



CERTIFICATION PROPOSAL

REHABILITATION OF THE INTERNATIONAL COLLECTOR AND THE TIJUANA RIVER DIVERSION INFRASTRUCTURE IN TIJUANA, BAJA CALIFORNIA

Submitted: November 3, 2023



CONTENTS

INTRODUCTORY NOTE	1
EXECUTIVE SUMMARY	2
1. PROJECT OBJECTIVE AND EXPECTED OUTCOMES	4
2. ELIGIBILITY	5
2.1. Project Type.....	5
2.2. Project Location	5
2.3. Project Sponsor and Legal Authority	5
3. CERTIFICATION CRITERIA	6
3.1. Technical Criteria.....	6
3.1.1. General Community Profile	6
3.1.2. Project Scope	9
3.1.3. Technical Feasibility	12
3.1.4. Land Acquisition and Right-of-Way Requirements	13
3.1.5. Project Milestones	13
3.1.6. Management and Operation.....	13
3.2. Environmental Criteria.....	15
3.2.1. Environmental and Health Effects/Impacts	15
A. Existing Conditions.....	15
B. Project Impacts	15
C. Transboundary Impacts	16
3.2.2. Compliance with Applicable Environmental Laws and Regulations	16
A. Environmental Clearance	16
B. Mitigation Measures	17
C. Pending Environmental Tasks and Authorizations	18
3.3 Financial Criteria.....	18
4. PUBLIC ACCESS TO INFORMATION	19
4.1. Public Consultation	19
4.2. Outreach Activities	20
5. RECOMMENDATION	22

INTRODUCTORY NOTE

In coordination with NADBank, the U.S. Environmental Protection Agency (EPA), the Mexican National Water Commission (CONAGUA) and the U.S. and Mexican Sections of the International Boundary and Water Commission (IBWC/CILA), the project sponsor and local water utility, Comisión Estatal de Servicios Públicos de Tijuana (CESPT), along with the State of Baja California, have been working to address incidents of untreated wastewater discharges to the Tijuana River basin and the Pacific Ocean. Infrastructure investments are supported by a mix of funding sources, including local equity and grants from Mexico, as well as the NADBank loan and grant programs. In particular, since most of these works are needed to protect public health and the environment on both sides of the border, several of the proposed activities have been prioritized for grant funding through the NADBank's EPA-funded Border Environment Infrastructure Fund (BEIF).

Additionally, as part of a binational commitment formalized through the Statement of Intent (SOI) signed by EPA and CONAGUA, as well as IBWC Minute 328, specific wastewater infrastructure rehabilitation and replacement projects are scheduled for implementation over the next few years with cost-share commitments from the U.S. and Mexico. Those improvements, which include the rehabilitation and expansion of the South Bay International Wastewater Treatment Plant and the San Antonio de los Buenos Wastewater Treatment Plant, along with several other infrastructure improvement projects, total nearly US\$500 million.

The project proposed for certification is included in the SOI and will address two key components of the wastewater collection and conveyance system in Tijuana: (i) replacement and abandonment of the old sewer main known as the International Collector and rehabilitation of the PB1B lift station; and (ii) rehabilitation of the Tijuana River diversion system, which includes works to improve the operation and increase the capacity of the PBCILA lift station and rehabilitate the PB1A lift station. EPA approved a match credit for the rehabilitation of the PBCILA lift station and the construction of the International Collector. The BEIF grant is expected to supplement funding available from Mexico to support the rehabilitation of PB1A and PB1B lift stations.

The total estimated cost of the proposed project is US\$30,880,000, which includes construction costs, supervision and contingencies. Based on a thorough financial analysis of both the project and the sponsor and taking into consideration the financial commitments established in the SOI, NADBank is recommending that EPA approve a BEIF grant for up to \$13,440,000 for its construction. The final designs have been completed and all environmental authorizations have been obtained for the BEIF-funded project components. The Sponsor is ready to begin project implementation as soon as the financing is in place.

EXECUTIVE SUMMARY

REHABILITATION OF THE INTERNATIONAL COLLECTOR AND TIJUANA RIVER DIVERSION INFRASTRUCTURE IN TIJUANA, BAJA CALIFORNIA

Project Summary

Project Name:	Rehabilitation of the International Collector and Tijuana River Diversion infrastructure in Tijuana, Baja California.
Project Type (Sector):	Wastewater.
Objective:	Eliminate exposure to untreated or inadequately treated wastewater discharges by replacing deteriorated infrastructure prone to leaks and failure, thus helping to reduce water pollution and the risk of waterborne diseases and to eliminate transboundary flows of wastewater to the U.S.
Expected Outcomes:	<ul style="list-style-type: none">▪ Improve wastewater collection and conveyance infrastructure for up to 208,360 existing residential wastewater connections.▪ Reduce the risk of pipeline failure that could result in approximately 1,400 liters per second (lps) or 32 million gallons per day (mgd) of uncontrolled wastewater discharges to the Tijuana River.▪ Reduce the risk of up to 1,120 lps (25.6 mgd) of transboundary wastewater flows to the U.S.▪ Support compliance with U.S.-Mexico binational agreements.
Population to Benefit:	688,000
Sponsor:	Local water utility, Comisión Estatal de Servicios Públicos de Tijuana (CESPT).
Project Cost:	US\$30,880,000.

Financial Summary

Program:	Border Environment Infrastructure Fund (BEIF).
Grant Amount:	US\$13,440,000.
Percentage of Project Cost	43.5%.

Recipient	CESPT.
Other Funding Sources	US\$17,440,000 from Mexican federal, state and local sources, representing 56.5% of the total project cost.

