. *Id.* at 1. “An appropriation measure provides budget authority to an agency for specified purposes.” *Id.* at 2. For a detailed discussion of appropriation measures and budget authority, see generally Streeter, *supra* note 224; see also Heniff, *supra* note 225.

229. 73 F.3d 867 (9th Cir. 1995).

230. *Id.* at 872.

231. *Id.* at 869–70.

232. See *infra* note 292 (indicating Congress's frustration with the USIBWC's lack of progress in completing treaty minute negotiations).

233. 22 U.S.C. § 277d-44(c)(1) (2000) (emphasis added).

234. See BILL SHUSTER, TIJUANA RIVER VALLEY ESTUARY AND BEACH SEWAGE CLEANUP ACT OF 2000, H.R. REP. NO. 106-842, pt. 1, at 9 (2000) (indicating that the fee-for-services contract will be characterized as a lease purchase and, as such, budget authority will be scored when annual payments become due); OFFICE OF MGMT. AND BUDGET, EXECUTIVE OFFICE OF THE PRESIDENT, CIRCULAR NO. A-11: PREPARATION, SUBMISSION, AND EXECUTION OF THE BUDGET pt. 2 app. at B-7 to B-8 (2002) (indicating

such, the fact that Congress has not appropriated the \$156 million authorized in the Tijuana River Act has no bearing on the USIBWC's ability to proceed with the Mexican alternative.

*B. The Lack of Congressional Funding
for Preliminary Studies*

The USIBWC has recently raised another argument relating to congressional funding. According to the USIBWC, the U.S. and Mexican sections of the commission feel that "planning level studies are needed to address technical and financial issues that would provide a framework for a minute."²³⁵ The USIBWC requested \$3 million in congressional funding to this effect.²³⁶ When this request was denied, the USIBWC went so far as to claim that the financial impact of the war in Iraq was responsible for the denial and that it was accordingly unable to proceed with minute negotiations.²³⁷

The USIBWC has claimed that a lack of funding for preliminary studies has prevented treaty minute negotiations in the past. For example, in December 2001, a congressional hearing was held before the Subcommittee on Water Resources and Environment of the Committee on Transportation and Infrastructure to determine why implementation of the Tijuana River Act had not moved forward.²³⁸ At the hearing, Commissioner Ramirez claimed the USIBWC needed money for preliminary environmental studies.²³⁹ After the Commissioner made this statement, his U.S. State Department superior, the Director of the Office of Mexican Affairs, informed Congress *that no additional funding was necessary*.²⁴⁰ Thus, the validity of the USIBWC's recent claim that it requires funding is in doubt.

Regardless, the USIBWC does have other sources of funding at its disposal. Recall that the USIBWC and the city of San Diego jointly

that agency debt in terms of outlays is to be redeemed "over the lease payment period according to an amortization schedule").

235. E-mail from Sally Spener to Author, *supra* note 165.

236. Defendant's Request for Judicial Notice of Facts in Support of Motion to Enter Consent Decree and Incorporated Memorandum of Law in Support Thereof at 2, *Surfrider Found. v. Ramirez* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441).

237. Leslie Wolf Branscomb, *Sewage Treatment Project Put on Hold, No Money for Border-Area Plant*, SAN DIEGO UNION-TRIB., May 24, 2003, at B1.

238. *See generally* *Hearing*, *supra* note 7, at 5 (testimony of Congressman Bob Filner).

239. *Id.* at 26.

240. *Id.*

constructed the SBOO.²⁴¹ The City set aside contingency funds in the event any lawsuits arose out of the SBOO's construction.²⁴² A lawsuit did in fact arise and is currently pending in the California Court of Appeal.²⁴³ In December 2001, the City contacted the USIBWC, stating that a portion of the approximately \$6.3 million in contingency funds could be used to begin implementation of the Tijuana River Act.²⁴⁴ Rather than pursuing the use of such funds, the USIBWC continues to unnecessarily delay treaty minute negotiations.²⁴⁵

Furthermore, Agua Clara has offered to pay for any necessary preliminary studies.²⁴⁶ The USIBWC can and should use Agua Clara's funding to conduct the preliminary studies and then repay these funds over the life of the contract. In fact, the contract provisions of the Tijuana River Act explicitly account for this scenario. The Act directs the USIBWC to pay the owner of the Mexican facility an annual amount that reflects "all agreed upon costs associated with the development [and] construction . . . of the Mexican facility."²⁴⁷ As such, the USIBWC's claim that it cannot proceed with negotiations because of a lack of funding for preliminary studies is without merit.

