



**CERTIFICATION PROPOSAL**

**WASTEWATER COLLECTION SYSTEM  
IMPROVEMENTS (PHASE II) IN MEXICALI, BAJA  
CALIFORNIA**

*Submitted: October 13, 2022*



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## EXECUTIVE SUMMARY

### WASTEWATER COLLECTION SYSTEM IMPROVEMENTS (PHASE II) IN MEXICALI, BAJA CALIFORNIA

#### Project Summary

<b>Project Name:</b>	Wastewater Collection System Improvements (Phase II) in Mexicali, Baja California.
<b>Project Type (Sector):</b>	Wastewater.
<b>Objective:</b>	The purpose of the Project is to eliminate exposure to untreated or inadequately treated wastewater discharges by replacing deteriorated wastewater infrastructure prone to leaks and failure, thus helping to reduce water pollution and the risk of waterborne diseases.
<b>Expected Outcomes:</b>	<ul style="list-style-type: none"><li>• Improve wastewater collection infrastructure and services for up to 11,624 existing residential connections.</li><li>• Reduce the risk of pipeline failure resulting in untreated or inadequately treated wastewater discharges to the New River, which would prevent:<ul style="list-style-type: none"><li>○ Approximately 96.8 liters per second (lps) or 2.2 million gallons per day (mgd) of uncontrolled wastewater discharges.</li><li>○ Transboundary wastewater flows to the U.S.</li></ul></li></ul>
<b>Population to Benefit:</b>	37,000.
<b>Sponsor:</b>	Local water utility, Comisión Estatal de Servicios Públicos de Mexicali (CESPM).
<b>Project Cost:</b>	US\$4,962,186.

#### Financial Summary

<b>Program:</b>	Border Environment Infrastructure Fund (BEIF).
<b>Grant Amount:</b>	US\$2,420,628.
<b>Percentage of Project Cost</b>	48.8%.
<b>Recipient</b>	CESPM.
<b>Other Funding Sources</b>	US\$2,541,558 from Mexican federal, state, and local sources, representing 51.2% of the total project cost.

## CERTIFICATION PROPOSAL

### WASTEWATER COLLECTION SYSTEM IMPROVEMENTS (PHASE II) IN MEXICALI, BAJA CALIFORNIA

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#### 1. PROJECT OBJECTIVE AND EXPECTED OUTCOMES

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The proposed project will replace 13,243 meters (43,448 ft) of deteriorated pipe in the wastewater collection system serving the residents of Mexicali, Baja California (the “Project”). The Project sponsor is the local water utility, Comisión Estatal de Servicios Públicos de Mexicali (CESPM). The purpose of the Project is to improve the wastewater collection infrastructure serving up to 11,624 existing residential wastewater connections,<sup>1</sup> which will reduce the risk of pipeline failures and prevent approximately 2.2 million gallons per day (mgd) of untreated or inadequately treated wastewater discharges, thereby helping reduce water pollution and the risk of waterborne diseases, as well as transboundary wastewater flows to the United States through the New River, an impaired water body.<sup>2</sup>

Approximately 37,000 residents in Mexicali are expected to benefit from this project.<sup>3</sup>

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#### 2. ELEGIBILITY

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##### 2.1. Project Type

The Project falls within the eligible sector of wastewater.

##### 2.2. Project Location

The Project will be implemented in the city of Mexicali, Baja California, which is adjacent to the U.S.-Mexico border. Mexicali is in the northeast region of the state of Baja California, directly across the border from Calexico, California and approximately 15 miles south of the