CERTIFICATION PROPOSAL

REHABILITATION OF THE INTERNATIONAL COLLECTOR AND THE TIJUANA RIVER DIVERSION INFRASTRUCTURE IN TIJUANA, BAJA CALIFORNIA

1. PROJECT OBJECTIVE AND EXPECTED OUTCOMES

The proposed project consists of the rehabilitation of two key components of the wastewater collection and conveyance system in Tijuana, Baja California: (i) replacement and abandonment of the old sewer main known as the International Collector and rehabilitation of PB1B lift station; and (ii) rehabilitation of the Tijuana River diversion system, which includes works to improve the operation and increase the capacity of the PBCILA lift station and to rehabilitate the PB1A lift station (the “Project”). The Project sponsor is the local water utility, Comisión Estatal de Servicios Públicos de Tijuana (CESPT), which has developed a Comprehensive Wastewater Treatment and Reuse Plan aimed at eliminating untreated wastewater discharges to the Tijuana River, an impaired water body that flows into the United States.

Replacing the International Collector and rehabilitating the PB1B lift station will improve wastewater infrastructure serving up to 208,360 existing residential connections, by reducing the risk of pipeline failure and preventing the potential discharge of up to 1,400 liters per second (lps) or 32 million gallons per day (mgd) of wastewater from spills and leaks that could impact the Tijuana River.¹

Moreover, the rehabilitation of the PBCILA and PB1A lift stations will allow CESPT to divert approximately 1,120 lps or 25.6 mgd of dry-weather flows in the Tijuana River and discharge them to the Pacific Ocean. Therefore, the Project will also benefit the U.S. by eliminating transboundary flows of water through the Tijuana River.

The Project will support compliance with binational agreements as provided for in the Statement of Intent (SOI) and referenced in the International Boundary and Water Commission’s (IBWC) Minute 328.² Residents from both Tijuana and San Diego County are expected to benefit from this project.

¹ The 208,360 wastewater connections served by the International Collector and PB1B lift station to be rehabilitated were calculated based on the average flow volume in 2022 of 176 liters (46.5 gallons) of wastewater generated per person per day as indicated by the Government of Baja California in its 2019 Technical Standards for Water and Sanitary Sewer System Projects (*Normas técnicas para proyecto de sistemas de agua potable y alcantarillado sanitario, actualización 2019*) and 3.3 persons per household as reported by the Mexican National Institute of Statistics (INEGI).

² The Statement of Intent and Minute 328 are two binational agreements signed by U.S. and Mexican federal agencies in July 2022 as a commitment to reduce transboundary wastewater flows in the Tijuana River watershed and Pacific Ocean through a suite of infrastructure projects on both sides of the border. <https://www.epa.gov/system/files/documents/2022-10/Summary%20of%20Agreements.pdf>

2. ELIGIBILITY

2.1. Project Type

The Project falls within the eligible category of wastewater.

2.2. Project Location

The Project will be implemented in the city of Tijuana, Baja California, which is adjacent to the U.S.-Mexico border. Tijuana is in the northwest region of the state of Baja California, approximately 16 miles south of the city of San Diego, California. The Project area is roughly centered at the following coordinates: Latitude 32°32'15.92" N and longitude 117°03'58.95" W. Figure 1 shows the location of Tijuana and Project area.

Figure 1
PROJECT LOCATION MAP



2.3. Project Sponsor and Legal Authority

The Project sponsor is the local water utility in Tijuana, Comisión Estatal de Servicios Públicos de Tijuana (CESPT or the “Sponsor”), a decentralized public entity, with legal personality and its own assets, established by Decree No. 44 of the V Legislature of the State of Baja California published on December 16, 1966. The utility was created to provide water and wastewater services to the municipalities of Tijuana and Playas de Rosarito in Baja California.

3. CERTIFICATION CRITERIA

3.1. Technical Criteria

3.1.1. General Community Profile

As reported by the Mexican National institute of statistics, INEGI, the population of Tijuana was 1,922,523 in 2020, which represented approximately 51% of the state population. Based on the census data, the population of Tijuana increased by 280,953 residents between 2015 to 2020, and the economically active population was estimated to be 840,664 residents.

The following table summarizes the status of public services and infrastructure in Tijuana.

Table 1
BASIC PUBLIC SERVICES AND INFRASTRUCTURE IN TIJUANA

Water System			
Coverage	99.7%		
Supply source	Colorado River		
Number of connections	626,419		
Wastewater Collection			
Coverage	90.1%		
Number of connections	566,063		
Wastewater Treatment			
Coverage	56.6% of collected wastewater		
Treatment facilities	Plant	Type	Capacity
	San Antonio de los Buenos (SAB)*	Oxidation ponds	1,100 lps (25 mgd)
	South Bay International	Activated sludge	1,100 lps (25 mgd)
	La Morita	Activated sludge	254 lps (5.8 mgd)
	Arturo Herrera	Activated sludge	460 lps (10.5 mgd)

Source: CESPT, December 2022.

*This plant is currently not in operation, and untreated wastewater discharged to the Pacific Ocean does not comply with the discharge permit. The Project Sponsor plans to initiate procurement for a new wastewater treatment option.

lps = liters per second; mgd = millions of gallons a day

Local Water and Wastewater Systems

CESPT operates the water and wastewater systems for Tijuana and Playas de Rosarito, Baja California. According to CESPT, 100% of the water supply for the two communities comes from the Colorado River. No groundwater was pumped from the wells located in the Tijuana and Playas de Rosarito aquifers or from the Rodriguez Reservoir in 2022. Surface water from the Colorado River is conveyed through a 78-mile aqueduct with a flow capacity of up to 120 mgd, which serves several other communities, including Tecate, before reaching Tijuana and Playas de Rosarito. Raw water is delivered and stored at the El Carrizo Dam, treated at the El Florido Water Treatment Plant and then distributed to the urban areas of Tijuana and Rosarito.