C. *The Competition in Contracting Act*

The second argument that the USIBWC has put forth in resisting implementation of Bajagua involves the Competition in Contracting Act (CICA).²⁴⁸ The USIBWC argues that CICA prevents it from entering into the fee-for-services contract prescribed in the Tijuana River Act.²⁴⁹ CICA requires that "an executive agency in conducting a procurement for property or services . . . shall obtain full and open competition through the use of

241. See *supra* Part II.

242. Letter from Scott Tulloch, Director, City of San Diego, to Carlos Ramirez, Commissioner, International Boundary and Water Commission (Dec. 7, 2001) (on file with author).

243. *Id.*

244. *Id.*

245. According to the USIBWC, a number of obstacles would need to be overcome in pursuing these funds. First, the city of San Diego would have to obtain the EPA's approval before dispersing the funds to the USIBWC. Second, the funds were originally appropriate for use at the IWTP site. As such, it is unclear whether the USIBWC can use these funds to implement a facility in Mexico. The USIBWC is uncertain whether these obstacles can be overcome because it has never tried. Telephone Interview with Mario Lewis, Office of the Staff Counsel, International Boundary and Water Commission (July 11, 2003).

246. Interview with Gary Sirota, *supra* note 189.

247. 22 U.S.C. § 277d-44(c)(2) (2000).

248. 41 U.S.C. § 253.

249. For additional analysis of CICA and its relation to the Tijuana River Act, see Minan, *supra* note 6, at 70-72.

competitive procedures.”²⁵⁰ In other words, CICA requires “full and open competition in soliciting offers and awarding government contracts.”²⁵¹ Thus, because the Bajagua project is the only proposal that satisfies the mandates of the Tijuana River Act, the USIBWC has claimed that the requirements of CICA are not met and, as a result, it does not have the authority to contract with Agua Clara.²⁵²

While there is some limited support for this contention, it is ultimately incorrect. The mandates of CICA can be circumvented through a number of different avenues. For instance, one possible exception, which has been the focus of the CICA debate, is section (c)(5). This section holds that CICA’s sole sourcing requirements do not apply when “a statute expressly authorizes or requires that the procurement be made through another executive agency or from a specified source.”²⁵³ However, CICA lists very specific requirements that must be met before any such legislation can be “construed as requiring a new contract to be awarded to a specified non-Federal Government entity.”²⁵⁴ As Professor John Minan of the University of San Diego School of Law has noted, there is a strong argument that the Tijuana River Act has failed to provide the required specificity.²⁵⁵ The Act states that the USIBWC may enter into a

250. 41 U.S.C. § 253(a)(1)(A).

251. Minan, *supra* note 6, at 68.

252. FINAL SUPPLEMENTAL EIS, *supra* note 111, at 4-31.

253. 41 U.S.C. § 253(c)(5); *see also* Minan, *supra* note 6, at 72.

254. Section (i) of CICA holds:

- (1) It is the policy of Congress that an executive agency should not be required by legislation to award a new contract to a specific non-Federal Government entity. It is further the policy of Congress that any program, project, or technology identified in legislation be procured through merit-based selection procedures.
- (2) A provision of law may not be construed as requiring a new contract to be awarded to a specified non-Federal Government entity unless that provision of law—
 - (A) specifically refers to this subsection;
 - (B) specifically identifies the particular non-Federal Government entity involved; and
 - (C) specifically states that the award to that entity is required by such provision of law in contravention of the policy set forth in paragraph (1).

41 U.S.C. § 253(i).

255. Minan, *supra* note 6, at 71–72. Professor Minan was a trial attorney in the Civil Division of the U.S. Department of Justice and a law professor at the University of Toledo before he started teaching at the University of San Diego School of Law in 1977. He teaches and writes in the areas of land use planning, property, water rights, and comparative law. He is also nationally recognized for his work in solar energy law. *See* University of San Diego School of Law, *John H. Minan*, at <http://www.sandiego.edu/>

contract with the owner of a Mexican treatment facility, “notwithstanding any provision of Federal procurement law.”²⁵⁶