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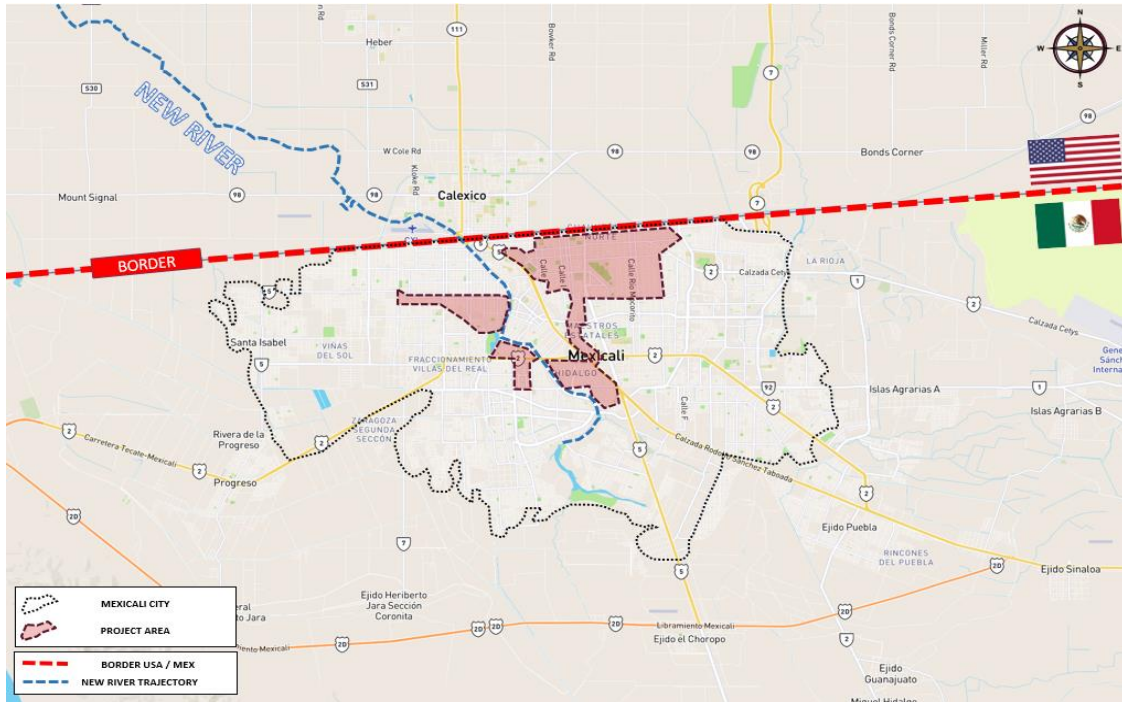
<sup>1</sup> Source: CESPM, *Subdirección General de Agua y Saneamiento* [Assistant Office of Water and Wastewater], *Habitantes Beneficiados por el Proyecto de Mejoras al Sistema de Alcantarillado Sanitario (Fase II)* [Residents benefitting from the Wastewater Collection System Improvements (Phase II) Project].

<sup>2</sup> Source: The flow volume was calculated based on the 11,624 wastewater connections served by the segments of the collection system and lift stations to be rehabilitated, with 225 liters (59.44 gallons) of wastewater generated per person a 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 3.2 persons per household as reported by the Mexican national institute of statistics (INEGI).

<sup>3</sup> Estimated population benefitted is calculated based on 3.2 persons per household, as reported by INEGI and rounded to the nearest 1,000 persons.

city of El Centro, California. The Project is located approximately one mile south of the border and is roughly centered at the following coordinates: Latitude 32°39'56.00" North and Longitude 115°29'57.01" West. Figure 1 shows the location of Mexicali.

**Figure 1  
PROJECT LOCATION MAP**



## 2.3. Project Sponsor and Legal Authority

The Project sponsor is the local water utility in Mexicali, Comisión Estatal de Servicios Públicos de Mexicali (CESPM). As established in the Baja California Law for State Water Utilities, CESPM has the legal authority to operate and maintain water treatment, storage and distribution systems, as well as wastewater collection and treatment systems for the municipality of Mexicali, Baja California.

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# 3. CERTIFICATION CRITERIA

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## 3.1. Technical Criteria

### 3.1.1. General Community Profile

The Project is expected to benefit residents in the community of Mexicali, Baja California. As reported by the Mexican National Institute of Statistics, INEGI, the population of Mexicali was 1,049,792 in 2020, which represented approximately 27.9% of the state population.

According to the census, Mexicali increased by 61,375 residents between 2015 to 2020. Per the 2020 census, the economically active population was estimated to be 406,135 residents.

The sections of the wastewater collection system that will be rehabilitated under this Project receive wastewater flows from 20 areas in the Mexicali watershed and in the event of failure would discharge to the New River. There is a total of 11,624 residential accounts in those areas, representing a population of nearly 37,000 people.

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

**Table 1**  
**BASIC PUBLIC SERVICES AND INFRASTRUCTURE IN MEXICALI**

<b>Water System</b>			
Coverage	99.96%		
Supply source	Colorado River		
Number of connections	321,387		
<b>Wastewater Collection</b>			
Coverage	95.5%		
Number of connections	299,364		
<b>Wastewater Treatment</b>			
Coverage	100% of collected wastewater		
Treatment facilities	Plant	Type	Capacity
	Zaragoza	Oxidation ponds	1,300 lps (29.7 mgd)
	Las Arenitas	Oxidation ponds	840 lps (19.2 mgd)
	UABC	Activated sludge	10 lps (0.22 mgd)
	CETYS	Activated sludge	7 lps (0.16 mgd)
	Tecnológico	Activated sludge	7 lps (0.16 mgd)

