RECORD OF DECISION
FOR THE
FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
FOR

INTERNATIONAL BOUNDARY AND WATER COMMISSION

CLEAN WATER ACT COMPLIANCE AT THE
SOUTH BAY INTERNATIONAL WASTEWATER TREATMENT PLANT
SAN DIEGO COUNTY, CALIFORNIA

Approved by:

Carlos Malm
Acting Commissioner, U.S. Section
International Boundary and Water Commission

9/30/05
Date

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I. INTRODUCTION

The United States Section, International Boundary and Water Commission (USIBWC) has prepared this Record of Decision on the Final Supplemental Environmental Impact Statement for Clean Water Act Compliance at the South Bay International Wastewater Treatment Plant (hereinafter referred to as the "Final SEIS").

The SBIWTP is an existing international wastewater treatment plant located in San Diego County at the United States-Mexico border. This facility plays a critical role in protecting public health and the environment of the south San Diego region. The SBIWTP and its associated facilities capture and treat to the advanced primary level an average of 25 million gallons per day (mgd) of raw sewage originating from the Tijuana region of Mexico and discharge the treated effluent approximately 3.5 miles offshore into the Pacific Ocean through the South Bay Ocean Outfall (SBOO). The SBIWTP and its system of canyon collectors prevent millions of gallons of dry weather flows of raw sewage from flowing daily into the United States from Mexico and polluting the Tijuana River, the Tijuana River Valley and Estuary, and south San Diego beaches.

The Final SEIS analyzed existing and new alternatives that would enable the USIBWC to bring the SBIWTP into compliance with the Clean Water Act (CWA) and with the SBIWTP's National Pollutant Discharge Elimination System (NPDES) permit either by providing secondary treatment at the SBIWTP; or by having another entity, either private or public, provide secondary treatment of the SBIWTP's effluent in Mexico; or by achieving CWA compliance by some other means. The Final SEIS also evaluated new information on the current discharges of advanced primary effluent from the SBIWTP through the SBOO, as well as potential interim actions that would allow continued operations of the SBIWTP until the SBIWTP achieves CWA compliance.

This Record of Decision was prepared in compliance with 40 CFR 1505.2 to document the USIBWC's decision on the project. The decision is based on the Final SEIS development process (40 CFR 1502) and public involvement (40 CFR 1500). The Record of Decision includes:

- a description of the project background;
- an overview of agency and public involvement in the decision-making process;
- a statement of the decision made;
- a synopsis of alternatives considered and the basis for the decision;
- a description of the environmentally preferred alternative;
- a listing of measures to minimize environmental harm;

- a discussion of major issues and factors in selecting the preferred alternative; and,
- a discussion of compliance with environmental regulations.

The USIBWC has engaged in an extensive public consultation process for development of the Draft and Final SEIS. On October 22, 2003, the USIBWC issued a Notice of Intent for preparation of the Draft SEIS. The USIBWC conducted a public scoping meeting on November 12, 2003 in San Diego, California. Preliminary alternatives were identified in the Notice of Intent and presented for stakeholder review during the scoping meeting. Subsequently, the USIBWC continued to consult with the public regarding development of the SEIS at community meetings in March, June, September and December 2004.

On December 30, 2004, USIBWC made the Draft SEIS available for public review and comment. The USIBWC conducted a public hearing on the Draft SEIS in San Diego, California on February 2, 2005 and received both oral and written comments at the hearing. The deadline for submittal of comments on the Draft SEIS was February 28, 2005.

On July 22, 2005, USIBWC made the Final SEIS available for public review and comment. A Notice of Availability of the Final SEIS was published in the Federal Register by the USIBWC on July 22, 2005, and by the United States Environmental Protection Agency (EPA) on July 29, 2005. USIBWC invited written comments on the Final SEIS to be submitted on or before August 24, 2005. USIBWC received one comment letter on the Final SEIS. The comments on the Draft and Final SEIS along with USIBWC responses are discussed in Sections VI and VII of this Record of Decision, respectively.

The USIBWC also held a public meeting on August 15, 2005 in the community of Imperial Beach, California on the Final SEIS and provided information on the Preferred Alternative. Issues raised at this public meeting were: contracting and issues associated with the Preferred Alternative; issues associated with the Preferred Alternative raised by Mexican governmental officials; and, ownership of the site for the Preferred Alternative. These issues are discussed in Sections VI and VII, respectively, of this Record of Decision.

II. DECISION

The USIBWC has selected the Bajagua Project, LLC proposal (Operation of SBIWTP as Advanced Primary Facility, Secondary Treatment in Mexico, Alternative 4, Treatment Option C, Discharge Option I) as the means for achieving CWA compliance at the SBIWTP. This decision is based on numerous factors, including: 1) a review of the Draft and Final SEIS for Clean Water Act Compliance at the South Bay International Wastewater Treatment Plant; 2) review of preliminary associated technical documents prepared by Bajagua Project, LLC for the project; 3) review of correspondence received in response to publication of the Draft and Final SEIS; 4) the proposal's consistency with Public Law 106-457, Tijuana River Valley Estuary and Beach Sewage Cleanup Act of 2000, as amended by Public Law 108-425, which authorizes funding for a multiyear fee-for-services contract with a service provider to provide secondary treatment for the SBIWTP's effluent in Mexico; 5) the proposal's consistency with IBWC Minute 311 (Recommendations For Secondary Treatment in Mexico of the Sewage Emanating From the Tijuana River Area in Baja California, Mexico); and, 6) the proposal's consistency with the Potable Water and Wastewater Master Plan for Tijuana and Playas de Rosarito (Master Plan), which was issued by the State Commission of Public Services Tijuana (CESPT) and prepared pursuant to Public Law 106-457 with funding from EPA, and which sets

forth the long term wastewater treatment needs for the Tijuana/San Diego border region. The U.S. Fish and Wildlife Service, the California State Office of Historic Preservation, and the California Coastal Commission have also reviewed the proposal.

This decision also updates and revises the previous decisions made with respect to the SBIWTP. Specifically, in the 1997 Record of Decision, the USIBWC and EPA decided to operate the facility as an advanced primary treatment facility on an interim basis stating that "interim operation of the IWTP would result in a net environmental benefit as opposed to discharge of untreated sewage from Mexico into the Tijuana River or nearshore coastal waters in Mexico." (1997 ROD, p. 15). The 2005 Final SEIS included an assessment of the environmental impacts of this ocean discharge based on data from 1999 through 2002 (see, Final SEIS, Chapter 4). The decision to select Alternative 4C continues interim operation of the advanced primary treatment plant, with construction of the Alternative 4C Option I facilities to occur consistent with the deadlines set forth in an Order Setting Compliance Schedule entered on December 6, 2004 in *People of the State of California ex rel. the Regional Water Quality Control Board, San Diego Region v. Duran et al*, Civ. 01-CV-0270 (consolidated with *The Surfrider Foundation v. Duran, Case No. 99-CV-2441.)* In addition, today's decision modifies the 1999 decision in which the USIBWC and EPA decided to construct completely mixed aerated (CMA) ponds adjacent to the SBIWTP as a means of achieving secondary treatment (reassessed as Alternative 5A in the 2005 Final SEIS), although funding to implement this 1999 decision was never authorized or appropriated by Congress.

A. *Consultations with Mexican Government and Necessary Approvals*

The proposed facilities to be designed and constructed under the alternative selected in this ROD are the subject of ongoing consultations with the Government of Mexico. Implementation of the selected alternative will require issuance of all necessary permits and obtaining approvals from the relevant Mexican authorities. The USIBWC understands that the Government of Mexico must have a decisive role in the approval of various aspects of the project to be constructed in Mexico, including final site selection and treatment technology, design, construction, operation, maintenance, commercialization of the effluent, and other contracting and administration aspects of the project. Further, prior to the construction of any proposed facilities in Mexico, a review of potential environmental impacts in Mexico will be conducted in accordance with the applicable environmental review process in Mexico (please see Subchapter 6.2 of the SEIS). In addition, IBWC Minute 311 provides for oversight by a Binational Technical Committee composed of appropriate U.S. and Mexican technical advisors to provide support to the Commission in the supervision of the different phases of implementation of the project in Mexico. Moreover, implementation of the selected alternative will be subject to successful completion of contract negotiations, execution of appropriate contract documentation, and the appropriation of necessary funding consistent with Public Law 106-457, as amended.

In the event there are modifications to the proposed facilities that have been selected based on requirements or requests of the Government of Mexico, the Binational Technical Committee, the contracting process, or for other reasons, USIBWC will evaluate whether supplementation of the Final SEIS or this Record of Decision is required.

B. Description of Bajagua Project, LLC Proposal (Alternative 4C, Discharge Option I)

The Bajagua Project, LLC Proposal would consist of the following: a private company would provide funding for the construction, operation and maintenance of a secondary treatment facility in Mexico in the Rio Alamar Region. The project would be developed through a public-private arrangement whereby a private company would provide up-front funding for the project and would be compensated by the United States through a multi-year fee-for-services contract, subject to the availability of future appropriations. Operation of the SBIWTP as an advanced primary facility would continue, with 25 mgd of primary treated effluent sent to a secondary treatment facility to be constructed in Mexico (Mexican Facility). In addition, up to 34 mgd of raw sewage would also be pumped to the Mexican Facility from other locations in the Tijuana region. The sewage treated at the Mexican Facility would be required to comply with the water quality requirements of NPDES Permit No. CA0108928 and would be discharged through the SBOO. This alternative would require new facilities in the United States and in Mexico as described below. Under this alternative, up to 59 mgd of sewage originating from the Tijuana region would be treated to the secondary treatment level and would be discharged through the SBOO.