It is important to note, however, that there is support for the position that a “notwithstanding” clause may override broad regulatory schemes such as those of CICA.²⁵⁷ Furthermore, the Congressional Research Service (CRS) has found that the “notwithstanding” provision “quite clearly permits the [IBWC] to sole source the contract.”²⁵⁸ The CRS works exclusively for members of Congress and congressional committees and was created for the sole purpose of providing Congress with “comprehensive and reliable analysis, research and information services that are timely, objective, nonpartisan, and confidential.”²⁵⁹

While reports issued by the CRS are not binding, they are commonly used as persuasive authority.²⁶⁰ Congress has shown impatience with the USIBWC’s attempts to use CICA as a means to avoid implementation of Bajagua and has relied on the CRS report in informing Commissioner Ramirez that the Tijuana River Act authorizes the USIBWC to sole source the contract.²⁶¹

In battling over whether the exception found in section (c)(5) applies to the Bajagua situation, both the USIBWC and Congress are off base. Even if the (c)(5) exception does not apply to the Bajagua situation, CICA contains numerous other exceptions that may be invoked. For instance, section (c)(1) states that an executive agency may use noncompetitive procedures when the “services needed by the executive agency are available from only one responsible source and no other type of property or services will satisfy the needs of the executive agency.”²⁶² This exception clearly applies to the Bajagua situation because Agua

usdlaw/profs/minan.htm (last visited Aug. 20, 2003).

256. 22 U.S.C. § 277d-44(c)(1).

257. See *Shomberg v. United States*, 348 U.S. 540, 547–48 (1955).

258. Memorandum from John R. Luckey, Legislative Attorney, Congressional Research Service, to Bob Filner (May 10, 2002) (on file with author).

259. See Congressional Research Service, *What’s CRS*, at <http://www.loc.gov/crsinfo/whatscrs.html> (last updated Mar. 25, 2003).

260. See, e.g., *Newmont Mining Corp. v. Pickens*, 831 F.2d 1448, 1453 (9th Cir. 1987); *Moorhead v. United States*, 774 F.2d 936, 944 (9th Cir. 1985).

261. After calling Commissioner Ramirez to a meeting in Washington, D.C. to address the USIBWC’s failure to comply with the Tijuana River Act, Congress informed Commissioner Ramirez that the Tijuana River Act

clearly provides the authority to the IBWC to directly contract with the owner of the Mexican facility. In fact, the exemption from the federal acquisition regulations was specifically added to allow for this opportunity. Further, the Congressional Research Service’s legal opinion, which is enclosed, should suffice as proof of the IBWC’s ability to move forward in consultations with the Bajagua Project.

Letter from San Diego Congressional Delegation to Carlos Ramirez, Commissioner, International Boundary and Water Commission (July 29, 2002) (on file with author).

262. 41 U.S.C. § 253(c)(1) (2000).

Clara is the only entity that can supply the USIBWC with the services required to carry out the Tijuana River Act.

A further exception may be invoked when “the head of the executive agency . . . determines that it is necessary in the public interest to use procedures other than competitive procedures . . . and . . . notifies the Congress in writing of such determination.”²⁶³ This exception demonstrates the absurdity of the USIBWC claim that it lacks the authority to contract with Agua Clara. It is clear that the USIBWC is doing all it can to resist implementation of the Tijuana River Act. If the USIBWC is serious about following Congress’s directive, then CICA should not be an obstacle to implementation of the Bajagua project.

D. The Lack of Mexican Support

In addition to the above arguments, the USIBWC has claimed that the Mexican government does not support the Bajagua project.²⁶⁴ The specific legal problem that arises in this context is straightforward: If the Mexican government is unwilling to renegotiate treaty Minute 283, then the U.S. federal government is powerless to implement a secondary treatment facility on Mexican soil.²⁶⁵

While Mexico initially was skeptical of a solution inapposite to the mandates of Minute 283,²⁶⁶ it has since shown broad support for

263. *Id.* § 253(c)(7)(A)–(B).

264. USIBWC’s Response to Second Supplemental Brief in Support of Motion to Allow Agua Clara LLC to Participate Amicus Curiae and Opposition of USIBWC to Request for Judicial Notice Regarding Second Supplemental Brief at 6, Surfrider Found. v. Bernal (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441).

265. *See* Minute 283, *supra* note 44, at 5 (mandating that secondary treatment be conducted in the United States).