Source: CESPМ, December 2021.  
 lps = liters per second; mgd = millions of gallons a day

**Local Water and Wastewater System**

CESPM operates the water and wastewater systems for Mexicali, Mexicali Valley and San Felipe, Baja California. The Mexicali wastewater system is divided into four service areas. Mexicali I and II cover the old urban areas of the city, while Mexicali III and IV serve most of the maquiladora industry and new urban developments. The wastewater collection system has approximately 1,800 miles of sanitary sewer lines and 14 lift stations, serving more than 299,364 connections in the city of Mexicali with coverage reaching approximately 95.5% of households.

CESPM regularly conducts video inspections of its wastewater collection infrastructure and has identified aging and deteriorated wastewater collection lines requiring rehabilitation to prevent failures that could result in raw wastewater spills. Most of those pipelines were constructed more than 30 years ago, have reached, or exceeded their expected useful life and are in immediate need of repair or replacement.

When a sewer line collapses, untreated wastewater is typically discharged into the New River. During the past two years, approximately 20.5 million gallons of untreated wastewater have been discharged into the New River, which has had a severe impact on the quality of the

river water. In February 2022, a failure in the Las Arenitas Force Main caused a major spill resulting in 120.3 million gallons of sewage flowing into the New River, which have caused health problems and polluted the already impaired water body.

To address this issue, CESPM developed a Strategic Wastewater Plan aimed at eliminating or reducing untreated wastewater discharges to the New River, prioritizing infrastructure rehabilitation activities and identifying potential funding sources. Immediate actions proposed under the plan include the rehabilitation of critical lift stations and replacement of approximately 54.8 miles of deteriorated concrete sewer lines.

CESPM has already completed rehabilitation of Lift Stations No. 1 and No. 3, as well as the first phase of rehabilitating Lift Stations No. 2 and No. 5. Work is currently under way to complete the final phases of Lift Stations No. 2 and No. 5, as well as rehabilitate Lift Station No. 4, along with 12 small lift stations and approximately 38,385 ft of deteriorated pipeline in the wastewater collection system, which will reduce the risk of discharges to the New River. Temporary lift stations were installed during the rehabilitation work to avoid wastewater discharges.

The proposed Project consists of replacing 43,448 ft of deteriorated sewer lines in 20 subdivisions within the Mexicali I and II service areas, which currently conveys an average of about 2.2 mgd.<sup>4</sup> The Project is needed to protect public health and the environment by minimizing the risk of line breaks that can cause sewage overflows onto local streets and into the New River, which flows northward into the United States. For these reasons, the Project was prioritized for funding through the U.S.-Mexico Border Water Infrastructure Program of the U.S. Environmental Protection Agency (EPA).

### 3.1.2. Project Scope

The Project consists of rehabilitating 13,243 meters (43,448 ft) of sanitary sewer pipelines, as follows:

- Bellavista subdivision:
  - 1,361 ft. of 8-inch polyvinyl chloride (PVC) pipe
  - 335 ft. of 12-inch PVC pipe
- Zona Industrial subdivision:
  - 298 ft. of 8-inch PVC pipe
  - 322 ft. of 10-inch PVC pipe
  - 984 ft. of 12-inch PVC pipe
  - 1,293 ft. of 18-inch PVC pipe
- Cuauhtémoc Norte subdivision:
  - 108 ft. of 8-inch PVC pipe
- Chapultepec Pinos subdivision:
  - 554 ft. of 8-inch PVC pipe
- Guajardo subdivision:
  - 443 ft. of 8-inch PVC pipe
- Prohogar subdivision:
  - 14,616 ft. of 8-inch PVC pipe

