



CERTIFICATION PROPOSAL

REHABILITATION OF SMALL LIFT STATIONS IN MEXICALI, BAJA CALIFORNIA

Submitted: July 27, 2020



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EXECUTIVE SUMMARY

REHABILITATION OF SMALL LIFT STATIONS IN MEXICALI, BAJA CALIFORNIA

Project: The proposed project consists of the rehabilitation of 12 deteriorated small lift stations in the wastewater collection system serving the residents of Mexicali, Baja California (the “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 failure, backups and leaks, thus helping reduce water pollution and the risk of waterborne diseases.

Expected Outcomes: The Project is expected to generate environmental and human health benefits related to the following outcomes:

- Improve wastewater conveyance infrastructure for up to 41,640 existing residential connections benefitting approximately 146,000 residents.¹
- Reduce the risk of failures and backups at 12 small lift stations resulting in untreated or inadequately treated wastewater discharges to the New River, which would prevent:
 - Up to 380 liters per second (lps) or 8.7 million gallons per day (mgd) of uncontrolled wastewater discharges.²
 - Transboundary wastewater flows to the U.S.

Population Benefitted: 146,000 residents in Mexicali, Baja California.³

¹ Source: Local water utility (CESPM), *Subdirección General de Agua y Saneamiento* [Assistant Office of Water and Wastewater], *Habitantes Beneficiados por el Proyecto de Rehabilitación de Cárcamos de Bombeo* [Residents Benefitted by the Lift Station Rehabilitation Project], April 2020. The number of connections and population served by the Project were calculated based on actual flow measurements at each lift station and on 225 liters (59.44 gallons) of wastewater generated per person a day as indicated by the Government of Baja California in the 2019 Technical Standards for Water and Sanitary Sewer System Projects [*Normas técnicas para proyecto de sistemas de agua potable y alcantarillado sanitario, actualización 2019*] with 3.5 persons per household as reported by the Mexican national institute of statistics (INEGI).

² The total flow volume is the sum of actual flow measurements at each lift station.

³ Estimated population benefitted is calculated based on 3.5 persons per household, as reported by INEGI and rounded to the nearest 1,000 persons.

Sponsor: Local water utility, *Comisión Estatal de Servicios Públicos de Mexicali* (CESPM).

Estimated Project Cost: US\$4,112,272.

NADB Funding: US\$2,055,770 grant from the Border Environment Infrastructure Fund (BEIF) funded by the U.S. Environmental Protection Agency (EPA).

Uses and Sources of Funds: (USD)

Uses	Amount	%
Construction	\$ 3,659,256	89.0
Supervision and contingencies	453,016	11.0
TOTAL	\$ 4,112,272	100.0
Sources	Amount	%
Mexican federal funds	\$ 616,951	15.0
Mexican state and local funds	1,439,551	35.0
NADB-BEIF (EPA grant)	2,055,770	50.0
TOTAL	\$ 4,112,272	100.0

Project Status:

Key Milestones	Status
Environmental clearance – U.S.	Complete
Environmental clearance – Mexico	Complete
Final design	Complete
Procurement for BEIF grant components	Anticipated in the 3rd quarter of 2020
Construction period with BEIF grant	Estimated period of 24 months

CERTIFICATION PROPOSAL

REHABILITATION OF SMALL LIFT STATIONS IN MEXICALI, BAJA CALIFORNIA

1. PROJECT OBJECTIVE AND EXPECTED OUTCOMES

The proposed project consists of the rehabilitation of 12 small lift stations—Aurora, Calle G, Campestre, Centro Civico, Cipresito, Esperanza Agricola, Hidalgo, Jardines del Lago, Nueva Esperanza, Zacatecas, San Marcos and Coronado—in the wastewater collection system serving the residents of Mexicali, Baja California (the “Project”). The purpose of the Project is to improve the wastewater collection facilities and infrastructure serving an estimated 41,640 existing residential wastewater connections. It will reduce the risk of pump failures, sewage backups and potential discharges of up to 380 liters per second (lps) or 8.7 million gallons per day (mgd) of untreated or inadequately treated wastewater, thereby helping reduce water pollution and the risk of waterborne diseases, as well as transboundary wastewater flows to the United States in the New River, an impaired water body.