The wastewater collection system currently serves more than 566,000 connections in Tijuana with coverage reaching approximately 90% of households. CESPT operates three major wastewater treatment plants (WWTPs): San Antonio de los Buenos (SAB) WWTP, La Morita WWTP and Arturo Herrera WWTP. Although a new regulation has been issued, the WWTPs are currently subject to the discharge standards established in Official Mexican Standard NOM-001-SEMARNAT-1996.³ In the case of the SAB WWTP, the effluent quality does not comply with the current discharge permit. However, CESPT has already initiated plans to upgrade all its plants to comply with the new regulation.

The South Bay International Wastewater Treatment Plant (SBIWTP), located in the United States and operated by the U.S. Section of IBWC, has a treatment capacity of 1,100 lps (25 mgd) of wastewater from the city of Tijuana. Including the SBIWTP and several small treatment facilities, the utility has a maximum treatment capacity of nearly 3,100 lps (71 mgd) to serve the city of Tijuana. The effluent from all wastewater treatment facilities serving Tijuana is eventually discharged into the Pacific Ocean.

CESPT has developed a Comprehensive Wastewater Treatment and Reuse Plan with the following key objectives: reduce untreated wastewater discharges to the Pacific Ocean, improve the management of treated wastewater discharges to the Tijuana River basin, increase the use of treated wastewater through groundwater replenishment, address sludge disposal, prioritize infrastructure development and establish a financial strategy.

Immediate actions proposed under the plan include improvements to the SAB WWTP and the rehabilitation of critical sewer mains. CESPT has completed the development of the technical and financial feasibility studies for the SAB WWTP, and procurement for improvements in the SAB WWTP is expected to initiate in the fourth quarter of 2023. Also, three segments of the Collector Poniente and the Buena Vista section of the Collector Oriente were certified by NADBank and have been rehabilitated, which will reduce the risk of wastewater discharges to the Tijuana River.

As part of a binational commitment formalized through the Statement of Intent signed by the U.S. Environmental Protection Agency (EPA) and the Mexican National Water Commission (CONAGUA) and IBWC Minute 328, additional wastewater infrastructure rehabilitation and replacement projects are scheduled for implementation over the next few years to further address treated and untreated wastewater flows to the Tijuana River. The proposed Project will address two main components of the Tijuana collection and conveyance systems, as described below.

- *International Collector and PB1B Lift Station*
The International Collector was built in 1980 and receives wastewater flows from the Poniente and Oriente collectors. It has a maximum design capacity of 2,979 lps (68 mgd) and currently receives an average flow of 1,400 lps (32 mgd).

³ On March 3, 2022, a modification of NOM-001-SEMARNAT-1996 was published in Mexico, establishing new maximum permissible levels of contaminants. The new standard went into effect on April 3, 2023. In accordance with CONAGUA guidelines, CESPT registered the SAB, La Morita and Arturo Herrera WWTPs in a compliance program, which gives CESPT until 2027 to comply with the new NOM-001-SEMARNAT-2021. CESPT is responsible for achieving and maintaining compliance with the new standard in accordance with the calendar of activities established under the program.

The PB1B lift station, which was constructed in 1963 and rehabilitated in 2001, receives wastewater from the International, Sanchez Taboada and Carranza collectors. It has a maximum pumping capacity of 2,000 lps (45.7 mgd), and currently receives an average flow of 1,038 lps (23.7 mgd). Flows that reach the PB1B lift station are sent to the SAB WWTP via a 16-kilometer (ten-mile) pipeline conveyance system. In the event of failure of this infrastructure wastewater would discharge to the Tijuana River.

- *PBCILA and PB1A Lift Stations*

In accordance with IBWC’s Minute 283 signed in 1990, several infrastructure components were implemented in both Tijuana and San Diego County as a binational solution to capture wastewater flows from the Tijuana River and provide treatment of northbound flows. These components were constructed to address dry-weather river flows, which consist of treated wastewater effluent along with uncontrolled quantities of untreated sewage discharges, percolating groundwater and other unidentified point or non-point sources from the urban areas of Tijuana. This flow is diverted from the Tijuana River via the CILA lift station (PBCILA) through an in-take located at the river just upstream from the border, to the PB1A lift station. The flows from the PB1A lift station are discharged to the Pacific Ocean. The general characteristics of these two pump stations are provided in the following table.

Table 2
PBCILA AND PB1A LIFT STATIONS

	Year Built/ Rehabilitated	Pumping Capacity	Average Flow (2022)	Origin of Wastewater
PBCILA	1991/2022*	1,500 lps (34.2 mgd)	1,120 lps (25.6 mgd)	Tijuana River
PB1A	1985/2007	1,500 lps (34.2) mgd)	460 lps (10.5 mgd)	PBCILA

*Already rehabilitated by CONAGUA as part of this Project.

During storm events, flows in the Tijuana River exceed the operational capacity of the PBCILA lift station, and the stormwater—laden with sewage, sediment and trash—flows into the United States, empties into the Tijuana River Estuary and, depending on volume and other factors, may reach the Pacific Ocean. Smaller volumes, due to occasional diversion system failures during dry-weather conditions, may also reach the United States.

Untreated transboundary flows may result in closure of San Diego County beaches due to potential bacteriological impacts. While it is not practical to prevent 100% of the transboundary flows, especially those flows due to significant storm events, enhancing the river diversion infrastructure will reduce the number of days of transboundary flows during both dry weather and post-wet weather.

On July 30, 2022, the parallel conveyance system related to PB1A and PB1B, which convey Tijuana River water to the Pacific Ocean and wastewater to the SAB WWTP, respectively,

experienced major breaks in both force mains. The problem required that PB1A and PB1B lift stations be shut down. It took 18 days to replace the affected segment of the 48-inch PB1B force main and to reinitiate regular operation. However, repairs on the PB1A force main have not been completed, and the PB1A lift station is still not operating as needed, and since August 2022, excess wastewater flows have been conveyed to the SBIWTP severely impacting its operation.