266. For instance, in 1999, the Commissioner of the Mexican IBWC (which is known as the Comisión Internacional de Límites y Agua, or CILA) conveyed the following message to the USIBWC:

Because of the present primary treatment module operating conditions, we consider it inappropriate to continue to postpone the construction of a secondary module [at] . . . the international plant [IWTP]. Thus we respectfully request that your government conform to the terms agreed to in Minute No. 283 of the Commission for the benefit of the sanitary conditions in the area and inhabitants on both sides of the border.

Letter from J. Arturo Herrera Solís, Commissioner, Comisión Internacional de Límites y Agua, to John Bernal, U.S. Commissioner, International Boundary and Water Commission (Dec. 2, 1999) (on file with author). This decision may have been influenced by the fact that the USIBWC informed Mexican officials that \$9 million in EPA funding would be available for improving Tijuana’s wastewater infrastructure if a ponds facility were constructed in the United States but not if the facility were

Bajagua.²⁶⁷ For instance, Ernesto Ruffo, the Commissioner of Northern Border Affairs for Mexico, has expressed the Mexican government's full support of the Bajagua project.²⁶⁸ In other circumstances, Mexican officials have worked with Agua Clara representatives to establish a logistical framework for moving forward with Bajagua.²⁶⁹ Nevertheless, despite these indications, the USIBWC has asserted that Mexico is not a "Bajagua supporter"²⁷⁰ and has publicly used this claim to shed doubt on negotiations for a new treaty minute in the past.²⁷¹ While it is already clear that the argument lacks merit, steps should be taken to permanently foreclose the issue. This can be accomplished through the Mexican government's issuance of a concession agreement.

A concession agreement is generally defined as "a license granted by a sovereign government to a foreign corporation or business for the express purpose of exploiting a natural resource, developing a geographic area, or pursuing some particular venture, for which the government desires the corporation's expertise, assets, technology, or capital."²⁷²

constructed in Mexico. *See* Letter from Arturo Herrera Solís, Commissioner, Comisión Internacional de Límites y Agua, to John Bernal, U.S. Commissioner, International Boundary and Water Commission (Aug. 30, 1999) (on file with author); *see also* Letter from John Bernal, U.S. Commissioner, International Boundary and Water Commission, to Arturo Herrera Solís, Commissioner, Comisión Internacional de Límites y Agua (Sept. 2, 1999) (on file with author) (confirming the \$9 million offer).

267. Filner, *supra* note 214.

268. *Hearing, supra* note 7, at 18.

269. Letter from Arturo Herrera Solís, Commissioner, Internacional de Límites y Agua, to Carlos Ramirez, Commissioner, International Boundary and Water Commission (May 3, 2002) (on file with author) (seeking ratification of the plan designed to implement Bajagua); Declaration of F. David Schlesinger in Support of Reply to USIBWC's Response to Second Supplemental Brief and Opposition to Request for Judicial Notice at 1-2, *Surfrider Found. v. Ramirez* (S.D. Cal. filed Nov. 16, 1999) (No. 99-CV-2441) (discussing the federal water authority's designation of Comisión Estatal de Servicios Públicos de Tijuana as the local agency to coordinate with Bajagua).

270. USIBWC's Response to Second Supplemental Brief in Support of Motion to Allow Agua Clara LLC to Participate Amicus Curiae and Opposition of USIBWC to Request For Judicial Notice Regarding Second Supplemental Brief, *Ramirez* (No. 99-CV-2441).

271. Ken Ellingwood, *Sewage Cleanup Is Focus of Talks*, L.A. TIMES, Jan. 2, 2002, at B1; Filner, *supra* note 214.

272. Viktor Soloveytschik, *New Perspectives for Concession Agreements: A Comparison of Hungarian Law and the Draft Laws of Belarus, Kazakhstan, and Russia*, 16 Hous. J. INT'L L. 261, 263 n.1 (1993) (citing KENNETH W. DAM, OIL RESOURCES: WHO GETS WHAT HOW 12-18 (1976)). Latin American governments began to open their markets to attract foreign investment into the infrastructure development and operation sectors in the early 1990s. Quirico G. Serriñá, *An Overview of the Legal Aspects of Concession Agreements in Latin America*, 5 ILSA J. INT'L & COMP. L. 371, 371 (1998). This came largely in response to their nations' own increasing demands for improved infrastructure. *Id.* Mexico first issued concessions in order to better develop its airport and railroad systems in 1995. *Id.* at 374. Mexico has since opened other markets to private investment, such as the transportation and distribution of natural gas and electricity, oil exploration and the operation of petrochemical plants, the operation of port facilities, and

The holding corporation then operates the infrastructure facilities or project for a specified number of years, allowing it to recuperate its investment costs by collecting the profits generated from those operations.²⁷³ In the context of the cross-border sewage dilemma, Mexico would enter into a concession agreement with a private entity granting the rights to develop and operate a wastewater treatment and reclamation facility, as well as the land upon which the facility and infrastructure will be built.²⁷⁴ The granting of these rights would unequivocally resolve Mexico's support for Bajagua.