2. ELIGIBILITY

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 city of El Centro, California. The Project is located approximately two miles south of the border and is roughly centered at the following coordinates: Latitude 32°38'01.54" North and Longitude 115°27'14.57" 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 or the “Sponsor”). 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.⁴

3. CERTIFICATION CRITERIA

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 statistical institute, INEGI, the population of Mexicali was 988,417 in 2015, which represented approximately 29.8% of the state population. According to the projections of the Mexican national population council, CONAPO, Mexicali grew at an average annual rate of 1.1% from 2010 to 2015 and is expected to grow at the same rate from 2016 through 2030, which is close to the national growth rate of 1.8%.⁵

⁴ In Mexico, a “*municipio*” or municipality has a jurisdiction similar to a county in the United States.

⁵ Mexican national population council, *Consejo Nacional de Población* (CONAPO).

The 12 small lift stations that will be rehabilitated under this Project receive wastewater flows from sectors I and II in the Mexicali wastewater system. The number of residential accounts in these areas total 41,640, representing a population of nearly 146,000 people.⁶

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

Table 1
BASIC PUBLIC SERVICES AND INFRASTRUCTURE IN MEXICALI*

Water System			
Coverage	99.96%		
Supply source	Colorado River		
Number of connections	312,791		
Wastewater Collection			
Coverage	95.46%		
Number of connections	294,421		
Wastewater Treatment			
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: CESPM, December 2019.
 lps = liters per second; mgd = millions of gallons a day

Local Wastewater System Profile

CESPM operates the water and wastewater systems for Mexicali, Mexicali Valley and San Felipe, Baja California. The water supply for the city of Mexicali comes from the Colorado River and is mainly conveyed through two open channels: Benassini and Reforma. The water is delivered to three treatment plants and then pumped to the water distribution system.

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 1,500 miles of sanitary sewer lines, 14 main lift stations and 22 small lift stations, serving more than 294,421 connections in the city of Mexicali with coverage reaching approximately 95.46% of households.

CESPM operates two major wastewater treatment plants (WWTP)—Zaragoza WWTP and Las Arenitas WWTP—both of which provide secondary treatment in compliance with applicable regulations as established in Official Mexican Standard NOM-001-SEMARNAT-1996. The Zaragoza WWTP discharges 406 lps (9 mgd) of effluent into a drain that is a tributary of the New River, while the Las Arenitas WWTP discharges 944 lps (21.5 mgd) to the Hardy River, a tributary of the

⁶ Estimated population benefited is calculated based on 3.5 persons per household as reported by INEGI and rounded to the nearest 1,000 persons.

Colorado River. Along with three other small treatment facilities, the utility has a maximum treatment capacity of 2,164 lps or nearly 50 mgd to serve the city of Mexicali.

The Project will address the problem of 12 small lift stations that have reached or exceeded their expected useful life and, consequently, are in immediate need of repair and/or replacement. Most of these lift stations are 30 years or older, with some pump replacement work performed over the years. When a lift station fails, untreated wastewater is typically discharged into the New River. CESPM estimates that 890,180 m³ (235 million gallons) of untreated wastewater have been discharged into the New River in the last five years, which has had a severe impact on the water quality of the river.

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 and establishing a financial strategy. The immediate actions proposed by the plan include the rehabilitation of critical sewer lines and lift stations. During 2018 and 2019, CESPM initiated some improvements to small lift stations, including the complete rehabilitation of the Madero lift station and the replacement of pumps in six of the lift stations included in the proposed Project. Additionally, CESPM is implementing improvements in the wastewater collection system, including the replacement of 11,760 meters (38,583 ft) of deteriorated pipelines and the rehabilitation of three lift stations, as part of another project recently certified by NADB and funded with EPA funds. Two other projects to replace aged and deteriorated gravity lines and force mains are in development and expected to be certified and receive EPA funds in 2021.

The proposed Project is needed to protect public health and the environment by minimizing the risk of sewage backups and overflows onto local streets and into the New River, which flows northward into the United States. Currently, the 12 small lift stations convey between 3.5 lps and 80 lps each for a total of 380 lps (8.7 mgd) within the Project area. 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 the rehabilitation of 12 small lift stations—Aurora, Calle G, Campestre, Centro Civico, Cipresito, Esperanza Agricola, Hidalgo, Jardines del Lago, Nueva Esperanza, Zacatecas, San Marcos and Coronado—and includes the acquisition and installation of the following components:

- 24 motors and eight (8) centrifugal pumps, ranging from 3 to 30 horsepower, distributed among the 12 lift stations;
- Automated fine screens for the removal of solids;
- SCADA system, including software and hardware, such as the programmable logic controller PLC, antenna and communication equipment;
- Flowmeters and new control panels; and
- Discharge manifolds with control and air valves.