The proposed Project and several other planned works are needed to protect public health and the environment on both sides of the border by minimizing the risk of line breaks that could cause sewage overflows onto local streets and into the Tijuana River. Additionally, improving the capability of critical infrastructure needed to consistently divert dry-weather river flows is necessary to reduce risks associated with exposure to untreated or inadequately treated wastewater entering the U.S. For these reasons, the Project was prioritized for funding through the EPA U.S.-Mexico Border Water Infrastructure Program.

3.1.2. Project Scope

The proposed Project includes replacing and abandoning the deteriorated International Collector, rehabilitating PB1A, PB1B and PBCILA lifts stations, increasing the capacity of PBCILA from 1,008 lps (23 mgd) to 1,490 lps (34 mgd) and constructing a new intake from the Tijuana River channel to PBCILA. The improvements to each component are described below:

- International Collector – under construction by Mexican Ministry of Defense (SEDENA)
 - 8,356 ft of 60-inch high-density polyethylene (HDPE) pipe
 - 656 ft of 72-inch HDPE pipe
 - Smart ultrasonic flow meter
 - SCADA system, including accessories.

Figure 2
NEW INTERNATIONAL COLLECTOR



- Tijuana River Diversion System – construction completed by CONAGUA
 - Tijuana River in-take (Figure 3): 289 ft of 48-inch fiberglass reinforced pipe.
 - Improvements in the PBCILA Lift Station (Figure 4):
 - Sand and grit removal (Vortex)
 - Fine and coarse mechanized screen
 - Effluent flow meter
 - Conveyor belts for automatic trash and debris collection
 - A new 125-HP Chopper pump
 - 300-kVA transformer replacement

Figure 3
NEW TIJUANA RIVER INTAKE

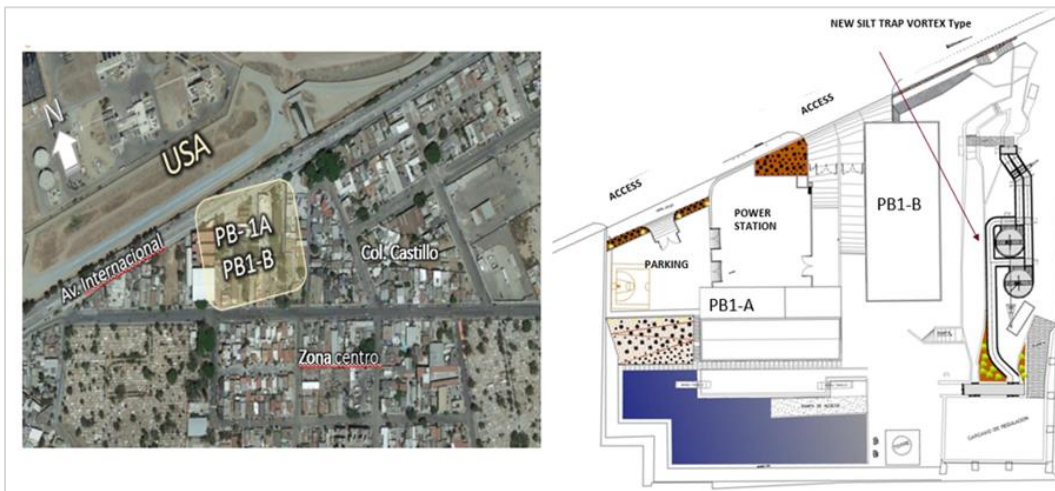


Figure 4
IMPROVEMENTS TO PBCILA LIFT STATION



- Improvements in the PB1A & PB1B Lift Stations – pending construction BEIF/ CESPT:
 - Sand and grit removal (Vortex)
 - Two fine and coarse mechanized screens
 - Two motor control centers
 - Four new pumping trains: Two 700-HP / 500 lps (11.4 mgd) per train
 - 13 flow control gates of various sizes
 - Electric substation maintenance
 - Two flow meters

Figure 5
IMPROVEMENTS AT PB1A AND PB1B LIFT STATIONS



Due to the location of lift stations PB1A and PB1B, the corresponding final designs also include flood protection measures.

EPA approved a match credit for the rehabilitation of the PBCILA lift station (already funded by CONAGUA) and the construction of the International Collector (under construction with Mexican funds). A grant from the Border Environment Infrastructure Fund (BEIF) is expected to supplement funding available from Mexico to support the rehabilitation of PB1A and PB1B lift stations.

As a result of the Project, the PBCILA lift station will convey dry-weather flows from the Tijuana River to the PB1A lift station and discharge directly to the ocean through one of the parallel lines. With the new system, PBCILA will not be connected to the International Collector.

The Sanchez Taboada and the Carranza Collectors, which collect wastewater from the downtown and northwest areas of the city of Tijuana, will be connected to the new

International Collector, which will convey the wastewater to the SBIWTP. With the installation of a smart ultrasonic flow meter in the International Collector and traditional flow meters at both PB1A and PB1B, CESPT will be able to better manage flows to the appropriate infrastructure. Once flows reach the capacity of the SBIWTP, remaining flows will be sent to PB1B and conveyed through the second parallel line to the SAB WWTP, which will be rehabilitated.

3.1.3. Technical Feasibility

The final designs of the proposed infrastructure works were completed in accordance with the recommendations provided in the Water and Wastewater Manuals developed by the Mexican National Water Commission (CONAGUA). The regional office of CONAGUA in the state of Baja California validated the technical documents of the various Project components through the following official correspondence:

- Official letters BOO.B07.036 dated February 16, 2022, BOO.B07.037 dated February 18, 2022 and BOO.807.06/100 dated June 6, 2022 for the International Collector;
- Official letter BOO.807.06/247 dated October 21, 2019 for the improvements to the PBCILA lift station; and
- Official letter BOO.807.06/165 dated November 22, 2022 for the rehabilitation of PB1A and PB1B lift stations.

An alternative analysis for the rehabilitation of the International Collector was developed in 2020 to determine the best solution for ensuring the reliable conveyance of wastewater from the Oriente and Poniente collectors to PB1B and into the SBIWTP. The alternatives focused on improvements to the sewer main that will provide the most efficient and economical solution, considering construction costs, as well as operation and maintenance (O&M) expenses throughout its useful life.