United States Facilities

- A new pump station at the SBIWTP site;
- A new SBIWTP force main (48-inch) from the new pump station at the SBIWTP site to the Bajagua treatment plant. Approximately 800 feet of this pipeline would be located in the United States.
- A return flow pipeline (60-inch) for conveying secondary treated effluent from the Bajagua treatment facility back to the SBIWTP. It would connect with the SBOO at the existing effluent blending structure. Approximately 1,400 feet of this pipeline would be located within the United States.

Mexico Facilities

- SBIWTP force main (48-inch) for conveying primary-treated effluent to the Bajagua treatment plant site. This pipeline would be approximately 12.5 miles in length, all but 800 feet of it would be in Mexico;
- A pump station (Tijuana Raw Water Pump Station situated just south of the Tijuana River near its confluence with the Alamar River and adjacent to the main sewer collector in the Tijuana Sewer System) and force main (Tijuana Force Main) for conveying raw wastewater from the Tijuana sewer system to the Bajagua treatment plant site (approx. 233 acres, 12.5 miles from the SBIWTP);
- Bajagua treatment facility located near the Alamar River; and,
- Return-flow pipeline (60-inch) for conveying secondary-treated effluent back to the SBIWTP. The return flow pipeline would follow the same alignment as the SBIWTP force main, 12.5 miles in length.

Secondary Treatment Process

Alternative 4C, Option I would provide secondary treatment using a completely mixed aerated (CMA) pond system. Secondary treatment would include the aeration lagoons and clarifiers, followed by disinfection before discharge of the treated effluent. Sludge would settle and be removed from the clarifiers. Sludge would be thickened using a dissolved air flotation (DAF) process followed by dewatering using

belt filter presses. Excess sludge would be withdrawn from the clarifiers, thickened and dewatered, and hauled to disposal sites in Mexico.

The new facilities would be designed to treat an average monthly organic loading of 325 mg/L BOD5 and 325 mg/L TSS, and an average flow of 59 mgd with a 75 mgd peak. The system would be designed to meet existing USIBWC NPDES permit limits for the SBIWTP's discharges through the SBOO.

C. *Reasons for Selection*

In the SEIS, USIBWC considered a range of alternatives, which are described in detail in Section III below. USIBWC has decided that the Bajagua Project, LLC proposal (Alternative 4C, Option I) is its preferred means to achieve compliance with the CWA and its NPDES permit for the following reasons:

- This alternative would provide secondary treatment for the SBIWTP's effluent. The Bajagua Project, LLC proposal is one of the secondary treatment alternatives that is designed to meet secondary treatment standards and California Ocean Plan requirements. Preliminary project details and a description have been developed for Alternative 4C and Bajagua Project, LLC is the only firm known to USIBWC at this time to have undertaken preliminary environmental and engineering studies and other advance work that should facilitate timely design and construction of secondary treatment facilities in compliance within the court order issued by the U.S. Federal Court on December 6, 2004 and referenced above.
- This alternative is also preferred based on federal legislation and funding considerations. In 1987, Congress passed Section 510(b) (2) of the Water Quality Act of 1987 ("Section 510"), which directed EPA to make available financial assistance to the USIBWC and others "to provide primary or more advanced treatment" of Mexican waste originating from Tijuana. Section 510 currently imposes a cap of $239.4 million on Section 510 funding for a treatment plant in San Diego. In 1999, USIBWC and EPA issued a Record of Decision recommending construction of secondary treatment facilities in the U.S. and sought congressional approval to raise the funding limits so the agencies could implement this decision. Congress, while it declined to authorize further funding for secondary treatment in the U.S., in November 2000 passed Public Law 106-45 which expressly provided for secondary treatment to be undertaken in Mexico for the advanced primary effluent treated at the SBIWTP if secondary treatment for that effluent was not available in the U.S. In the fall of 2004, Congress passed new legislation to reauthorize and amend Public Law 106-457 and also to request that USIBWC give the highest priority to implementing IBWC Minute 311, which provides the framework for the construction of a 59 mgd facility in Mexico.
- This alternative would be consistent with Title VIII of Public Law 106-457, the *Tijuana River Valley Estuary and Beach Sewage Cleanup Act of 2000,* as amended. This alternative would also be consistent with IBWC Minute 311 and the Potable Water and Wastewater Master Plan for Tijuana and Playas de Rosarito, prepared by the State Commission of Public Services Tijuana (CESPT) and the EPA.
- This alternative could address long-term needs of the San Diego/Tijuana region. This alternative provides an opportunity for Mexico to expand its treatment infrastructure/capacity and reduce or eliminate dry weather raw sewage flows into the United States. Alternative 4C promotes potential re-use activities in Mexico thus reducing its dependence on Lower Colorado River water supply

and other water sources. This alternative promotes, after 20 years, the enhancement of CESPT's institutional capacity because construction of the facility will be paid in full. Given projected increased flows in Tijuana, this alternative would provide a long-term approach to address projected increasing wastewater treatment needs for the region.

- This alternative is preferred over Alternative 1 because the "No Action" alternative would not achieve compliance with the CWA, the NPDES permit or the court order issued by the U.S. Federal Court on December 6, 2004.
- This alternative is preferred over Alternative 2 because the return of SBIWTP's primary treated effluent to Mexico would require the agreement of the Government of Mexico, which has heretofore indicated its unwillingness to accept the SBIWTP effluent. In addition, this alternative would not achieve secondary treatment for the SBIWTP's effluent, would result in increased ocean discharges in Mexico just south of the U.S. border, and would overburden the existing infrastructure in the Tijuana region.
- This alternative is preferred over Alternative 3 (use of City of San Diego connections) because the City has advised that its facilities are not available, including even on an interim basis, to treat Tijuana sewage. The City confirmed in its February 23, 2005 comment letter on the Draft SEIS that it does not support any alternative that would require treatment of Tijuana sewage in the City system.
- This alternative is preferred over Alternatives 4A and 4B because they lack specificity and because no preliminary planning or studies have been prepared that would facilitate timely compliance with the deadlines set forth in the December 6, 2004 court order.
- This alternative is preferred over Alternative 5 (which considers secondary facilities in the U.S. that would upgrade the current plant from an advanced primary to a secondary treatment facility) because of funding constraints associated with the construction of facilities in the U.S. While USIBWC envisioned the construction of such secondary facilities in the U.S. adjacent to the SBIWTP and has previously issued Records of Decision for such facilities, USIBWC has been unable to implement these decisions due to legal challenges and/or lack of adequate funding. In particular, USIBWC and EPA originally issued a 1994 Record of Decision selecting activated sludge secondary treatment facilities at the SBIWTP (reassessed as Alternative 5B in the 2005 Final SEIS) as the means for providing secondary treatment at the SBIWTP; however, that alternative was subject to a legal challenge and USIBWC resolved the litigation by agreeing to reexamine the alternatives available to complete the secondary treatment component of the SBIWTP. Thereafter, USIBWC and EPA issued a 1999 Record of Decision selecting completely mixed aerated ponds at the SBIWTP (reassessed as Alternative 5A in the 2005 Final SEIS), but Congress declined requests by USIBWC and EPA to authorize the necessary funding for implementation of this alternative, instead passing the Title VIII of Public Law 106-457, the Tijuana River Valley Estuary and Beach Cleanup Act of 2000, authorizing secondary treatment for the SBIWTP's effluent in Mexico pursuant to a public-private partnership arrangement. As noted above, Congress reauthorized and amended this legislation in 2004, directing USBIWC to give the highest priority to implementation of IBWC Minute 311, which provides a framework for the construction of new secondary treatment facilities in Mexico.
- This alternative is preferred over Alternative 6 (which considers a combination of Alternatives 4 and 5 which would include secondary treatment facilities in both

countries) because Alternative 6 would include construction of secondary treatment facilities in the United States adjacent to the SBIWTP. While USIBWC envisioned the construction of such secondary treatment facilities, Congress has declined to approve funding for such facilities on the U.S. side of the border beyond that which has been already been authorized under Section 510(b)(2) of the Water Quality Act of 1987 and expended for the existing SBIWTP, SBOO and related facilities. In addition, construction of new secondary treatment facilities in both countries is not consistent with IBWC Minute 311, which provides for the engineering, construction and operation and maintenance of a 59 mgd secondary wastewater treatment plant in Mexico, if the treatment of 25 mgd of advanced primary effluent of the SBIWTP is not provided in the United States.

The USIBWC has considered the comments that were provided in response to the Draft SEIS concerning the preferred and other alternatives and addressed these comments in the Final SEIS (see Appendix H). USIBWC has also considered written comments received since the issuance of the Final SEIS in response to the notice published in the Federal Register. A summary of these comments and responses is provided in Sections VI and VII of this Record of Decision.