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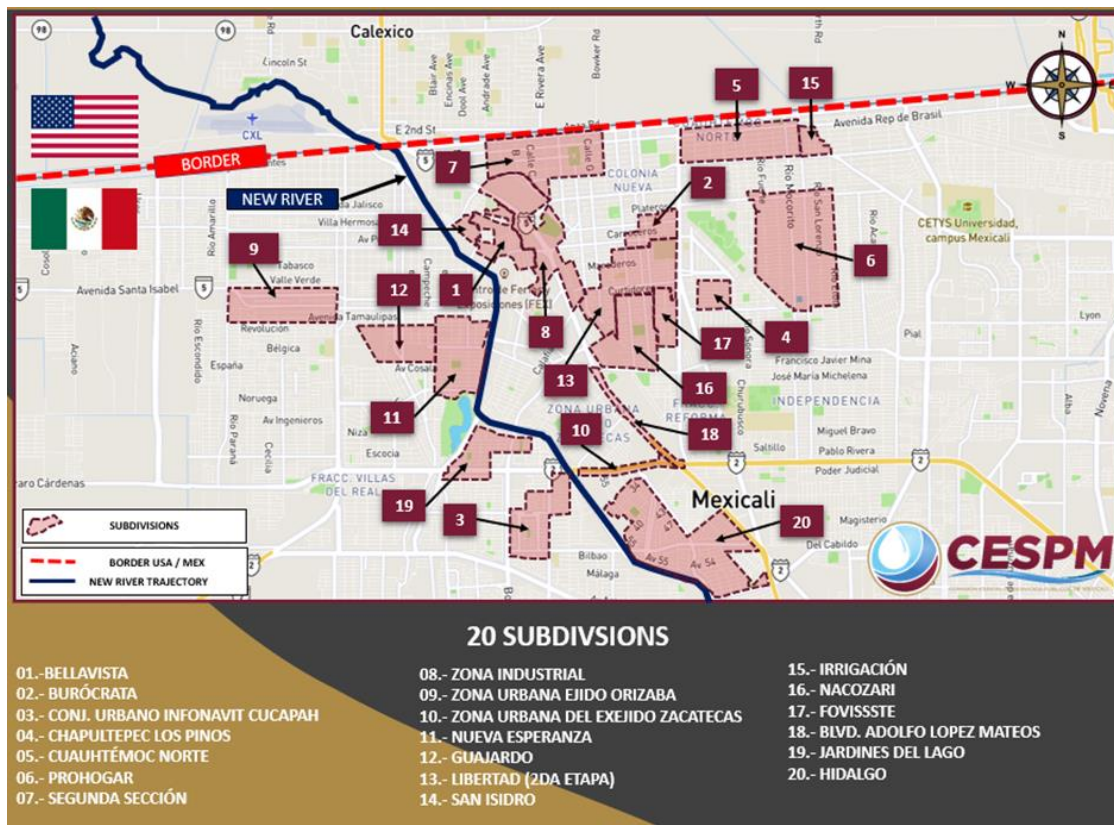
<sup>4</sup> CESPM is also requesting funding for two other projects aimed at eliminating the risk for untreated discharges to the river, both of which are currently under development for certification.

- Segunda Sección subdivision:
  - 46 ft. of 8-inch PVC pipe
  - 223 ft. of 10-inch PVC pipe
  - 4,521 ft. of 12-inch PVC pipe
- Zona Urbana Ejido Orizaba subdivision:
  - 823 ft. of 8-inch PVC pipe
- Nueva Esperanza subdivision:
  - 164 ft. of 8-inch PVC pipe
  - 394 ft. of 10-inch PVC pipe
- Nacozari subdivision:
  - 138 ft. of 8-inch PVC pipe
- Libertad segunda etapa subdivision:
  - 2,297 ft. of 8-inch PVC pipe
  - 1,420 ft. of 12-inch PVC pipe
- San Isidro subdivision:
  - 1,795 ft. of 8-inch PVC pipe
  - 69 ft. of 10-inch PVC pipe
- Jardines del Lago subdivision:
  - 1,132 ft. of 8-inch PVC pipe
- Burocratas subdivision:
  - 623 ft. of 8-inch PVC pipe
  - 627 ft. of 12-inch PVC pipe
  - 361 ft. of 18-inch PVC pipe
- Ex Ejido Zacatecas subdivision:
  - 1,473 ft. of 8-inch PVC pipe
- Infonavit Cucapah subdivision:
  - 978 ft. of 8-inch PVC pipe
  - 522 ft. of 10-inch PVC pipe
- Fovissste subdivision:
  - 830 ft. of 8-inch PVC pipe
- Hidalgo subdivision:
  - 1,280 ft. of 15-inch PVC pipe
  - 1,532 ft. of 16-inch PVC pipe
- Boulevard Lopez Mateos subdivision:
  - 469 ft. of 8-inch PVC pipe
  - 285 ft. of 12-inch PVC pipe
- Irrigacion subdivision:
  - 1,132 ft. of 8-inch PVC pipe

Figure 2 shows the areas of the wastewater collection system that will be rehabilitated in the city of Mexicali, Baja California.