However, progress in attaining the concession recently met with political complications. Mexico's National Water Commission tentatively denied granting the concession because Minute 283 had not been renegotiated,²⁷⁵ and accordingly, the "applicable legal framework necessary to support [the concession] is not in existence."²⁷⁶

Despite these setbacks, there is still a strong indication that Mexico will grant the concession. First, the Mexican government must recognize Tijuana's imminent water shortage²⁷⁷ and that demand for water will increase dramatically over the next twenty years.²⁷⁸ Second, under the concession agreement, Agua Clara would finance the construction and operation of the water reclamation facility through the

telephone and satellite services. *Id.* at 373–74.

273. For an example of this from Mexico, see Serriña, *supra* note 272, at 374.

274. The concession would most likely contain a clause that conditioned the granting of these rights upon renegotiation of an international treaty minute. Interview with Gary Sirota, *supra* note 189. Thus, the USIBWC could still attempt to hinder negotiations, but could not assert a lack of Mexican support as a reason for doing so.

275. Letter from Jose Carlos Sanchez, Engineer, National Water Commission, to Federico Manuel Ruanova Guinea (Jan. 31, 2003) (on file with author).

276. *Id.*

277. *See supra* note 175.

278. Studies conducted by San Diego State University (SDSU) have shown that "the entire San Diego-Tijuana region will experience a significant growth in demand for potable water over the next 20 years. Finding sources of water to meet projected planning area and regional demands will be a major challenge for the binational community." SDSU studies further found that the irregularity of water supply "will be problematic until supply is expanded through reclaimed water, desalinization, and completion of the new aqueduct from the Colorado River." Velerio et al., *supra* note 175. Recall that, through water reclamation, the Bajagua project can help free up potable water supplies by providing reclaimed water for agricultural and industrial purposes. *See supra* Part III. Note that pursuant to international treaty, the United States is obligated to deliver 1.85 cubic kilometers of Colorado River water to Mexico annually. PETER H. GLEICK ET AL., *THE WORLD'S WATER 2002–2003: THE BIENNIAL REPORT ON FRESHWATER RESOURCES* 137–38 (2002).

design-build-operate scheme discussed above,²⁷⁹ and would then recuperate its costs through the fee-for-services contract with the U.S. federal government. In other words, no Mexican financing would be required. As such, Mexico would be able to increase its water supply and improve its wastewater infrastructure without facing the financial barriers that have haunted it in the past.²⁸⁰ These factors suggest that the Mexican government is still willing to issue a concession to Agua Clara in the near future.

Thus, as demonstrated above, the specific legal obstacles erected by the USIBWC can be overcome. However, beyond this, other, more difficult problems may arise from the foundational tenants of our legal system, including the separation of powers doctrine and the recognition of sovereign immunity.

V. SOVEREIGN IMMUNITY

The doctrine of sovereign immunity²⁸¹ is particularly significant in the context of cross-border sewage issues because it may provide the federal government a license to violate state and federal environmental laws without having to face serious consequences. For instance, the State of California has attempted to impose civil penalties on the USIBWC in the past but has been unsuccessful. Recall that as soon as the USIBWC began operations at the ITWP, it was in violation of state and federal law.²⁸² The Regional Board then issued cease and desist order number 96-52 to extend the USIBWC's compliance schedule.²⁸³ After the USIBWC made no effort to comply, the Regional Board issued an addendum to the cease and desist order²⁸⁴ that gave the USIBWC less than two months to comply with its NPDES permit, and ordered the USIBWC to pay \$60,000 for each day it continued to operate in violation of its permit.²⁸⁵ The USIBWC has never paid.

These problems involving sovereign immunity are likely to resurface at trial. The concern is that the USIBWC could simply disregard any court-imposed compliance deadlines, continue to violate treatment

279. *See supra* Part III.