III. ALTERNATIVES AND CONSIDERATIONS BALANCED IN MAKING THE DECISION

In arriving at the decision to select the Bajagua Project, LLC proposal, the USIBWC considered the No Action and six (6) treatment alternatives for the SBIWTP to achieve compliance with the Clean Water Act and its NPDES permit, including primary and secondary treatment in the United States and/or Mexico, and two discharge options, including discharging in the United States via the SBOO and discharging at the shoreline in Mexico at Punta Bandera. The analysis of the No Action and six treatment alternatives for full consideration in the SEIS was based on: 1) the potential environmental impacts of each option; 2) the terms and conditions of IBWC Minutes 270, 283, 296, 298, 311 and Public Law 106-457, as amended by Public Law 108-425; 3) the status of Mexico's pretreatment program; 4) feasibility of alternative treatment facilities in the United States and Mexico; 5) the need to expeditiously achieve CWA compliance and meet the limitations of SBIWTP's NPDES permit and the deadlines set forth in an Order Setting Compliance Schedule entered on December 6, 2004 in *People of the State of California ex rel. the Regional Water Quality Control Board, San Diego Region v. Duran et al*, Civ. 01-CV-0270 (consolidated with *The Surfrider Foundation v. Duran, Case No. 99-CV-2441)*, and 6) the requirements of the federal Water Pollution Control Act (Clean Water Act) and the California Porter-Cologne Water Control Act.

A summary of each alternative is provided below. A more detailed description of the alternatives is discussed in the Final SEIS.

A. Alternative 1: No Action (Operation of SBIWTP as Advanced Primary Facility)

1. Alternative 1 Option A (USIBWC Continues Operating SBIWTP as Advanced Primary Facility and Mexico Does Not Rehabilitate Its Original Conveyance Channel)

Under Alternative 1 Option A, the SBIWTP would continue to operate, providing advanced primary treatment for average flows of 25 mgd and peak flows of 50 mgd. All treated effluent would be discharged through the SBOO. This alternative

represents the last phase of interim operating conditions of the SBIWTP as discussed in the 1996 Interim Operation SEIS, without the detention/flow equalization basin, which has not been constructed, and reflects current (i.e., existing) operations. Pump Station 1/1A would operate in a way that results in daily peak flows of 50 mgd being directed to the SBIWTP. Combined with low flows, the average flow to the SBIWTP would be 25 mgd. The discharge of advanced primary effluent via the SBOO would continue.

Remaining flows of up to 50 mgd would continue to be conveyed to Mexico's SABWWTP via the Parallel Conveyance Line (PCL) which is a conveyance pipeline in the City of Tijuana that was constructed parallel to Tijuana's original conveyance channel. The original conveyance channel is currently in need of rehabilitation and serves as the backup to the PCL conveyance system. Of this total, 25 mgd would be treated at the SABWWTP. The rest would bypass treatment at the SABWWTP and be discharged untreated into the shoreline at Punta Bandera, 5.6 miles south of the international border. Under Alternative 1 Option A, USIBWC assumed that Mexico's Original Conveyance Channel (OCC) in Tijuana would not be rehabilitated and used. Sewage flows beyond the capacity of the United States or Mexican treatment and conveyance systems would not be treated in either country and could eventually reach the Tijuana River and flow northward via the Tijuana River and nearby canyons and gullies into the United States, polluting the Tijuana River, the Tijuana River Valley and Estuary and south San Diego beaches. It is estimated that by 2023, up to 9 mgd of untreated sewage from Tijuana would drain into the river unless the conveyance channel capacity is increased to route the wastewater to Punta Bandera. Untreated wastewater flowing south of the international border would significantly affect water quality by exceeding most water quality criteria for protection of freshwater aquatic life, both under acute and chronic exposure of aquatic organisms.

2. *Option B: With Future Improvements to Mexico's Existing Conveyance Facilities*

Under the No Action Alternative Option B, the SBIWTP would continue to operate, providing advanced primary treatment for average flows of 25 mgd and peak flows of 50 mgd. No equalization of flow would be provided. All treated effluent would be discharged through the SBOO. Pump Station 1/1A would be operated in a way that results in daily peak flows of 50 mgd being directed to the SBIWTP. Combined with low flows, the average flow to the SBIWTP would be 25 mgd. Similar to Option A, under Alternative 1 Option B, the SBIWTP would continue to provide advanced primary treatment for average flows of 25 mgd and discharge through the SBOO. All other flows would remain within Mexico. However, with Alternative 1 Option B, average flows of 25 mgd would be conveyed to the SABWWTP via the PCL for treatment. Up to 34 mgd of average flows would be conveyed via the OCC, and USIBWC assumed for purposes of this alternative that all excess flows conveyed via this system (i.e., the OCC) would bypass treatment at the SABWWTP to be discharged into the shoreline at Punta Bandera. This alternative would not include any new treatment facilities at the SBIWTP.

The improved conveyance system would eliminate the untreated sewage flows into the Tijuana River, but increase untreated sewage releases at Punta Bandera that bypass the SABWWTP.

B. *Alternative 2: Operate SBIWTP as Advanced Primary Facility With Treated Flows Conveyed To Mexico for Discharge*

Under Alternative 2, the SBIWTP would continue to operate as an advanced primary facility for average flows of 25 mgd and peak flows of 50 mgd. No SBIWTP advanced primary treated effluent would be discharged through the SBOO; instead, all effluent would be returned to Mexico. All other flows would remain within Mexico, with 25 mgd being conveyed to the SABWWTP via the PCL for treatment. Up to 34 mgd would be conveyed via the OCC, if Mexico undertakes the necessary rehabilitation. It would bypass treatment at the SABWWTP and would be discharged into the shoreline at Punta Bandera.

Currently, Mexico has advised the USIBWC that it does not have sufficient capacity to accept treated effluent back from the SBIWTP. A new pumping and conveyance system has been constructed by Mexico as a parallel backup facility for the existing original Mexican conveyance system, to pump an average flow of 25 mgd and peak of 50 mgd, to convey flows from Pump Station 1/1A to the SABWWTP in Mexico. The new parallel pumping and conveyance system, or PCL, was originally intended as backup for the existing system to allow for needed repairs to Tijuana's existing system. However, this system is now the primary conveyance system.

Under Alternative 2, the treated effluent would be sent to Tijuana via the SBIWTP's primary effluent return connection (PERC) conveyance and pumping facilities, completed in 2004, and by the PCL. If the treated effluent does not enter the SABWWTP, it would be discharged into the shoreline 5.6 miles south of the U.S./Mexico border, at Punta Bandera. The new pumping and conveyance system to the treatment works in SABWWTP would continue to operate.

All other flows would remain within Mexico, with 25 mgd being conveyed to the SABWWTP via the PCL for treatment. Up to 34 mgd would be conveyed via the OCC by 2023; it would bypass treatment at the SABWWTP and would be discharged into the shoreline at Punta Bandera.

The following improvements to the OCC in Mexico would be required to implement this alternative:

- Refurbish Pump Station 1
- Install new pumps and new motors
- Install a new conveyance pipeline (force main) with increased capacity from Pump Station 1 to Playas de Tijuana

The Comision Estalad de Servicios Publicos de Tijuana/State Commission of Public Services Tijuana (CESPT) has expressed objections to this alternative because it would eliminate the redundancy of their conveyance line and reduce operational flexibility.

C. *Alternative 3: Operate SBIWTP with City of San Diego Connections (Interim Alternative Only)*

Under Alternative 3, the SBIWTP would continue to operate as an advanced primary facility at its current 25-mgd capacity and would send up to 14 mgd to San Diego city treatment facilities. The SBIWTP would also return 11 mgd of treated effluent to Mexico via its OCC. Direct discharges by the SBIWTP to the SBOO would cease. This alternative would be a potential interim alternative for the SBIWTP, while

secondary facilities were being constructed, and would require agreement by the City of San Diego. It would also require agreement by the Government of Mexico to accept the returned effluent and to expand the capacity of the OCC.

The Rules, Finance and Intergovernmental Relations Committee of the San Diego City Council voted unanimously in 2002 to deny any request from the USIBWC to treat effluent from the SBIWTP at the South Bay Water Reclamation Plant (SBWRP), a tertiary plant, and/or the Point Loma Wastewater Treatment Plant (PLWTP), an advanced primary plant, because of toxicity of Tijuana wastewater, handling of sludge, reduced capacity, and reclaimed water concerns. Further, on October 11, 2004, and in prior correspondence, the City of San Diego has advised the USIBWC that its facilities are not currently available to treat Tijuana sewage on an interim basis or otherwise. For purposes of this alternative, USIBWC assumed that if circumstances were to change and the City's facilities were to be made available to USIBWC under this potential interim alternative, the SBIWTP would send its advanced primary effluent to two existing City of San Diego treatment facilities, specifically the SBWRP and the PLWTP to complete the wastewater treatment process and discharge the treated effluent. Advanced primary treated or screened effluent would be sent to the SBWRP for secondary treatment via a new connection, with treated effluent discharged through the SBOO. In addition, screened effluent would be sent to the PLWTP via the City's South Metro Interceptor, where it would be treated and discharged through the Point Loma Outfall.

Under this alternative, a total of 14 mgd of advanced primary treated effluent or 14 mgd of screened effluent would be sent to the SBWRP or the PLWTP. The remaining 11 mgd of advanced primary effluent from the SBIWTP would be returned to Mexico via its OCC, where it would be blended with untreated wastewater and discharged at Punta Bandera. This alternative assumes that the Government of Mexico agrees to accept the return of the treated effluent and expands the capacity of its OCC. Alternative 3 also assumes that 25 mgd of flows generated by the City of Tijuana would be conveyed to the SABWWTP via Mexico's PCL.