**Figure 2**  
**LOCATION OF PROJECT COMPONENTS**



A grant from the Border Environment Infrastructure Fund (BEIF) is expected to supplement funding available from Mexico to support the necessary rehabilitation activities throughout the 20 subdivisions. Considering current cost estimates the BEIF funds are targeted to address infrastructure in Area 6, the Prohogar subdivision (14,616 ft. of 8-inch PVC pipe) and Area 20, the Hidalgo subdivision (1,280 ft. of 15-inch and 1,532 ft. of 16-inch PVC pipe). However, depending on the availability of funds, additional areas may be funded by BEIF.

### 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) and include green building practices as part of the construction specifications. The final design documents were reviewed by CONAGUA and NADBank. The CONAGUA regional office in the State of Baja California validated the technical specifications of the various Project components through official correspondence dated August 3, 2021 (B00.807.06/195) and September 30, 2021 (B00.807.06/234).

The current condition of the pipelines was assessed through closed-circuit television (CCTV) inspections and incident reports of problems with the lines, such as breaks, leaks or odors. The decision as to whether to rehabilitate or replace a particular segment using an open trench or pipe bursting method was based on the feasibility of each option. Specific factors considered 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 diameters were 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 operation and maintenance (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 PVC pipes were selected, which have proven to be reliable and are frequently used in the Mexicali wastewater collection system.

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

### **3.1.4. Land Acquisition and Right-of-Way Requirements**

All the sewer lines 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**

Once the notice to proceed is issued for rehabilitation of the wastewater collection lines, the work is expected to take approximately 18 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 2 provides a summary of the critical Project milestones and their respective status.

**Table 2**  
**PROJECT MILESTONES**

<b>Key Milestones</b>	<b>Status</b>
Environmental clearance – Mexico	Completed July 21, 2021
Environmental clearance – U.S.	Completed September 13, 2021
Final designs	Completed September 30, 2021
Procurement for BEIF grant component	Anticipated in the 4th quarter of 2022
Construction period (BEIF portion)	Estimated period of 18 months

### **3.1.6. Management and Operation**

Management and operation of the proposed Project will be the responsibility of CESPM, which currently serves 321,387 water hookups and 299,364 wastewater connections in Mexicali. In 2021, the utility treated 2,127 lps (48.5 mgd) of wastewater from the urban area.

Capital investments to extend service or replace deteriorated infrastructure is a priority for CESPM, which has successfully implemented previous projects certified and funded by NADBank. The current Project is necessary because the wastewater collection infrastructure was built more than 30 years ago. Additionally, CESPM is continuously working to address other infrastructure improvement needs in its water and wastewater systems. In particular, investments to improve the Las Arenitas Wastewater Treatment Plant (WWTP) and Zaragoza WWTP will be needed in the near future, in order to assure compliance with the new regulatory requirements for discharge quality. NADBank is working with the utility to consider its comprehensive water infrastructure needs, many of which will also be considered for certification.

CESPM 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 used to prevent temporary discharges related to aged pipes or pumps. The impact of the proposed Project on CESPM's O&M budget and procedures has been reviewed and is considered sustainable.

An important sustainable management practice that CESPM has implemented, in coordination with the Baja California Ministry of Environmental Protection (SPA), is a pretreatment program to control the quality of wastewater discharges into its sewer system from industrial and small business customers.<sup>5</sup> The pretreatment program also complies with BEIF program requirements, and the covenants established in BEIF grant agreements for projects previously funded in Mexicali.

## **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 residents to waterborne diseases.

Waterborne diseases may be caused by protozoan, viruses, bacteria and intestinal parasites. An individual may become ill after drinking water that has been contaminated with these

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<sup>5</sup> Such discharges must comply with Official Mexican Standard NOM-002-SEMARNAT-1996, which regulates the quality of wastewater discharged into municipal sewer systems.

organisms, eating uncooked foods that have been in contact with contaminated water or through poor hygiene habits that contribute to the proliferation of diseases by direct or indirect human contact. Table 3 shows waterborne disease statistics for the city of Mexicali, B.C. during the period 2015-2020.

**Table 3**  
**WATERBORNE DISEASE STATISTICS FOR MEXICALI, B.C.**

Disease	No. of Cases					
	2015	2016	2017	2018	2019	2020
Intestinal diseases other organisms	48,070	39,222	47,917	43,640	40,383	13,683
Typhoid fever	1,242	644	961	636	343	186
Salmonellosis	783	641	569	322	313	217
Intestinal amoebiasis	959	547	554	501	231	142

Source: Ministry of Health, Epidemiological Monitoring Coordination Unit, General Morbidity, New Cases in Mexicali (ISSESALUD de B.C.) May 2021.