The current condition of the International Collector was assessed through closed-circuit inspections. The decision of whether to rehabilitate or replace the collector, using an open trench or pipe bursting method, was based on the feasibility of each option. Specific factors considered during the assessment included the condition of the existing line; the location of the line in relation to traffic, buildings and trees; and the presence or absence of scale and/or deflection that could affect the suitability for pipe bursting.

Pipe diameter was selected using appropriate slopes and velocities to prevent silting, clogging, and septic conditions in the pipes, as well as over-excavation or the need for pumping facilities that could increase both capital and O&M costs. The analysis also considered various pipe materials in compliance with applicable standards and regulations. For the proposed Project, an open-trench process and HDPE pipe were selected.

To prevent untreated wastewater discharges from flowing into the Tijuana River during construction, wastewater flows will be bypassed to an existing manhole downstream when necessary.

Improvements to the Tijuana River diversion system were based on a study that consisted of a transboundary flow analysis, a diversion infrastructure (lifts stations) and operational needs assessment and an evaluation of technical alternatives identified for potential infrastructure investments. The study was managed by NADBank, in coordination with EPA, IBWC/CILA, CONAGUA, and CESPT.

3.1.4. Land Acquisition and Right-of-Way Requirements

All the infrastructure will be installed within existing municipal easements and rights of way. No additional land or rights of way need to be acquired for the Project.

3.1.5. Project Milestones

Rehabilitation of PBCILA lift station was completed in February 2022 and since then it has been operating adequately by a private contractor. Construction of the International Collector initiated in August 2023 with Mexican funds, which was approved by EPA as a match credit. Once the notice to proceed is issued for rehabilitation of the two remaining lift stations, the work is expected to take approximately 24 months to complete. Potential factors that could affect the Project completion timeline, such as issues with traffic control, weather or the delivery of materials and accessories, were considered in estimating the construction period. Table 3 provides a summary of the critical Project milestones and their respective status.

**Table 3
 PROJECT MILESTONES**

Key Milestones	Status
Environmental clearance – Mexico	Completed November 29, 2021
Environmental clearance – U.S.	Completed March 3, 2022
Final designs	Completed November 22, 2022
Procurement for BEIF grant component	Anticipated in the 1st quarter of 2024
Construction period (BEIF portion)	Estimated period of 24 months

3.1.6. Management and Operation

Management and operation of the proposed Project will be the responsibility of CESPT, which currently serves more than 626,000 water hookups and over 566,000 wastewater connections in Tijuana. In 2022, the utility treated 1,740 lps (39.7 mgd) of wastewater from the urban area.

CESPT is organized in various departments, including Water Treatment, Wastewater Treatment, Operation and Maintenance, Construction, and Management. The utility has an operation and maintenance (O&M) manual that includes routine tasks to ensure proper operation of the system, as well as procedures to address unexpected conditions, including mobile back-up pumps that are intended to prevent temporary discharges related to aged

infrastructure. Additionally, as an important sustainable management practice, in coordination with the Baja California Ministry of Environmental Protection (SPA), CESPT has implemented a pretreatment program to control the quality of the wastewater discharges going into its sewer system from industrial and small business customers.⁴ The pretreatment program also complies with BEIF program requirements, and the covenants established in BEIF grant agreements for projects previously funded in Tijuana.

Capital investments to extend services or replace deteriorated infrastructure are a priority for CESPT, which works continuously to address other infrastructure improvement needs in its water and wastewater systems. Over the past 20 years, CESPT has focused significant investment efforts on expanding wastewater collection infrastructure to eliminate unsanitary conditions related to direct discharges or inadequate on-site disposal practices. Nevertheless, more significant efforts to maintain and modernize aged infrastructure are critical.

In particular, CESPT will need to make investments in the near future to rehabilitate the SAB WWTP, as well as upgrade the La Morita and Arturo Herrera WWTPs to bring them into compliance with the new effluent quality standard. CESPT also has a commitment to implement investments included in the binational agreement, as formalized in IBWC's Minute 328, including a reuse project and other infrastructure improvements necessary to eliminate untreated discharges to the Tijuana River. NADBank is working with the utility to complete development tasks and access funding for those infrastructure needs, many of which will also be considered for certification.

Additionally, the State of Baja California contracted a sustainability loan with NADBank to support the financing and development of water and wastewater infrastructure projects sponsored by the state water utilities. As part of the sustainability framework, the state and the water utilities entered into an agreement to establish repayment terms and specific benchmarks related to operational efficiency. Achieving those performance standards is expected to result in the activation of an incentive mechanism, which would support the availability of funds for further investments in water infrastructure projects. The proposed Project does not fall within the current pipeline of the sustainability loan; however, terms established to access grant funds also require some operational performance reporting and other best management practices, such as the development of reserve accounts for operations and maintenance as well as repair and replacement of the infrastructure.

CESPT has the capacity to control and supervise the construction of the new International Collector, as well as the rehabilitation of the lift stations. The utility has a construction supervision department to provide continuous oversight, inspection and coordination of the works in a timely, professional, competent manner. Based on the successful completion of other certified projects, CESPT has demonstrated its ability to ensure compliance with the approved construction and contractual documents, applicable regulations, project schedule and all other applicable requirements.

The impact of the proposed Project on CESPT's O&M budget and procedures has been reviewed and is considered sustainable. On September 30, 2019, the Mexican Section of IBWC

⁴ Such discharges must comply with Official Mexican Standard NOM-002-SEMARNAT-1996, which regulates the quality of wastewater discharged into municipal sewer systems.

(CILA) and CESPT signed a new agreement for the operation of PBCILA, in which CILA is responsible for covering O&M costs using federal funds. The O&M costs of the remaining project components will continue to be the responsibility of CESPT.