In its comment letter on the Draft SEIS dated February 23, 2005, the City of San Diego confirmed that it does not support any alternative that would require treatment of Tijuana sewage in the City's system.

D. *Alternative 4: Public Law 106–457, Secondary Treatment Facility in Mexico*

This Alternative includes three treatment options for implementing Public Law 106-457, as amended, and IBWC Minute 311:

- **Option A:** Operation of SBIWTP as Advanced Primary Facility, Secondary Treatment in Mexico
- **Option B:** Cease Operation of SBIWTP and Conduct all Secondary Treatment in Mexico
- **Option C:** Bajagua Project, LLC proposal – Operation of SBIWTP as Advanced Primary Facility with Secondary Treatment in Mexico

At present, the specific facilities required to implement Public Law 106-457, as amended, and IBWC Minute 311 have not been fully identified. Therefore, USIBWC made the following assumptions about the characteristics of this alternative:

- Required facilities would include a pump station (for Alternative 4 Options A and C only) on the SBIWTP to pump the plant's advanced primary effluent to the Public Law 106- 457 facility (sized to pump an average of 25 mgd), a pipeline to

transport treated effluent from the SBIWTP to the Public Law 106-457 facility, a pump station in Mexico to transport flows from the Tijuana collection system to the Public Law 106-457 facility (sized to pump 34 mgd), and a pipeline to return up to 59 mgd treated effluent from the Public Law 106-457 facility to SBIWTP for discharge.

- A Public Law 106-457 treatment plant would be constructed in the area conceptually presented in the Master Plan (in the Alamar River basin).
- The plant would have a 59-mgd capacity consistent with IBWC Minute 311 and the Master Plan. Future expansion beyond the 59 mgd capacity recommended in the Master Plan was not considered.
- Secondary treatment would be performed in compliance with the Federal Water Pollution Control Act (Clean Water Act).
- Treated effluent would comply with the water quality requirements of the USIBWC's NPDES Permit No. CA0108928 and could be discharged through the SBOO.
- Disposal of all sludge produced would be the responsibility of the service provider under the fee-for-service contract established as part of Public Law 106-457, as amended.
- The Master Plan assumed that operations would begin in 2006. However, for modeling purposes, the SEIS assumed operations would commence in 2009 as a worst-case scenario.

Discharge Options

Alternative 4 also includes two options for discharging secondary treated effluent from the Public Law 106-457 treatment facility.

Option I consists of discharging offshore in the United States through the SBOO.

Option II consists of retaining treated effluent in Mexico and discharging it at the shoreline in Mexico at Punta Bandera using a pump station at the Public Law 106-457 plant (sized to pump up to an average of 59 mgd) and a force main between the plant and Pump Station 1/1A. From Pump Station 1/1A treated effluent would be conveyed via the OCC, bypassing treatment at the SABWWTP to be discharged into the shoreline at Punta Bandera. It is also assumed that Mexico would improve its OCC (i.e., replace it with a pipeline that increases capacity) to convey the treated effluent to Punta Bandera.

1. Treatment Option A: Operation of SBIWTP as Advanced Primary Facility, Secondary Treatment in Mexico

Under Alternative 4 Option A, the SBIWTP would continue to operate as an advanced primary facility for average flows of 25 mgd and peak flows of 50 mgd with 25 mgd of primary treated effluent sent to a secondary treatment facility to be constructed in Mexico (Public Law 106-457 facility). All other flows would remain within Mexico, with 25 mgd being conveyed to the SABWWTP via the PCL for treatment. Up to 34 mgd of raw sewage would be pumped to the Public Law 106-457 treatment facility, via a new Tijuana pumping station and conveyance line.

Under Alternative 4 Option A, both options would result in the discharge of 6 mgd of untreated flows to the shoreline in Mexico in 2004. These flows would be eliminated once the Public Law 106-457 facility begins operation in 2009.

The principal difference between the discharge options is the discharge location and volume of secondary treated effluent. Option I would result in discharges up to 59 mgd of secondary treated effluent offshore in the United States, and Option II would result in coastal discharges in Mexico of up to 84 mgd of secondary treated effluent to the shoreline at Punta Bandera.

Facilities for this alternative would be designed to ensure compliance with water quality standards of the United States and Mexico, and in accordance with USIBWC's NPDES permit limitations. Final design of the treatment facility would be subject to approval of both sections of the IBWC in accordance with IBWC Minute 311.

2. *Treatment Option B: Cease Operation of SBIWTP, Secondary Treatment in Mexico*

Under Alternative 4 Option B, SBIWTP operation would cease. Up to 59 mgd of wastewater flows would be conveyed directly to the Public Law 106-457 facility for secondary treatment. Flows beyond 59 mgd generated by the City of Tijuana would be retained in Mexico and conveyed to the SABWWTP via the PCL for treatment.

This alternative would require new facilities in the United States and Mexico. A return effluent pipeline and connection to the SBOO discharge at the blending structure would be constructed in the U.S. The facilities required for this option would be similar to those identified for Option A, with two exceptions:

- There would be no pump station at the SBIWTP
- The Tijuana pump station would be sized to pump up to 59 mgd of raw sewage to the Public Law 106-457 treatment facility

In addition, the treatment process at the secondary treatment plant in Mexico would differ. With Option B, the treatment process would include preliminary treatment (screening and grit removal) as well as primary sedimentation of the raw wastewater before secondary treatment. Sludge digestion and handling would be provided for the primary and secondary sludge.

3. *Treatment Option C: Bajagua Project, LLC Proposal – Operation of SBIWTP as Advanced Primary Facility, Secondary Treatment in Mexico*

This alternative is described in Section II.A of this Record of Decision

E. *Alternative 5: Secondary Treatment in the United States at SBIWTP*

Under Alternative 5, secondary treatment facilities (completely mixed aerated (CMA) ponds or activated sludge would be constructed at the SBIWTP to treat 25 mgd of wastewater with disposal through the SBOO. This alternative would require Mexico to handle all flows beyond the 25 mgd capacity of the SBIWTP. Within Mexico, flows would be conveyed to the SABWWTP (25 mgd capacity) via the PCL and would be discharged at Punta Bandera. Any remaining flows would be discharged untreated into the shoreline at Punta Bandera.

The alternative of constructing secondary treatment facilities in the United States was analyzed in prior NEPA documents for the SBIWTP. The 1994 Final EIS identified activated sludge facilities as the preferred alternative and this treatment option was approved in a 1994 Record of Decision issued by the USIBWC and EPA. This NEPA evaluation was later supplemented by a 1999 Final SEIS, which

evaluated treatment options for providing secondary treatment at the SBIWTP. Options evaluated in the 1999 SEIS included a CMA pond system at the former Hofer site as well as the following two options for an activated sludge treatment process at the SBIWTP:

- Activated Sludge with Flow Equalization Basins (FEB), Option B-1
- Activated Sludge with Expanded Capacity, Option B-2

In 1999 USIBWC and EPA issued a Record of Decision selecting a CMA pond system at the Hofer site as the means for achieving secondary treatment for the SBIWTP's effluent, and the two agencies sought congressional approval to raise the funding limits so the agencies could implement this decision. However, Congress declined to raise the funding limits or take any other action to fund construction of CMA ponds and since then has not taken any other action to fund construction of CMA ponds or activated sludge secondary treatment facilities in the United States to treat the SBIWTP's effluent. The construction of a CMA pond system and the construction of activated sludge secondary treatment facilities (the decision made in 1994 ROD) at the SBIWTP site were again evaluated in the Final SEIS issued in July 2005 as options for bringing the SBIWTP into compliance with the CWA and its NPDES permit. The CMA pond system at the former Hofer site is referred to as Alternative 5 Option A. The activated sludge options, with flow equalization basins and with expanded capacity, are referred to as Alternative 5 Options B-1 and Option B-2, respectively.

1. *Option 5A: Completely Mixed Aeration (CMA) Ponds at SBIWTP*

Alternative 5A includes a treatment pond option capable of treating 25 mgd average flows with peaks of 50 mgd. The CMA ponds would be located at the former Hofer site adjacent to facilities at the SBIWTP. This alternative assumes that conventional primary treatment, rather than advanced primary treatment, would be provided at the SBIWTP to fully optimize the pond system. The new facilities required for this alternative would include the following major elements:

- Four ponds having a total volume of 147 million gallons, each divided into five cells: four anaerobic digester pits (ADPs) receiving primary effluent followed by one CMA cell, which receives effluent from all of the ADPs. The ADPs would have surface aerators and the CMA cells would be completely mixed and aerated.
- Two surface aerated ponds (27 million gallons each) divided into two cells, each pond receiving effluent from the CMA cells.
- Distribution structures, pump stations, and a new control building.

This alternative would cover about 36 acres of land and have a total pond surface area of about 29 acres.

2. *Options 5B-1 and 5B-2: Activated Sludge Secondary Treatment at SBIWTP*

Alternative 5 Options B-1 and B-2 would provide secondary treatment at the SBIWTP in the United States using activated sludge treatment.

Activated Sludge with Flow Equalization Basin (Alternative 5 Option B-1)

For the Alternative 5 Option B-1, activated sludge secondary treatment facilities would be constructed at the existing SBIWTP site. This alternative would result in an average flow of 25 mgd into the SBIWTP with flow equalization basins to accommodate peak flow storage and subsequent off-peak discharge to the secondary activated sludge facility. Flow equalization basins capable of storing peak flows greater than 25 mgd would be constructed for this alternative. A storage volume of 7 million gallons would be required. Accordingly, the average flow through both the advanced primary and secondary portion of the plant would be 25 mgd. Flow through the primary portion of the plant would follow the daily flow variations with a low flow of about 3.5 mgd and a peak flow of 50 mgd. Before this variable flow enters the secondary portion, it would be equalized by the basins to a steady rate of 25 mgd.