Due to its proximity to the New River, wastewater spills on local streets in the Project area are likely to flow into the river. Between 2019 and 2020, a total of 20.5 million gallons of wastewater were discharged to the New River due to system failures. In February 2022, a break in the Las Arenitas Force Main caused a major discharge of 120.3 million gallons to the New River, which has caused sanitary problems and worsened the contamination of the already impaired water body.

Since the New River flows from Mexico into the U.S. and discharges into the Salton Sea, the poor quality of the river flows running in or near Calexico and reaching the Salton Sea may lead to health alerts in Imperial County, California.

## **B. Project Impacts**

The Project will provide the infrastructure necessary to collect the wastewater flows and safely convey them to the existing Zaragoza and Las Arenitas WWTPs, which are operating in compliance with NOM-001-SEMARNAT-1996 and their respective discharge permits.<sup>6</sup> The rehabilitated infrastructure will improve system reliability by preventing leaks and spills and thus significantly reduce the risk of exposure to untreated wastewater and the potential contamination of surface and groundwater.

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 11,624 existing residential wastewater connections, benefitting approximately 37,000 residents.

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<sup>6</sup> On March 3, 2022, a modification of the NOM-001-SEMARNAT-1996 was published in Mexico, with new maximum permissible levels of contaminants that must be met. It is expected that the discharge from Mexicali's WWTPs will not comply with all of the effluent quality parameters established in the new regulation. The new norm is scheduled to come into effect on April 3, 2023. It will be the responsibility of the CESPМ to maintain compliance with the norm.

- Reduce the risk of pipeline failure and thus prevent approximately 2.2 mgd of uncontrolled wastewater discharges to the New River that could result in transboundary flows to the United States.

### **C. Transboundary Impacts**

The proposed Project is expected to have an overall positive impact on the New 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.

Moreover, according to the transboundary environmental assessment, no significant negative impacts are expected as a result of Project implementation.

### **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.
- 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 an environmental impact assessment (MIA) for the Project was not required and subsequently authorized its implementation, through official letter No. SEST/SDS/DGIA/MXL/4058/2021 issued on July 21, 2021.

However, 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 found that the proposed Project met the parameters for exclusion from a detailed environmental review and does not involve any extraordinary circumstances. On September 13, 2021, EPA issued a Categorical Exclusion, which establishes 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 temporary and minor adverse impacts during construction and operation of the Project. To prevent untreated wastewater discharges from flowing into the New River during construction, wastewater flows will be bypassed to an existing manhole downstream when necessary. Other potential impacts, as described in the EID, 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 storm water runoff during the construction phase.
- Hazardous waste—such as construction debris, used oil, etc.—may be generated during the construction and operation phases.
- 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.

Typical mitigation measures to be implemented 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;
- 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.

The resolution issued by SEST for the Project describes mitigation measures, such as, requiring the proper disposal of construction debris (including excavated materials) and other measures similar to those listed above. Therefore, the results deriving from implementation of the proposed Project will be positive overall. In addition, 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.

**C. Pending Environmental Tasks and Authorizations**

There are no environmental authorizations pending.

**3.3 Financial Criteria**

The total estimated cost of the Project is \$4,962,186, 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, NADBank is recommending that EPA approve a BEIF grant for up to \$2,420,628 for its construction. Table 4 presents a breakdown of total Project costs and the proposed sources of funding.

**Table 4  
 USES AND SOURCES OF FUNDS  
 (USD)**

Uses		Amount	%
Construction		\$ 4,420,629	89.0
Supervision and contingencies*		541,557	11.0
<b>TOTAL</b>		<b>\$ 4,962,186</b>	<b>100.0</b>
Sources	Instrument	Amount	%
Mexican federal funds	Grant	\$ 1,270,779	25.6
CESPM	Equity	1,270,779	25.6
NADBank-BEIF	EPA grant	2,420,628	48.8
<b>TOTAL</b>		<b>\$ 4,962,186</b>	<b>100.0</b>

\*Supervision costs are estimated for the entire investment. The contingency budget is estimated only for the components to be funded by the BEIF grant.

When determining BEIF assistance for projects, BEIF program guidelines require a loan component, when feasible, to finance part of the project. The loan component amount is subject to the sponsor’s ability to support the project through user fees, other specific project revenue and/or funds available from state or local sources. In addition, the analysis considers the overall capital investment plan for the utility and the demand it will place on the financial capacity of the project sponsor. In this case, a request to waive the loan requirement for this Project was submitted by NADBank to EPA with the intent to maintain CESPM’s current debt capacity. By maintaining its debt capacity, CESPM will be able to finance future investments with debt through the State of Baja California’s sustainability bond issuance.