3.2. Environmental Criteria

3.2.1. Environmental and Health Effects/Impacts

A. Existing Conditions

Deteriorated wastewater lines increase the potential for breaks and leaks resulting in untreated wastewater spills, which in turn increases the risks of water contamination, exposure to raw sewage and the vulnerability of Tijuana residents to waterborne diseases. Furthermore, due to natural drainage patterns toward the Tijuana River, wastewater spills in the Project area are likely to flow into the river and have the potential to enter the United States. At any given time, the river may contain stormwater flows, effluent from Mexican wastewater treatment plants, uncontrolled discharges of untreated wastewater and other unidentified sources, which may impair its water quality.

In the past two years, the Utility has addressed major breaks in the wastewater collection system, which resulted in untreated or inadequately treated discharges to the river, as well as placed other critical infrastructure at risk. Incidents such as the major breaks in the PB1A and PB1B parallel conveyance system have caused both lift stations to be shut down. While the PB1B force main has been replaced and regular operations have resumed, repairs on the PB1A force main have not been completed, impairing the operations at the PB1A lift station and resulting in excess wastewater flows to the SBIWTP. This situation has placed increased demand on the operations of the plant, risking the integrity of its facilities and the reliability of its treatment process.

Additionally, since the Tijuana River flows from Mexico into the U.S. and empties into the Pacific Ocean through the Tijuana River Estuary, the poor quality of the river flows—impacted by fugitive discharges, run-off, trash and silt—often leads to beach closures in San Diego County, California. Although a diversion system exists to prevent transboundary flows, at least in dry-weather seasons, the condition of the PBCILA lift station and its river intake were insufficient to address those needs adequately.

B. Project Impacts

The Project will provide the infrastructure necessary to collect and safely convey wastewater flows to the appropriate WWTP or, for water that comes from the Tijuana River, to be discharged directly to the Pacific Ocean in compliance with the respective standard. The rehabilitated infrastructure will improve system reliability by preventing leaks and spills and thus significantly reduce the risk of human contact with untreated wastewater and the potential contamination of surface and groundwater, including transboundary flows.

Specifically, the Project is expected to generate environmental and human health benefits related to the following Project outcomes:

- Improve wastewater collection and conveyance infrastructure for up to 208,360 existing residential wastewater connections.
- Reduce the risk of pipeline failure that could result in approximately 1,400 lps (32 mgd) of uncontrolled wastewater discharges to the Tijuana River.
- Reduce the risk of up to 1,120 lps (25.6 mgd) of transboundary wastewater flows to the United States.
- Support compliance with U.S.-Mexico binational agreements.

C. Transboundary Impacts

The proposed project is expected to have an overall positive impact on the Tijuana River, a transboundary water body flowing from Mexico into the United States. Implementation of the Project is intended to prevent future system failures resulting in wastewater spills that could contaminate the river, thus helping to protect water resources in California.

As stated in EPA's Finding of No Significant Impact (FONSI) and based on the information contained in the corresponding Environmental Assessment, EPA has concluded that the proposed Project will not result in significant impacts to the environment and that an environmental impact statement is not required.

3.2.2. Compliance with Applicable Environmental Laws and Regulations

The Project will comply with the following official Mexican standards and regulations:

- Official Mexican Standard NOM-001-CONAGUA-2011, which establishes the specifications for hermeticity in water distribution systems, residential water connections and wastewater collection systems, as well as methods for testing hermeticity.
- Official Mexican Standard NOM-001-SEMARNAT-1996, which establishes the maximum permissible levels of contaminants in wastewater discharges to national waters and resources.⁵
- Official Mexican Standard NOM-002-SEMARNAT-1996, which establishes the maximum permissible levels of contaminants in wastewater discharges to urban or municipal wastewater collection systems.

A. Environmental Clearance

Pursuant to state regulations, the Baja California State Sustainable Economy and Tourism Ministry (SEST), through the Sustainable Development Agency, determined that a Preventive Environmental Impact Assessment Report was required. The report for the rehabilitation of the lift stations was prepared and submitted to SEST on April 13, 2020, and authorized by

⁵ On March 3, 2022, NOM-001-SEMARNAT-2021 was published, updating NOM-001-SEMARNAT-1996 and establishing new maximum permissible levels of contaminants in wastewater discharges to national waters and resources. The new standard went into effect on April 3, 2023. In accordance with CONAGUA guidelines, CESPT registered the La Morita, Arturo Herrera and SAB WWTPs in a compliance program, which gives CESPT until 2027 to comply with the new standard.

SEST through Official Letter No. SEST/DGIA/SDS/TIJ1152/2021 dated March 17, 2021. The report for the International Collector was prepared and submitted to SEST on October 28, 2021, and authorized by SEST through Official Letter No. SEST-SDS-DGIA/TIJ-6663/2021 dated November 29, 2021.

To be eligible for a BEIF grant funded by federal appropriations from the EPA U.S.-Mexico Border Water Infrastructure Program, the transboundary impacts of the Project must be examined in compliance with the U.S. National Environmental Policy Act (NEPA). To meet this requirement, a Transboundary Environmental Information Document (EID) was developed and submitted to EPA for consideration.

Based on the findings and conclusions of the EID, EPA Region 9 prepared an Environmental Assessment. On November 11, 2021, EPA issued a Finding of No Significant Impact (FONSI) for the lift stations. In the case of the International Collector, EPA Region 9 found that the proposed Project met the parameters for exclusion from a detailed environmental review. On March 3, 2022, EPA issued a Categorical Exclusion. Both documents establish that the proposed Project will not result in any significant impacts to the environment that may negatively impact the U.S.-Mexico border area.