The flow equalization basins would be situated within the existing SBIWTP footprint. Proposed new facilities would include the following major elements:

- One 7-million gallon equalization basin and a pump station capable of pumping up to 21.50 mgd to the activated sludge process.
- Six single-pass conventional activated sludge tanks with fine bubble diffusers and anoxic zone selectors, including one aeration blower structure with three blowers.
- Eight secondary sedimentation tanks with return-activated sludge pump facilities, a secondary skimming pump station, and an electrical local control center.
- Two 27-foot-diameter dissolved air flotation thickeners with chemical addition facilities.
- One 34-foot-diameter sludge storage tank.
- Extension of the support facilities such as yard piping to accommodate the expanded site and facilities for the secondary treatment facilities.

Activated Sludge with Expanded Capacity (Alternative 5 Option B-2)

Under Alternative 5 Option B-2, activated sludge secondary treatment facilities would be constructed on the existing SBIWTP property and at the 40-acre former Hofer site as described in the 1999 Final EIS. This alternative would use activated sludge as the secondary treatment process and the capacity of the facilities would be expanded to accommodate peak flows.

For this alternative, an average flow of 25 mgd with peak flows up to 50 mgd would be treated by the advanced primary and the secondary facilities. The proposed new facilities, which would be located on the current SBIWTP property, would include these major elements:

- Six single-pass conventional activated sludge tanks with fine bubble diffusers and anoxic zone selectors, including one aeration blower structure with four blowers.
- Sixteen secondary sedimentation tanks with return-activated sludge pump facilities, a secondary skimming pump station, and an electrical local control center.

- Two 27-foot-diameter dissolved air flotation thickeners with chemical addition facilities.
- One 34-foot-diameter sludge storage tank.
- Extension of the support facilities such as yard piping to accommodate the expanded site and facilities for the secondary treatment facilities.

F. *Alternative 6: Secondary Treatment in the U. S. and in Mexico*

Alternative 6 is a combination of the treatment processes described for Alternatives 4 and 5, with secondary treatment facilities being constructed at the SBIWTP in the United States and in Mexico. Under Alternative 6, the secondary treatment facilities constructed at the SBIWTP (activated sludge or CMA ponds) would treat 25 mgd of wastewater with disposal to the SBOO. Flows beyond the SBIWTP capacity would be treated in Mexico at the either the existing SABWWTP (25 mgd) with discharge to Punta Bandera or at a new Public Law 106-457 facility (34 mgd secondary treatment facility) with disposal to the SBOO.

G. *Alternative 7: SBIWTP Closure/Shutdown*

Alternative 7, which would be necessary if the SBIWTP could not otherwise achieve compliance with the federal CWA through other means, assumes that the SBIWTP would be closed if CWA compliance cannot be achieved. It also assumes implementation of the following projects in Mexico:

- Tijuana Sewer Rehabilitation Project, certified by the Border Environment Cooperation Commission (BECC) in 2001, which includes 429,034 feet of sewer lines, laterals, collectors, subcollectors, and interceptors. Some of theses projects are already under construction.
- Rehabilitation and expansion of the San Antonio de los Buenos Plant, from 17 to 25 mgd. The renovation work was completed in early 2004.
- Construction of the four Japanese Credit Program wastewater treatment plants to be constructed in Mexico.
- Renovation and rehabilitation of the original conveyance channel.

In addition, this alternative assumes that Mexico would construct the improvements identified under the "preferred option" in the *Potable Water and Wastewater Master Plan for Tijuana and Playas de Rosarito.* The improvements to wastewater collection, pumping, and treatment would consist of constructing five new wastewater treatment plants (including the four Japanese Credit Program plants and a regional wastewater treatment plant in the Alamar River area) and expanding two existing plants. Related infrastructure to support these improvements would include new pumping facilities and new pipelines.

With Alternative 7, untreated flows would continue to be discharged to the shoreline in Mexico south of the San Antonio de los Buenos treatment works. Untreated flows discharged to the shoreline are projected to be 31 mgd in 2004. This volume would increase to 40 mgd by 2009 and to 59 mgd by 2023.

IV. ENVIRONMENTALLY PREFERRED ALTERNATIVE

The Council on Environmental Quality (CEQ) regulations for implementing the National Environmental Policy Act (NEPA) require that the Record of Decision specify "the alternative or alternatives which were considered to be environmentally

preferable" (40 C.F.R. §1505.2(b)). The environmentally preferable alternative is the alternative that will cause the least damage to the biological and physical environment. It is the alternative that best protects, preserves, and enhances historic, cultural, and natural resources.

The environmentally preferred alternative is to construct a new 59 mgd secondary treatment plant and supporting facilities in Mexico (Alternative 4), consistent with Public Law 106-457, as amended, and IBWC Minute 311, and to discharge the treated effluent offshore through the SBOO (Discharge Option I). Construction of new facilities in Mexico to treat Tijuana sewage is environmentally preferable because it would address long-term sewage treatment needs of the region by treating current and future projected increased raw sewage flows in Tijuana, providing secondary treatment for not only the 25 mgd of Tijuana raw sewage currently treated at the SBIWTP and also secondary treatment for up to an additional 34 mgd of such sewage originating from Tijuana. The additional secondary treatment capacity would significantly expand and improve the existing wastewater infrastructure for the Tijuana/San Diego region and benefit public health and the environment in the Tijuana River Valley and Estuary since it would reduce raw sewage flows from Tijuana into the U.S. that result in contamination of the Tijuana River and south San Diego beaches.

V. MEANS TO AVOID OR MINIMIZE ENVIRONMENTAL EFFECTS

NEPA regulations and guidance require the Record of Decision to contain a concise summary of the mitigation measures which the agency has committed itself to adopt. The USIBWC commits to the following mitigation measures:

A. Terrestrial Biological Resources

- Mitigation would be undertaken for the potential loss of non-native grassland associated with the construction of pipelines connecting the SBIWTP and the Bajagua treatment plant site. Mitigation would be undertaken typically at a 0.5 to 1 mitigation ratio. Mitigation may be accomplished with preservation or restoration/creation of similar or better quality habitat. The mitigation completed for impacts to non-native grassland would offset the temporary loss of foraging habitat for raptors. With incorporation of this mitigation measure, impacts to nonnative grasslands would be mitigated to a less than significant level.
- Standard techniques for reducing construction noise impacts such as using noise suppressing mufflers on construction equipment and complying with the local noise control ordinance would be undertaken to reduce potential noise impacts on least Bell's vireo in the vicinity of the SBIWTP to a less than significant level.
- Confirmatory surveys and directed searches for least Bell's vireo, and southwestern willow flycatcher in the vicinity of the pipeline alignment along the Alamar River shall be conducted. Vireo and flycatcher surveys/directed searches shall be initiated between mid-March and mid-May prior to the initiation of construction. If the least Bell's vireo or the southwestern willow flycatcher is confirmed to be present in riparian habitats along the pipeline corridor, the corridor shall be adjusted to avoid these habitats and provide the appropriate buffers. Depending on the proximity of construction activity, adjusting the construction schedule to avoid noise and glare impacts during critical life stages may also be required.
- At the SBIWTP site, generally accepted measures and practices in the industry to effectively address potential adverse effects to the least Bell's vireo from construction noise will be required. Specificially, during the least Bell's vireo's

breeding season (March 15 to September 15) measures will be required to ensure that construction noise not exceed ambient noise levels of 60 decibels hourly (dBA L_{eq}) at the edge of riparian habitat constituting least Bell's vireo territories. A qualified acoustician will establish monitoring stations where activities from construction may infiltrate the least Bell's vireo habitat, and will monitor noise levels during construction activities and verify that the average hourly noise levels do not exceed 60 dBA or ambient levels at those stations. If noise from construction activities exceeds these levels, construction activities will be modified or curtailed to ensure that noise levels do not exceed 60 dBA L_{eq} or average ambient levels within or immediately adjacent to suitable least Bell's vireo habitat.

- In addition, surveys of raptor nests and roosts shall be conducted in the vicinity of the pipeline alignment along the Alamar River prior to the initiation of construction. If raptor nests or roosts are confirmed to be present, the pipeline location will be adjusted to avoid these habitats and provide appropriate buffers. Depending on the proximity of construction activity, adjusting the construction schedule to avoid noise and glare impacts during critical life stages may also be required by USIBWC.
- Mitigation would be undertaken for the loss of 33.0 acres of annual grassland at the Bajagua treatment plant site. Mitigation would be required, typically at a 0.5 to 1 mitigation ratio. Mitigation may be accomplished by preserving 17.0 acres on-site. Adequate land is available for mitigation including 11.0 acres of annual grassland and 48.4 acres of disturbed habitat, portions of which would be rehabilitated for mitigation. Removal of the cattle ranch upon initiation of construction, will allow the area to naturally revegetate into annual grassland. Temporary construction staking or fencing will be erected under the supervision of a qualified biologist at, or near the edge of the preserved habitat, prior to any brushing or grading activities to limit disturbance of the habitat. The mitigation completed for impacts to annual grassland would offset the temporary loss of foraging habitat for raptors. With incorporation of this mitigation measure, impacts to annual grasslands would be mitigated to a less than significant level.