280. *See supra* note 27.

281. The doctrine generally holds that a government is immune from being sued in its own courts without its consent. *Fed. Deposit Ins. Corp. v. Meyer*, 510 U.S. 471, 475 (1994). Plaintiffs who bring suit against the government carry the burden of proving that the government has waived its immunity. Congress can waive sovereign immunity via statute. *Holloman v. Watt*, 708 F.2d 1399, 1401-02 (9th Cir. 1983).

282. *See supra* Part II.C.

283. *Id.*

284. *See* Cal. Reg'l Water Quality Control Bd., San Diego Region, Addendum No. 3 to Cease and Desist Order No. 96-52 (2000).

285. *Id.* at 6.

regulations, and then claim that it has not waived its sovereign immunity.

On the issue of sovereign immunity, the U.S. Supreme Court's decision in *Department of Energy v. Ohio*²⁸⁶ is directly on point. In that case, Ohio brought suit against the Department of Energy, seeking civil penalties for past violations of the Clean Water Act.²⁸⁷ At issue was the federal facilities provision of the Clean Water Act,²⁸⁸ which seemed to waive sovereign immunity by subjecting federal agencies to the same sanctions as nongovernmental entities. However, the Court went out of its way to interpret the word "sanction" in a coercive sense, precluding the possibility of seeking punitive fines for prior violations.²⁸⁹ The Court ultimately held that the United States has not waived sovereign immunity for punitive fines.²⁹⁰

Thus, the State of California can seek fines to coerce the USIBWC into future compliance but cannot seek punitive fines for past violations. Problematically, the state's effort to impose coercive fines may be construed as an attempt to punish the USIBWC for its past violations. This is especially possible given the Court's restrictive interpretation in *Department of Energy v. Ohio*. Thus, while coercive penalties should be sought in the event that the USIBWC defies the court's order, further congressional action should be taken to bring about the USIBWC's compliance. Congress may have the power to guide the USIBWC's hand into action.

VI. THE SEPARATION OF POWERS DOCTRINE

It is clear that the legislative and executive branches have adopted drastically different political strategies for resolving the cross-border sewage crisis between Tijuana and San Diego. Congress is committed to implementing the Bajagua project as the Mexican facility called for in

286. 503 U.S. 607 (1992).

287. *Id.* at 612.

288. This section states:

Each department, agency, or instrumentality . . . of the Federal Government . . . shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution in the same manner . . . as any nongovernmental entity.

33 U.S.C. § 1323(a) (2000).

289. *Dep't of Energy*, 503 U.S. at 623.

290. *Id.* at 626–27.

the Tijuana River Act.²⁹¹ The USIBWC has resisted the efforts in direct defiance of congressional directives.²⁹² As such, the looming issue is whether Congress has the power to force the USIBWC to implement Bajagua.²⁹³

In this regard, the separation of powers doctrine²⁹⁴ poses a significant obstacle. It is well-established that the legislature cannot step into the shoes of the executive branch and directly implement the law. However, Congress does have a number of tools that can be used to check executive actions and ensure effective legislation. These tools allow Congress to indirectly force federal agencies to execute the law as prescribed.

While Congress does not have the power to remove executive officials,²⁹⁵ it can conduct investigations and hold those who refuse to answer congressional inquiries in contempt.²⁹⁶ Congress has already exercised this power by summoning Commissioner Ramirez to testify before the Subcommittee on Water Resources and Environment at the end of 2001.²⁹⁷ Commissioner Ramirez's effort to implement activated sludge technologies at the Hoffer site prompted Congressmen Bob Filner

291. This commitment is being tested. As will be discussed below, further congressional action is necessary to overcome the separation of powers issue.

292. The local congressional delegation responded to Commissioner Ramirez's continued delays in this way:

We continue to be frustrated by the lack of progress being made by the [IBWC] to complete negotiations of the amended treaty minute with Mexico, and ultimately, the continued delays over addressing the raw sewage flowing out onto our San Diego beaches. . . . [I]t is nearly two years since the [Tijuana River Act] was unanimously passed and signed into law and still there is no appreciable sign that it will be implemented any time soon.

Letter from San Diego Congressional Delegation to Carlos Ramirez, *supra* note 261.