B. Mitigation Measures

Although Project implementation will have no significant adverse impact on the environment, mitigation measures have been established to address any temporary and minor impacts during construction and operation of the Project. These potential impacts, include:

- The local air basin may be temporarily impacted by carbon monoxide, nitrogen oxides and sulfur dioxide emissions due to vehicles and equipment used during construction.
- A temporary increase in soil erosion and particulate matter emissions may be experienced due to construction.
- Surface water resources could be temporarily impacted by stormwater runoff during the construction phase.
- Noise levels may be elevated during construction activities; however, this impact is short term and will be concentrated in the work area. Potential impacts also include temporary roadway blockages, as well as the presence of workers in the area.

The Mitigation measures specified in the resolutions issued by SEST and in the EID to be implemented during construction include:

- Application of water to reduce the emission of dust particles and soil erosion;
- Hay bales or silt fences to be placed along rights of way to prevent erosion and contamination of surface water resources;
- Proper disposal of construction debris (including excavated materials);
- Vehicle tune-ups to reduce emissions and noise;

- Construction to be scheduled between 8 a.m. and 5 p.m. to prevent extended disturbances from noise;
- Placement of warning signs to prevent potentially hazardous situations; and
- All construction personnel will attend a briefing to familiarize workers with potential construction impacts and mitigation measures.

Moreover, the Utility will be responsible for maintaining continuous coordination with SEST and must comply with any water quality requirements, authorization procedures or recommendations that the state agency may issue throughout the life of the Project.

In addition, to prevent untreated wastewater discharges from flowing into the Tijuana River during construction, wastewater flows will be bypassed to an existing manhole downstream when necessary. A construction manager will be contracted using BEIF funds to follow up on the implementation of these measures during the construction of all the remaining Project components.

C. Pending Environmental Tasks and Authorizations

There are no environmental authorizations pending.

3.3 Financial Criteria

The total estimated cost of the Project is US\$30,880,000, which includes construction costs, as well as supervision and contingencies. The Sponsor requested a BEIF grant to support the implementation of the Project and improve the affordability of the investment. Based on a thorough analysis of both the Project and the Sponsor and taking into consideration the financial commitments established in the SOI, NADBank is recommending that EPA approve a BEIF grant for up to \$13,440,000 for its construction.

Table 4 presents a breakdown of total Project costs and the proposed sources of funding.

Table 4
PROJECT INVESTMENT & FINANCING PLAN
 (USD)

Uses		Amount	%
Construction		\$ 28,090,000	91.0
Supervision		1,680,000	5.4
Contingencies*		1,110,000	3.6
TOTAL		\$ 30,880,000	100.0
Sources	Instrument	Amount	%
SEDENA**	Grant	\$ 9,000,000	29.1
CONAGUA	Grant	4,710,000	15.3
CESPT	Equity	3,730,000	12.1
NADBank-BEIF	EPA grant	13,440,000	43.5
TOTAL		\$ 30,880,000	100.0

* Represents 10% of the cost of the BEIF components.

**Mexican Ministry of National Defense.

The proposed Project is a component of a binational agreement establishing commitments for funding from EPA and Mexico, including federal, state and local contributions. While BEIF program guidelines require a loan component, when feasible, to finance part of the project, EPA has advised that this agreement contains specific cost sharing provisions and, therefore, the normal procedures for determining the grant amount do not apply and a loan waiver is not required.

For projects located in Mexico, EPA requires that every grant dollar be matched with grant funding from other sources. As indicated in Table 4, total funding from Mexican sources for this Project is estimated at more than US\$17.4 million, which will cover 56.5% of the project costs.

4. PUBLIC ACCESS TO INFORMATION

4.1. Public Consultation

NADBank published the draft certification proposal for a 30-day public comment period beginning October 3, 2023. The following Project documentation is available upon request:

- Environmental clearance for the Rehabilitation of the Lift Stations, Official letter No. SEST/DGIA/SDS/TIJ1152/2021 issued on March 17, 2021.
- Environmental Clearance for the Rehabilitation of International Collector, Official Letter No. SEST-SDS-DGIA/TIJ-6663/2021 issued on November 29, 2021.
- Finding of No Significant Impact (FONSI) for the Lift Stations PB1A and PB1B issued by EPA on November 11, 2021.
- Categorical Exclusion for the International Collector issued by EPA on March 3, 2022.
- Technical validations issued by CONAGUA as follows:
 - Official letters BOO.807.06/247 dated October 21, 2019, for improvements to the PBCILA lift station;
 - Official letter BOO.807.06/165 dated November 22, 2022, for rehabilitation of the PB 1A and PB1B lift stations;
 - Official letters BOO.B07.036 dated February 16, 2022, BOO.B07.037 dated February 18, 2022, and BOO.807.06/100 dated June 6, 2022, for rehabilitation of the International Collector.
- Tijuana Comprehensive Wastewater Treatment and Reuse Plan developed by CESPT in 2017.

The 30-day public comment period ended on November 2, 2023, with no comments received.

4.2. Outreach Activities

CESPT conducted extensive outreach efforts to publicize the Project, including its costs and impact on user fees, in order to gain the support of residents in the Project area. In accordance with the requirements of the BEIF program, outreach activities included the establishment of a local steering committee, public meetings and access to appropriate project information, as described in the Public Participation Plan.

The Local Steering Committee was established on March 2, 2021, with members of the community and utility staff. The steering committee developed the Public Participation Plan and periodically met with the Project team to help CESPT disseminate information regarding the Project. The Steering Committee, with assistance from the Project Sponsor, prepared a fact sheet and a PowerPoint presentation about the Project. Because of public health concerns and social-distancing requirements related to the COVID-19 pandemic, public meetings were not possible, and other forms of outreach were used to disseminate information about the Project. For that reason, in lieu of a first public meeting, CESPT distributed a fact sheet with the project information on March 31, 2021, and conducted a survey, which indicated that 100% of residents surveyed supported the Project.