B. *Cultural Resources*

In the event cultural materials are encountered during construction, the contractor shall immediately suspend work in the area of the find until the material can be evaluated by a qualified cultural resource specialist. Cultural resources discovered during excavation would be evaluated for NRHP eligibility following their discovery or considered eligible for listing by default and subjected to impact mitigation as called for in the Programmatic Agreement. Impacts to historic properties discovered within the excavation path would be mitigated to a level below significance through implementation of the terms of the Programmatic Agreement. With incorporation of this mitigation measure into project planning, impacts to cultural resources would be considered mitigated to a less than significant level.

C. *Paleontological Resources*

Due to the potential for disturbance to paleontological resources in the highly fossiliferous San Diego formation at the SBIWTP and in the surrounding area, paleontological monitoring of construction of pipelines and the pump station would be required of the contractor by USIBWC. A Paleontological Resource Mitigation Plan will be prepared by a qualified paleontologist and implemented by the contractor. The plan will identify:

- Specific areas to be monitored during excavation and other ground-disturbing activities;
- Procedures for recovery and preservation of paleontological material found on the site (including transfer of fossils to repositories); and
- Reporting of these findings.

With incorporation of this mitigation measure into project planning, impacts to paleontological resources would be considered mitigated to a less than significant level.

D. Best Management Practices

The following best management practices would also be implemented to avoid or minimize adverse effects:

- Facilities would be sited, designed and constructed in accordance with applicable engineering standards for seismic resistance.
- Recommendations of the geotechnical site investigation would be incorporated into project design and planning to avoid or minimize erosion and sedimentation of natural drainage areas associated with hillside grading.
- Site watering would be conducted during ground-disturbing construction activities to reduce generation of fugitive dust.

VI. Discussion of Issues and Factors

The USIBWC received a total of 35 responses on the Draft SEIS. Each comment letter and testimony has been reprinted in Appendix H of the Final SEIS, which includes responses to each of the issues raised. The USIBWC took into consideration twelve major issues identified during the agency and public consultation process.

1. Need for Comprehensive Approach

Several comment letters raised the issue that the scope of Draft SEIS was too narrow, that the alternatives would will fall short of a comprehensive solution to chronic sewage pollution during rainy season (wet-weather flows), and that there was a need for a comprehensive approach to address longstanding cross-border contamination.

The USIBWC identified that the purpose of this SEIS is to evaluate alternatives for bringing the SBIWTP into compliance with the Clean Water Act (CWA) and the plant's NPDES Permit. The purpose of this SEIS is not to evaluate alternatives that would comprehensively address all of the sanitation needs of the San Diego/Tijuana region, but rather, is limited to those reasonable and feasible alternatives that would bring the SBIWTP into compliance with the CWA and the plant's NPDES Permit. Given this limited purpose, the SEIS considers various alternatives in the U.S. and Mexico that would bring the SBIWTP into compliance, including alternatives that are consistent with Public Law 106-457, as amended, that would also provide additional sewage treatment capacity to further address and prevent pollution from estimated future sewage flows originating from the Tijuana region, consistent with Public Law 106-457, as amended.

Wet weather flows have for decades, and continue to be an issue in the Tijuana River Watershed. This is due, in part, to areas within the City of Tijuana that either do not have a sewage collection system or in which the existing collection system is in need of rehabilitation. During rain events, raw sewage flows from these areas via

the Tijuana River into the U.S. To address this issue, the EPA through the BECC has provided $18 million to the City of Tijuana to implement the Tijuana Sana Project. This project, which is ongoing, consists of rehabilitating portions of the Tijuana sewage collection system, including areas most likely to spill and result in sewage flows that enter into the U.S. System rehabilitation includes replacement of 30,250 meters of wastewater collection laterals and 16,600 meters of collectors and subcollectors. Currently, the City of Tijuana has applied for a second grant through the BECC to continue the work of rehabilitation the City's sewage collection system. Potential impacts of wet-weather flows, largely the result of non-point sources through the Tijuana River watershed, are beyond the scope of this SEIS which is intended to evaluate the alternatives for bringing the SBIWTP into compliance with the Clean Water Act and its NPDES permit. The SBIWTP does not, and could not, treat wet weather flows; but rather was constructed to capture and treat dry-weather wastewater flows from point sources. Improvements at the watershed level are anticipated as wastewater discharges are removed from the Tijuana River for treatment and routed for controlled and proper disposal.

While this SEIS does not purport to comprehensively address the treatment of all raw sewage originating from the Tijuana Region, USIBWC has considered the existing and planned wastewater treatment infrastructure in the Tijuana region, as well as current and projected future wastewater treatment flows and the long-term needs of the San Diego/Tijuana Region. In particular, USIBWC has reviewed the Potable Water and Wastewater Master Plan for Tijuana and Playas de Rosarito (Master Plan) issued in 2003 by the Comision Estatal de Servicios Publicos de Tijuana (CESPT) which defines an integrated strategy for water and wastewater services to meet the needs of present and future generations in regard to public health, quality of life and environmental protection. This comprehensive Master Plan was funded by EPA, which in accordance with Public Law 106-457, as amended, analyzed the short and long-term potable water and wastewater needs of the Tijuana-Playas de Rosarito area in Baja California, Mexico. For a copy of this Master Plan, see http://www.epa.gov/region9/water/tijuana/index.html# master.

2. *Impacts In Mexico*

Two commentors indicated that the Draft SEIS did not address impacts to resources in Mexico associated with the Preferred Alternative and did not identify mitigation measures for such impacts.

Environmental resources in Mexico were evaluated only when alternatives with construction or operations in Mexico have the potential to impact resources in the United States or would be considered as trans-boundary effects. Although construction of the proposed facilities in Mexico may pose impacts at the site to geological resources, cultural resources, noise, land use, socioeconomics, public health, environmental justice and energy, such impacts are anticipated to occur in proximity to the construction activity area and are not likely to result in significant trans-boundary impacts within the U.S. Before construction of any Public Law facility in Mexico, a review of potential environmental impacts in Mexico will be conducted in accordance with the applicable environmental impact review process in Mexico. USIBWC anticipates that if the Mexican authorities identify potential impacts to Mexican resources during the review process, those impacts and any potential additional measures the Mexican authorities believe would be appropriate will be addressed through the contracting process.

Another commentor requested site-specific surveys for sensitive specifies at the Preferred Alternative treatment plant site and along the pipeline corridor(s).

The appropriate surveys required to adequately assess impacts to the species of concern have already been conducted and were forwarded to the U.S. Fish and Wildlife Service (USFWS). A Quino checkerspot butterfly habitat site assessment is not required because the vegetation required to support the Quino checkerspot butterfly was not found on the Bajagua treatment plant site. Appropriately timed surveys for spring blooming annuals for sensitive plant species, including Otay tarplant and San Diego thornmint were conducted in early and late spring and fall and have been provided to the U.S. Fish and Wildlife Service. In addition, the jurisdictional wetland analysis conducted on the Bajagua treatment plant site found no vernal pools on the site. A copy of the two site assessments conducted in Mexico was sent to the U.S. Fish & Wildlife Service.

The Draft SEIS (p. 5-5) included the recommendation to conduct surveys of least Bell's vireo and southwestern willow flycatcher. However, because arroyo toads do not migrate to the U.S., no trans-boundary impacts would occur and no mitigation would be undertaken.

Prior to construction of any Public Law facility in Mexico, a review of potential environmental impacts in Mexico will be conducted in accordance with the applicable environmental review process in Mexico. Notwithstanding the above, the USIBWC will consider incorporating a minimum buffer of 100 feet between pipelines and wetlands to minimize impacts to the Alamar River.

Pursuant to Section 7 of the Endangered Species Act, the USIBWC consulted with the U.S. Fish and Wildlife Service (please see Section VII.B of this Record of Decision for additional details regarding this consultation).

3. *Requests For Clarification/Additional Information on NPDES Permit and Facility Regulation*

Several commentors requested additional information on the NPDES permit for the proposed new, Mexican secondary treatment facility and how that facility in Mexico would be regulated.

The current NPDES permit for the SBIWTP is held by the USIBWC, and the USIBWC plans to consult with the Regional Water Quality Control Board, San Diego Region regarding any renewed, revised or future permits for increases in the flow rate of effluent discharged through the South Bay Ocean Outfall. These consultations will include: discussions of the appropriate parties to hold the renewed/revised/future permit; when the renewal application must be submitted; the amount of time required to process the application; and, when the draft permit will be available.

IBWC Minute 311 provides for supervision of the project by the IBWC, which intends to monitor the progress and status of performance of any contract executed to ensure fulfillment of the objectives of the Minute and evaluate the degree to which the service provider of the facilities in Mexico has complied with the terms of the contract. The contract with the service provider will require that the service provider ensure treatment to the secondary level at the facility in Mexico in compliance with applicable water quality laws of the U.S., the State of California and Mexico. In addition, IBWC Minute 311 provides for oversight by a Binational Technical Committee composed of appropriate U.S. and Mexican technical advisors, presided over by the IBWC. IBWC Minute 311 further provides that the Binational Technical Committee include representatives from the State of California, EPA, the Mexican National Water Commission and the Government of Baja California.