The Baja California sustainability is intended to support the development of water and wastewater infrastructure by the state water utilities. CESPM, like other water utilities in Baja California, is working with the state government to produce an interagency agreement that stipulates that the water utility will partially cover the debt commitment acquired by the State in the issuance of the bond for water and wastewater infrastructure needs in Mexicali.

In addition, for projects located in Mexico, EPA requires that every grant dollar be matched with grant funding from other sources. As indicated in the Table 4, total funding from Mexican sources for this Project is estimated at more than US\$2.5 million, which will cover 51.2% of the project costs.

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## 4. PUBLIC ACCESS TO INFORMATION

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### 4.1. Public Consultation

NADBank published the draft certification proposal for a 30-day public comment period beginning September 12, 2022. The following Project documentation is available upon request:

- Environmental Exclusion Letter SEST/SDS/DGIA/MXL/4058/2021 issued by the Baja California Sustainable Economy and Tourism Ministry on July 21, 2021.
- Categorical Exclusion issued by EPA on September 13, 2021.
- Technical validations of the wastewater collection system issued by CONAGUA through official letters BOO.807.06/195 dated August 3, 2021, and BOO.807.06/234 dated September 30, 2021.
- Mexicali Strategic Wastewater Plan developed by CESPM in April 2017.
- Public Participation Report, including public meeting minutes, pictures, articles and related materials.

The 30-day public comment period ended on October 12, 2022, with no comments received.

### 4.2. Outreach Activities

CESPM conducted extensive outreach efforts to publicize the Project, including its costs and user fees, 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 July 28, 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 CESPM 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 prohibited, and other forms of outreach were used to disseminate information about the Project. For that reason, in lieu of a first public meeting, CESPM distributed a fact sheet with the project information on September 28 and 29, 2021, and conducted a survey, which indicated that 100% of residents surveyed supported the Project.



Based on improved conditions and an easing of restrictions regarding public gatherings, CESPM held a public meeting on September 13, 2022, to present the final Project scope, proposed financial structure and implementation timeline. The meeting offered the residents in the project area a public forum to learn about the Project and to share any comments. The meeting was attended by members of the steering committee, CESPM representatives and 113 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.

- *Cadena Noticias* (January 21, 2022) “*Envía Mexicali aguas negras a EEUU por ruptura de drenaje*” [Sewer line collapse in Mexicali sends sewage to the United States]. A landslide broke the seal between the pipe joints causing the force main to collapse in the Satélite subdivision. CESPM had to shut down Lift Station #4 and diverted the flow to the New River temporarily.  
<https://cadenanoticias.com/regional/2022/01/envia-mexicali-aguas-negras-a-eeuu-por-ruptura-de-drenaje>
- *CESPM Web Page* (September 6, 2021) “*Concluyen obras de reparación del socavón en el fraccionamiento Sonora*” [Work to repair sinkhole completed in Sonora subdivision]. The sinkhole was fully repaired with the installation of 14 meters of 60-inch polyethylene pipe and perimeter concrete rings to reinforce the connections made inside Drain 134.  
<http://www.cespm.gob.mx/tf-noticias.html?not=1761#gsc.tab=0>
- *Unimexicali* (February 11, 2021) “*Buscan reducir flujos transfronterizos de aguas negras al río nuevo*” [They seek to reduce transboundary flows of sewage to the new river]. Addressing the environmental challenges facing the border is a priority that we share with our Mexican colleagues. “This project will benefit communities on both sides of our border by minimizing the risk of sewer spills and wastewater overflowing into streets and the New River”.  
<https://www.unimexicali.com/noticias/mexicali/625817/buscan-reducir-flujos-transfronterizos-de-aguas-negras-al-rio-nuevo.html>
- *El Imparcial* (September 18, 2020) “*Descarga CESPM agua sin tratar al Río Nuevo*” [CESPM discharges raw water to the New River]. CESPM discharged untreated sewage into the New River and thus alerted the Imperial County Public Health Department. The notification was made through the International Boundary and Water Commission (IBWC) to warn Imperial County officials about the impacts that the sewage discharge could have on the river that flows into the Salton Sea.  
<https://www.elimparcial.com/mexicali/mexicali/Descarga-CESPM-aguas-sin-tratar-al-Rio-Nuevo-20200918-0025.html>