293. One problem in this respect is that while the legislators that enacted the Tijuana River Act have been active in advocating its implementation, congressional statements made after enactment of the statute are given little legal weight. *Northwest Forest Res. Council v. Pilchuck Audubon Soc'y*, 97 F.3d 1161, 1168 (9th Cir. 1996); *Slaven v. BP America, Inc.*, 973 F.2d 1468, 1475 (9th Cir. 1992).

294. Congress did not expressly mention Bajagua in the Tijuana River Act. In addition, the plain language of the statute does not force the USIBWC to proceed with a Mexican facility. The Act states that "[s]ubject to the negotiation of a new Treaty Minute" the USIBWC "may" enter the fee-for-services contract. 22 U.S.C. § 277d-44 (2000). Commissioner Ramirez has used this language to argue that he is not required to implement Bajagua.

295. The Constitution does not explicitly mention the removal power. However, constitutional jurisprudence indicates that the President has a broad power to remove executive officials. Congress can limit that power in certain narrow situations. *See Morrison v. Olson*, 487 U.S. 654, 691-93 (1988); *Wiener v. United States*, 357 U.S. 349, 353 (1958); *Humphrey's Ex'r v. United States*, 295 U.S. 602, 629 (1935); *Myers v. United States*, 272 U.S. 52, 164 (1926).

296. *See Watkins v. United States*, 354 U.S. 178, 187-88 (1957).

297. *Hearing, supra* note 7, at 2 (testimony of Congressman Duncan Hunter).

to suggest that Ramirez be held in contempt.²⁹⁸ However, there are fairly strict requirements for holding someone in contempt.²⁹⁹ In addition, the Republican party would probably resist this course of action, given that Commissioner Ramirez was appointed by President Bush.

Congress should further exercise its investigative power in order to compel Commissioner Ramirez's compliance. A more comprehensive investigation may reveal concrete evidence that the USIBWC is intentionally circumventing the Tijuana River Act. At the very least, the increased pressure could deter Commissioner Ramirez from employing further delay tactics.

VII. CONCLUSION

The decades-old cross border sewage dilemma is still far from being resolved. The Bajagua project will provide the most comprehensive solution to the crisis because it is cost-efficient, can support the future growth of the Tijuana region, has the capability to increase Tijuana's water supply, and incorporates the most effective technologies.

Perhaps the most significant Bajagua project benefit is water reclamation. First, this would provide a source of tertiary water for agricultural and industrial uses in Mexico. Second, and more importantly, current oceanographic data suggests that the South Bay gyre may transport effluent from the SBOO to San Diego's shoreline. The oceanographic studies conducted under the Surfrider-USIBWC consent decree will be critical in verifying this information. If effluent from the SBOO is being transported to shore, the Bajagua project will alleviate the problem. The more effluent that is treated to tertiary levels, the less effluent will be discharged from the SBOO and onto San Diego's beaches. No other alternative in the region offers these benefits.

The Tijuana River Act was enacted on November 7, 2000. Almost four years have passed, and the USIBWC continues to make excuses for why it cannot proceed with treaty minute negotiations and implementation of the Act. As has been shown, the individual arguments made by the USIBWC can be overcome. Problematically, as soon as one argument is addressed, the USIBWC raises others in its place. Therefore, a resolution to the sewage crisis can only be reached through direct judicial and congressional action.

298. *Id.* at 27.

299. 2 U.S.C. § 192.

California's lawsuit against the USIBWC and the potential for coercive sanctions may play a critical role in bringing about the USIBWC's compliance. However, California's ability to impose these sanctions is questionable, especially given the Supreme Court's restrictive interpretation of the Clean Water Act's federal facilities provision in *Department of Energy v. Ohio*. As such, it may ultimately be up to Congress to resolve the sewage crisis. The USIBWC has continually defied the will of Congress as expressed in the Tijuana River Act. It is testing Congress's commitment to the Act as well as its legislative authority. As was noted above, Congress has the power to ensure that its laws are executed as prescribed. In this vein, Congress must continue to exercise its investigational power. A thorough investigation will, in all likelihood, reveal direct evidence that the USIBWC has intentionally prevented implementation of the Tijuana River Act and provide a basis for holding Commissioner Ramirez and USIBWC officials in contempt of Congress. These drastic measures must be used to put an end to the USIBWC's excuses and incessant foot-dragging. In the meantime, San Diego's beaches will continue to be plagued by Tijuana's sewage.

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