4. Funding Availability For Other U.S./Mexico Border Projects

One commentor raised concerns that funding for the Preferred Alternative would exhaust EPA/NADBank Funds for other U.S./Mexico border projects and questioned whether any of the alternatives would be able to meet the court-ordered compliance schedule.

Funding for the operation, maintenance and reimbursement of private capital invested for development of any project constructed under Public Law 106-457, as amended, would be sought through the annual appropriations process. This is separate and apart from funding for Mexican border infrastructure projects obtained through an annual earmark appropriation to the EPA. EPA does not intend to use its border infrastructure money to fund the upgrade of the SBIWTP. Thus, implementation of Alternative 4C should not come at the expense of any other California or Baja border projects traditionally funded by EPA.

5. Compliance with Court-Ordered Schedule

Several commentors were concerned about the ability of the Preferred Alternative to meet the court-ordered compliance schedule.

The USIBWC estimates that all alternatives, which include major construction, would require approximately two years for facility construction. However, implementation of any of the alternatives will also require that necessary funding be made available and that necessary regulatory approvals in the U.S. and Mexico be obtained. The selected alternative will be required to comply with the court-ordered schedule for compliance.

6. Request for Clarifications and/or Additional Information

One commentor requested additional information on the Preferred Alternative relative to details on the Return Effluent Pipeline, depth of the aeration/clarifier basis relative to groundwater and the Amount of cut/fill required at treatment plant site and location of borrow sites.

The effluent return line for the Preferred Alternative would be connected directly to the flow distribution structure where the land portion of the SBOO begins. Given that the effluent return line would operate by gravity, the pressure in the pipe will be automatically controlled by the discharge occurring at atmospheric pressure at the mentioned large flow distribution structure. At this structure, the effluent of the South Bay Water Reclamation Plant also joins the SBOO and the connection would be made in a similar manner to avoid splashing due to any excess energy.

During final design of the Preferred Alternative the pipe diameter would be checked to insure the provision of adequate capacity and the connection to SBOO checked for adequate backflow prevention.

Aeration basin or clarifier depth, as well as cut and fill information is not normally shown in conceptual plans; this information will be shown in a later design phase.

7. Private Company/Sole-Source Contract

Several commentors expressed concerns that the Preferred Alternative would be constructed and operated by a private company with a sole-source contract. Public Law 106-457, as amended, provides for private involvement in the construction and operation of the proposed secondary treatment facilities in Mexico consistent with Public Law 106-457, as amended. That legislation authorizes USIBWC, notwithstanding any provision of Federal procurement law, to enter into a multiyear

fee-for-services contract with the service provider for secondary treatment services as provided for under the statute. Implementation of the selected alternative will be subject to successful completion of contract negotiations, execution of appropriate contract documentation, and the appropriation of necessary funding consistent with Public Law 106-457, as amended. Any payment by the U.S. Government will be subject to the availability of future appropriations. Under Public Law 106-457, as amended, the fee-for-service provider will be required to use competitive procedures, consistent with applicable U.S. and Mexican laws, in the procurement of property or services for the engineering, construction, and operation and maintenance for the Mexican facility.

8. Community Input

One comment letter indicated concern about whether the residents of the Tijuana region were given an opportunity to participate in the approval and oversight of necessary permits for the Preferred Alternative. This same commentor also questioned whether information about effluent quality from the Preferred Alternative would be available to American and Mexican citizens. Another commentor was concerned about outreach in Mexico, especially within the Alamar River Valley.

The USIBWC has included public participation as an integral part of its decision-making. The IBWC has held citizen forums, a public scoping meeting, a public hearing to take comments, and has otherwise complied with all public participation requirements applicable to this project. A Spanish translation of the Draft SEIS was also made available on the USIBWC website. Any public outreach to be undertaken in Tijuana will be conducted pursuant to applicable Mexican law.

All discharge information will be subject to the same reporting and disclosure requirements which govern all discharges subject to the laws of the United States and California.

9. Concerns about the Existing SBOO

One commentor expressed concerns about the existing the South Bay Ocean Outfall. Specifically, the commentor states the ocean surface over the outfall is contaminated with viruses and other contaminants that are not being measured and there are frequent reports of a visible plume and/or sewage-like odor. In addition, the commentor states high bacterial counts, odors and discoloration occurred at 25 mgd in violation of the NPDES permit.

With the exception of the deepest outfalls, the plume of most outfalls surfaces during the winter when due to the cooling of the surface water, there is little density variation along the water column. The lighter effluent mixes as it rises with surrounding water that has the same density at any depth. The mixing results in a plume that regardless of the amount of dilution is always lighter than the ambient, which results in surfacing. At times when there is some density stratification, the frequency of surfacing depends on the depth of the discharge and the design of the diffuser. The SBOO diffuser was designed to minimize surfacing by selecting very small ports discharging horizontally. Surfacing, per se, is not a violation and there are no body contact standards in the area of the discharge. The body contact standards apply to the protected areas of the kelp beds (sport fishing) and within a coastal band 300 ft wide or to a depth of 30 ft (bathing area).

On the subject of the performance of the SBOO outfall, two studies were completed in 2004. The first report, *Compliance Assessment and Environmental Effects Study of the International Treatment Plant (ITT) Receiving Water Quality Monitoring Program*, was prepared by Science Application International Corporation and Robert Smith (the final report was dated April 2004). The second report, *Evaluation of*

South Bay International Wastewater Treatment Plant Receiving Water Quality Monitoring Program to Determine its Ability to Identify Source(s) of Bacterial Exceedances (August 2004) was prepared by the Scripps Institution of Oceanography, and is referred to in response to comment no. 6-16 (Appendix H of the Final SEIS). Both reports find no evidence of any adverse impacts from the discharges either as a source of bacterial exceedances at the shore or to the marine environment in the area of the outfall. With regard to the marine environment, the SAIC report focused on the impacts to receiving water environment in the zone near the diffuser and found no detectable adverse impacts to water quality, sediment quality, benthic infauna, fish and macroinvertebrates, and fish tissue contaminant concentrations (bioaccumulation) related to the discharges from the SBIWTP through the SBOO.

The elevated bacteria counts on the surfacing plume in the area of the discharge are not in violation of the NPDES permit nor the Ocean Plan of California. The values presented actually indicate that the diffuser is performing much better than predicted in the design and is attaining a higher initial dilution.

10. Mexico's Industrial Pretreatment and Source Control Program

One commentor requested that specific compliance goals for Mexico's industrial pre-treatment and source control program be included in the NPDES permit for the Preferred Alternative.

Currently, the City of Tijuana has limited pretreatment standards and no toxicity standards. USIBWC has recently conducted an optimization study to identify potential interim measures that would optimize the SBIWTP's current treatment processes, including measures that would reduce toxicity and/or improve total suspended solids removal. USIBWC is currently evaluating implementation of possible measures. The conditions for any modified or future NPDES permit for the SBIWTP will be determined by the California Regional Water Quality Control Board, San Diego Region.

11. Identification of Preferred Alternative in Draft SEIS

One commentor expressed concern that the Preferred Alternative was identified in the Draft SEIS before public input.

The CEQ regulations implementing NEPA expressly provide that an agency "[i]dentify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternatives in the final statement unless another law prohibits the expression of such a preference" 40 C.F.R. §1502.14(e). The USIBWC considered comments on the Draft SEIS concerning the preferred and other alternatives, and addressed these comments in the Final SEIS (see Appendix H).

12. Japanese Credit Plant Effluent

Several commentors raised concerns about the disposal of effluent from the Japanese Credit Plants.

Tijuana's Comision Estatal de Servicios Publicos de Tijuana (CESP-T) is currently working with the Japanese Credit Bank (JBIC) to fund the construction of four wastewater treatment plants. Three of these plants (La Morita, Monte de los Olivos, and El Florido) will be constructed within the Tijuana River Watershed and will have an ultimate total capacity of 30.5 mgd. The fourth plant (Tecolote-La Gloria), which

is located along the Pacific coast south of the San Antonio de las Buenos wastewater treatment plant and not near the Tijuana River, will have a capacity of 8.7 mgd. Initial construction of these wastewater treatment plants is anticipated to begin in late 2005 with phased-operation commencing in mid-2007. It is not anticipated that these plants will be treating at their full capacity until sometime after 2007. Although these plants have the potential to discharge into the Tijuana River, Mexico has not made a decision as to where these plants may discharge, and the Mexican government has not requested at this time that these discharges be routed to the SBOO, which is located on the U.S. side of the border, for discharge into the Pacific Ocean. For more information on the discharge alternatives regarding these plants, please see "Identification and Evaluation of Effluent Disposal Alternatives for the Treated Wastewater for Tijuana, B.C., prepared by CSI Ingenieros for EPA, North American Development Bank, and CESP-T, June 2004."

The purpose and need of this SEIS is to evaluate potential alternatives for bringing the SBIWTP into compliance with the CWA and the plant's NPDES permit. The disposition of effluent from the Japanese Credit plants is beyond the scope of this SEIS. Nonetheless, related impacts were addressed in the SEIS as part of the cumulative impacts analysis in order to provide background and context.

VII. COMMENTS ON FINAL SEIS

The USIBWC made the Final SEIS available for public review and comment on July 22, 2005 and notices of availability were published in the Federal Register on July 22, 2005 and July 29, 2005. The USIBWC also invited written comments to be submitted on the Final SEIS on or before August 24, 2005. The USIBWC received one comment letter on the Final SEIS from the State of California Water Resources Control Board. A number of the comments were previously addressed in the Final SEIS, either in the body of the SEIS or in the responses to comments submitted on the Draft SEIS (Appendix H of the Final SEIS). The Final SEIS contains information on these issues and USIBWC responses. Table 1 presents a summary of the comment as well as the Subchapter of the Final SEIS and/or the Response to Comment number in which the comment was addressed.