Based on improved public health conditions and an easing of restrictions regarding public gatherings, CESPT held a public meeting on May 4, 2023, to present the final Project scope, proposed financial structure and implementation timeline. The meeting offered residents in the project area a public forum to learn about the Project and to provide comments. The meeting was attended by more than 100 people, including members of the steering committee, CESPT representatives and local residents. After the meeting, the attendees completed a survey, where 100% of respondents indicated that they understood the project and expressed their support.

Additionally, a media search was conducted to gauge public awareness of the Project, as well as to detect any possible opposition from the community concerning the proposed investment. Media attention over the past two years has documented recurring conditions related to untreated discharges. A summary of some of the articles and news reports found is presented below.

- *Punto Norte* (May 7, 2023) “*CESPT se compromete a eliminar aguas negras del Río Tijuana hacia San Diego.*” [CESPT commits to eliminating sewage flows in the Tijuana River going to San Diego]. The article highlights the utility’s plans to rehabilitate the entire wastewater collection system to eliminate transboundary flows of raw wastewater flowing to San Diego, including the lift stations and the International Collector, which have reached the end of their useful life.
<https://puntonorte.info/2023/05/07/cespt-se-compromete-a-eliminar-aguas-negras-del-rio-tijuana-hacia-san-diego/>
- *Hypertex* (May 6, 2023) “*Refuerza CESPT acciones transfronterizas para modernizar el sistema de alejamiento de aguas residuales.*” [CESPT reinforces transboundary actions to upgrade its wastewater conveyance system]. A second public meeting was held to present infrastructure projects to rehabilitate lift stations PBCILA and PB1A and PB1B, as well as the International Collector.

<https://hiptex.com.mx/noticias/42102/refuerza-cespt-acciones-transfronterizas-para-modernizar-el-sistema-de-alejamiento-de-aguas-residuales>

- Uniradio Informa (May 5, 2023) “Anuncian financiamiento de proyectos de infraestructura para hacer frente a las aguas residuales transfronterizas.” [Financing of infrastructure projects to address transboundary flows announced]. EPA and IBWC joined CONAGUA and CESPT to announce the financing of two wastewater infrastructure projects that will reduce the risk of up to 60 mgd in untreated wastewater spills in the Tijuana River basin.
<https://www.uniradioinforma.com/sociedad/anuncian-financiamiento-proyectos-infraestructura-hacer-frente-aguas-residuales-transfronterizas-n663094>
- Hispanos Unidos (May 5, 2023) “EPA and USIBWC join Mexico in Announcing Funding for Infrastructure Projects to Address Transborder Sewage”. EPA, CONAGUA and CESPT invited the public for a second opportunity to comment on plans for replacement of the International Collector and rehabilitation of Pump Station 1 (PB1).
[EPA and USIBWC join Mexico in Announcing Funding for Infrastructure Projects to Address Transborder Sewage - Hispanos News](#)
- Coronado Eagle & Journal (April 7, 2023) “Water Pollution Workshop Held with Special Presentations”. More short-term projects include the rehabilitation in Mexico of many facilities: PBCILA, PB1, International Collector, Insurgentes Collector, rehabilitation of the Arturo Herrera WWTP and Tijuana River gates.
http://www.coronadonewsca.com/news/coronado_city_news/water-pollution-workshop-held-with-special-presentations/article_0bd11cf6-d59b-11ed-86d6-a3495e487dae.html
- Imagen del Golfo (March 13, 2023) “Gobierno del estado de Baja California y NADBank concretan financiamiento para avanzar en el suministro del agua.” [Baja California State Government and NADBank formalize financing to advance water supply projects]. To reverse the long-standing backlog in water infrastructure and guarantee an adequate water supply for Baja Californian families, as well as to take aggressive actions regarding wastewater problems, of Baja California Governor Marina del Pilar Avila Olmedo executed the State’s first sustainability financing with NADBank, for \$3 billion pesos. <https://imagedelgolfo.mx/nacional/baja-california-y-nadbank-concretan-financiamiento/50332897>
- LA Times (February 25, 2023) “Tijuana sewage hit San Diego beaches at record pace in 2022. What will this summer bring?” The construction of a new wastewater treatment plant at Punta Bandera is expected by 2025. The U.S. has also agreed to double the capacity of its South Bay International Wastewater Treatment Plant, which serves Mexico, by 2027. <https://www.latimes.com/california/story/2023-02-25/tijuana-sewage-closed-san-diegos-beaches-record-pace>
- Eagle and Times (October 22, 2022) “Binational Agreements and Next Steps discussed at USMCA Meeting”. On August 18th, two important binational agreements were signed committing the U.S. and Mexico to work together to implement infrastructure projects on both sides of the border, which we collectively believe will significantly

reduce pollution and transboundary wastewater flows, especially into the United States. http://www.imperialbeachnewsca.com/news/article_185207cc-4c18-11ed-89e1-d3a5af8839ae.html

The activities carried out by the Project Sponsor and the foregoing articles demonstrate that the public has received periodic information regarding the infrastructure problems and need for wastewater collection and treatment system improvements. The Project Sponsor informed NADBank that no comments expressing concern about the Project were received during the public outreach process, and no opposition to the Project was detected in the media search.

5. RECOMMENDATION

Certification Criteria Compliance

The Project falls within the eligible category of wastewater and is located in the border region, as required under NADBank Charter. The 30-day public comment period ended on November 2, 2023, with no comments received. The Project review performed by the NADBank Chief Environmental Officer confirms that the Project complies with all the certification requirements, and there are no pending activities required for compliance.

Funding Criteria Compliance

The Project Sponsor applied for funding through the U.S.-Mexico Border Water Infrastructure Program prioritization process and was selected for technical assistance through the Project Development Assistance Program (PDAP) and construction assistance through the Border Environment Infrastructure Fund (BEIF). The Project meets all BEIF program criteria and is expected to be approved by EPA to receive a BEIF grant for up to US\$13,440,000 for its construction.

Accordingly, based on the foregoing conclusions as supported and presented in detail in this certification proposal, NADBank hereby recommends the certification of the Project.