- *La Voz de la Frontera* (June 20, 2020) – “Alerta Estados Unidos por descargas de aguas residuales al Rio Nuevo” [U.S. issues warning for wastewater discharges to the New River]. IBWC issued a notice about wastewater discharges to the New River from Mexicali. The Imperial County Public Health Department activated an alert asking residents to avoid contact with the river water.  
<https://www.lavozdelafrontera.com.mx/local/alerta-eu-por-descargas-de-aguas-residuales-en-rio-nuevo-5367155.html>
- *La Voz de la Frontera* (April 2, 2020) “Derrame de aguas negras afecta comercios en la zona centro” [Sewage spill affects downtown businesses]. Business owners in downtown Mexicali requested the prompt response of CESPM to address a sewage spill, which, in addition to causing fetid odors, is a source of infectious diseases.  
<https://www.lavozdelafrontera.com.mx/local/derrame-de-aguas-negras-afecta-a-comercios-de-la-zona-centro-5051977.html>

The activities carried out by the Project Sponsor and the articles identified above demonstrate that the public has received periodic information regarding the infrastructure problems and need for wastewater collection 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.

The proposed Project is one of many investment efforts currently under development to resolve uncontrolled discharges to the New River and will help address the main concerns identified by residents in Mexicali.

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## 5. RECOMMENDATION

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### **Certification Criteria Compliance**

The Project falls within the eligible sector of wastewater and is located in the border region, as required under NADBank Charter. The 30-day public comment period ended on October 12, 2022, 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 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 has been approved by EPA to receive a BEIF grant for up to US\$2,420,628 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.

## ANNEX A: RESULTS MATRIX

### WASTEWATER COLLECTION SYSTEM IMPROVEMENTS (PHASE II) IN MEXICALI, BAJA CALIFORNIA

Project Objective:			
The purpose of the Project is to eliminate exposure to untreated or inadequately treated wastewater discharges by replacing deteriorated wastewater infrastructure prone to leaks and failures, and thus contribute to the reduction of water pollution and the risk of waterborne diseases.			
Results Measurement	Indicators and Targets	Baseline Value	Measurement Methodology
Outcomes: Access to, use of, and satisfaction with goods and services provided, building evidence of the achievement of the project objective. These should be directly attributable to the project and should describe an improvement in existing conditions related, whenever possible, to environmental and human health, financial, and sustainable development.			
1	<b>Population benefitted</b>	# of residents (Target = 37,000 residents)	[2022] 0 Reviewed by NADB during project closeout process. Measurement supported by available information provided by project sponsor.
2	<b>Improve wastewater collection services</b>	# of improved residential wastewater connections (Target = 11,624 residential connections)	0
3	<b>Eliminate untreated or inadequately treated wastewater discharges</b>	Wastewater discharges eliminated (Target ~ 2.2 mgd)	0
4	<b>Improved financial self-sustainability</b>	Sufficiency of annual revenues to provide adequate cashflow to properly operate and maintain the system and maintain reserve requirements (Target Net Cash Flow ≥ MX\$0)	NA Reviewed by NADB on an annual basis, during the BEIF project with the financial statements report.
		Maintain appropriate reserve levels for O&M and repair and replacement (Target ≥ MX\$4,100,000)	NA Reviewed by NADB on an annual basis, during the BEIF time period with the bank account statement of each reserve.
5	<b>Strengthen institutional capacity</b>	Full compliance with all applicable laws, rules and regulations	In compliance Reviewed by NADB at project closeout. Measurement supported by available information by project sponsor of regulatory compliance.
Implementation			
<b>Outputs:</b> Goods and services that the project will deliver			
<b>Technical:</b>			
	Pipe replacement	43,448 ft of PVC pipe	
<b>Financial:</b>			
	Utility annual financial statement	Net cash flow ≥ MX\$0	
	Operations and Maintenance Reserve	MX\$2,900,000	
	Repair and Replacement Reserve	MX\$1,200,000	
<b>Inputs and Activities:</b>			
<b>Technical:</b>			
<i>NADB Implementation Activities</i>			
	Procurement process	To initiate in fourth quarter of 2022	
	Construction	18 months from NTP	
	Project close-out	One year after construction completion	

**BOARD DOCUMENT BD 2022-14  
 CERTIFICATION PROPOSAL  
 WASTEWATER PHASE II, MEXICALI, B.C.**

<b>Financial:</b>			
<b>Inputs</b>			
NADBank-BEIF construction assistance	US\$2,420,628.00		
CESPM	US\$1,270,779.00		
CONAGUA	US\$1,270,779.00		
<b>TOTAL</b>	<b>US\$4,962,186.00</b>		
<b>Activities</b>			
Execution of grant agreement NADBank/CESPM			
Compliance with disbursement NADBank Auditing - Covenants compliance review			
<b>Public Participation:</b>			
Outreach activities - construction updates; education / awareness			