Table 1. Summary of Comments on the Final SEIS

Comment	Final SEIS Subchapter	Response to Draft SEIS Comment
Significant unresolved technical issues related to Alternative 4C (project design criteria; project reliability; permitting; construction, operations and maintenance budgets; and feasibility of constructing within court-ordered compliance schedule)	--	26-30, 26-31
Request for implementation of a variation of Alternative 6	--	26-8
Implementation of Alternatives 5A or 5B could meet court-ordered compliance schedule	--	12-27
Construction of 25 mgd plant at SBIWTP should be included in any Preferred Alternative	--	12-26, 12-27
Comprehensive solution must address containment/disposal of effluent from Japanese Credit Plants	1.7.5, 2.4 and 4.12	12-27, 21-2, 26-39, 26-49

The comments on the Final SEIS also raised several new issues (i.e., issues not raised during public review of the Draft SEIS). The comments and the USIBWC's responses are summarized below:

1. *Formation of a Binational Technical Committee*

The commentor raised the issue that the binational technical committee, called for by IBWC Minute 311, has not yet been organized and has never met.

The USIBWC concurs that IBWC Minute 311 provides for oversight by a Binational Technical Committee composed of appropriate U.S. and Mexican technical advisors, presided over by the IBWC. IBWC Minute 311 further provides that the Binational Technical Committee includes representatives from the State of California, EPA, the Mexican National Water Commission and the Government of Baja California. The USIBWC anticipates formation of the committee by the end of October 2005.

2. *Coordination with Mexican Section of IBWC Regarding Alternative 4C*

The commentor indicated that Mexico has formally raised a number of significant questions and issues regarding Alternative 4C.

The proposed facilities included in the Preferred Alternative are the subject of ongoing consultations with the Government of Mexico. Implementation of the selected alternative will require the issuance of all necessary permits and obtaining necessary approvals from the relevant Mexican authorities. The USIBWC understands that Mexico must have a decisive role in the approval of various aspects of the project to be constructed in Mexico, including final site selection and treatment technology, design, construction, operation, maintenance, reuse of the effluent, and other contracting and administration aspects of the project. In the event that Mexico requests modifications of any aspects of Alternative 4C, including modification of the site location, USIBWC will evaluate what actions may be necessary in view of those requested modifications, including whether any supplementation of the Final SEIS or this Record of Decision is required.

3. *Re-evaluation of Time Period Required to Implement Preferred Alternative*

The commentor requested that the USIBWC reevaluate the time period required to implement the Preferred Alternative compared to other alternatives evaluated in the Final SEIS.

The amount of time required to address Mexico's concerns, obtain the necessary permits and approvals for the project, as well as the contracting and construction timelines were all considered in the estimation of the time needed to implement the Preferred Alternative. Therefore, no re-evaluation is necessary.

In selecting Alternative 4C, compliance with the deadlines set forth in the court-ordered schedule for the SBIWTP referenced above has been of critical importance to USIBWC in making its decision to select Alternative 4C. USIBWC believes construction of new secondary treatment facilities in Mexico is the approach most likely to enable timely compliance with the court-ordered schedule because there is federal legislation, recently reauthorized, expressly providing for the secondary treatment of the SBIWTP's effluent and authorizing funding for such facilities under a multiyear fee-for-services contract. USIBWC believes any alternatives that involve construction of new secondary treatment facilities in the United States could not meet the court-ordered compliance schedule because there is presently not adequate funding available for construction of such facilities in the United States under Section 510(b) of the Water Quality Act of 1987, Further, there is no Congressional legislation authorizing new funds for such new facilities in the United States. Therefore, the USIBWC has been unable to implement the previously issued Records of Decision for the SBIWTP deciding upon construction of secondary treatment facilities in the United States (see Section II.C above.) In view of the history of legal challenges and/or political opposition to the construction of new secondary treatment facilities at the SBIWTP, Congress' failure to fund new secondary treatment facilities in the U.S. when USIBWC previously recommended such facilities, Congress' passage of legislation expressly providing for secondary treatment of the SBIWTP's effluent in Mexico, Congress' recent reauthorization of that legislation, and the execution by the governments of the United States and Mexico of IBWC Minute 311 which provides a framework to construction of new facilities in Mexico to provide secondary treatment for the SBIWTP's effluent in Mexico, USIBWC believes secondary treatment facilities in Mexico presents the approach most likely to be funded by Congress and which will enable USIBWC to timely comply with the court-ordered compliance schedule.

4. *Include Interim Measures to Improve Total Suspended Solids and Toxicity Removal at SBIWTP*

The commentor requested that interim measures to improve total suspended solids and toxicity removal from effluent at the SBIWTP be included in the Preferred Alternative, regardless of which alternative is selected.

The South Bay International Wastewater Treatment Plant Optimization Study (August 8, 2005) provides recommendations that reflect promising ways of removing additional total suspended solids (TSS) from the SBIWTP effluent. The USIBWC is currently evaluating the recommendations of the Optimization Study and anticipates implementing interim measures with remaining project funds.

VIII. COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS

A. NPDES Permit

A NPDES permit for the SBIWTP for Section 402 Clean Water Act compliance and California Ocean Plan standards was issued by the San Diego Regional Water Quality Control Board (SDRWQCB) on November 14, 1996 (Permit No. CA108928). The NPDES permit for the SBIWTP authorizes discharge from a secondary wastewater treatment plant using activated sludge. SDRWQCB also issued a Cease and Desist Order for the interim advanced primary discharge. The USIBWC intends to modify the NPDES to reflect an increased discharge volume of secondary effluent via SBOO.

B. U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) is responsible for oversight of the federal Endangered Species Act (ESA). As required by Section 7 of the ESA, the EPA and the USIBWC consulted with the USFWS on potential impacts evaluated in the Draft SEIS. By supplemental letter dated June 30, 2005, the USIBWC identified specific measures to address potential adverse affects in the vicinity of the SBIWTP related to construction noise.

In a letter dated July 11, 2005, the USFWS concurred with the USIBWC's determination that by implementing mitigation measures the action was not likely to adversely affect endangered species.

C. National Historic Preservation Act

Regarding the National Historic Preservation Act, the USIBWC consulted with the California State Historic Preservation Officer (SHPO) regarding potential impacts to cultural and paleontological resources. On June 8, 2005, the SHPO concurred with the USIBWC's determination that there are no historic properties that may be affected by the action.

D. Coastal Consistency

A Coastal Consistency Determination (Determination) was submitted to the California Coastal Commission (Commission) in April 2005. This Determination, included in Appendix I of the Final SEIS, evaluated the Bajagua Project, LLC proposal – Operation of the SBIWTP as Advanced Primary Facility, Secondary Treatment in Mexico with discharge to the United States via the South Bay Ocean Outfall (Alternative 4C, Option I) for the SBIWTP in consideration of the California Coastal Act of 1976, as amended January 2005 and the Coastal Zone Management Act of 1972, as amended. Based on this information, the USIBWC determined that the implementation of the Bajagua Project, LLC proposal (Alternative 4C, Discharge Option I) would not result in direct, adverse impacts to the coastal zone. The Determination was approved by the Commission on June 9, 2005.

E. Air Quality

Construction of the Bajagua Project, LLC project pump station, portions of the force main and return flow pipeline in the United States would require grading, excavation and possibly compaction over a 6-month period. Air pollutant emissions from construction of pipelines from the SBIWTP to, and in, Mexico would be negligible. Construction-related emissions in the United States would be below significance threshold values, including de minimis levels established under the conformity provisions of the Clean Air Act. Air quality impacts of construction activities at the

Rio Alamar site in Mexico (approximately 3.5 miles southwest of the SBIWTP) would not be discernible in the United States because of distance. Upon operation of the SBIWTP following construction, air quality would be similar to existing conditions. For these reasons, air quality impacts of Alternative 4C would not be considered significant. In addition, as stated in Chapter 6.1.6.2, the total direct and indirect emissions from Alternative 4C, Option 1, fall below the general conformity de minimus thresholds of EPA's general conformity regulations, and a conformity determination is not required.

Alternative 4C would result in construction of the Bajagua Project, LLC project pump station and portions of the force main and return flow pipeline in the United States. The force main and return flow pipeline would be underground. The pump station is not expected to be a source of odors. Therefore, no changes in odor emissions are expected to occur.

The construction contractor would be responsible for obtaining a valid authority-to-construct permit before construction begins.

The SBIWTP has an air permit for current operations, but expanding operations under any alternative would require that the permit be modified.

IX. SUMMARY OF DECISION

In conclusion, the USIBWC finds that the Bajagua Project, LLC proposal (Alternative 4C, Option I) represents the wastewater treatment option that best services overall public interest and is consistent with the National Environmental Policy Act, Clean Water Act, and other federal, states and local plans and policies. The decision takes into account the direct, indirect, transboundary and cumulative impacts from the alternative. This alternative includes all practicable means to avoid or minimize environmental harm, while providing for the treatment of wastewater from Tijuana, Baja California, Mexico as described in existing international agreements and Public Law 106-457, as amended.