Additionally, all lift station sites will include building improvements, such as updates to the control room, wet well rehabilitation, installation of travel hoist equipment, a perimetral fence and site improvements to accommodate access for vacuum trucks.

To prevent untreated wastewater discharges from flowing into the New River during construction, a provisional pump station will be installed to manage the flows. Figure 2 shows the location of the 12 small lift stations, which will be rehabilitated within the city of Mexicali, Baja California.

Figure 2
LOCATION OF SMALL LIFT STATIONS



Mexican funding will be available for some components prior to Project certification, including the acquisition and installation of new pumps in the Centro Civico and Calle G Lift Stations. A grant from the Border Environment Infrastructure Fund (BEIF) is expected to support rehabilitation of the Aurora, Campestre, Hidalgo, Jardines del Lago and Coronado Lift Stations.

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 NADB. The Project received technical validation from the regional offices of CONAGUA in the State of Baja California through official correspondence dated February 18, 2020 (BOO.807.06/087).

During the hydraulic modeling and final design process, technical options were evaluated for equipping the lift stations to avoid failures and uncontrolled discharges, including pumps, motors, screens and accessories.

To identify the most appropriate technology, the evaluation considered the following technical factors:

- Constructability;
- Capital cost;
- Operation and maintenance costs;
- Material and equipment reliability;
- Environmental impact;
- Social/community acceptance;
- Topography;
- System reliability; and
- Technology and sustainable practices.

The pumps, motors and control panels will be replaced with products that meet National Electrical Manufacturers Association (NEMA) premium efficiency standards and are consistent with the technical specifications of other pump equipment used throughout the system in order to maintain similar operation and maintenance procedures. The Project also includes the installation of new components—such as fine screen for the removal of solids, control valves, a SCADA system and building improvements—which are intended to automate operations and enhance security.

3.1.4. Land Acquisition and Right-of-Way Requirements

All pumps and equipment will be installed within existing lift station sites located in municipal easements and rights of way. No additional land or rights of way acquisition will be required.

3.1.5. Project Milestones

Once the Notice to Proceed is issued for rehabilitation of the small lift stations, the work is expected to take approximately 24 months to complete. Potential factors affecting the Project completion timeline—such as issues with weather or the delivery of the materials, pumps, motors and appurtenances—were considered in estimating the construction period. Construction permits will be the responsibility of the contractor and are considered a construction task.

Table 2 provides a summary of the critical Project milestones and their respective status.

Table 2
PROJECT MILESTONES

Key Milestones	Status
Environmental clearance – U.S.	Completed December 12, 2019
Environmental clearance – Mexico	Completed September 27, 2019
Final design	Completed February 18, 2020
Procurement for BEIF grant component	Anticipated in the third quarter of 2020
Construction period with BEIF grant	Estimated period of 24 months

3.1.6. Management and Operation

Management and operation of the proposed Project will be the responsibility of CESPM, which currently serves 312,791 water hookups and 294,421 wastewater connections in Mexicali. In 2019, the utility treated 2,126 lps (48.5 mgd) of wastewater from the urban area.

CESPM is organized in various departments, including: Water Treatment, Wastewater Treatment, Operation and Maintenance, Construction, and Management. Capital investments to extend service or replace deteriorated infrastructure is a priority for CESPM, which has successfully implemented previous projects certified and funded by NADB. The current Project is necessary due to the deteriorated condition of the pumps, which have exceeded their expected useful life and have been operating without modern enhancements, such as soil and grit removal equipment or a remote management system.

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 wastewater collection system from industrial and small business customers. Wastewater quality must comply with Official Mexican Standard NOM-002-SEMARNAT-1996, which regulates the quality of wastewater discharged into municipal wastewater collection systems. 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

The deteriorated condition of the small lift stations increases the risks of backups and discharges of untreated wastewater into the New River. Raw sewage spills increase water contamination and the vulnerability of residents to waterborne diseases. According to CESPM, the wastewater collection system discharged an estimated 890,180 m³ (235 million gallons) of untreated wastewater into the New River over the past five years, which has had a severe impact on the water quality of the river.

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 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 diseases statistics for the city of Mexicali, B.C. for the period 2014-2019.

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

Disease	No. of Cases					
	2014	2015	2016	2017	2018	2019
Intestinal diseases other organisms	46,278	48,070	39,222	47,917	43,640	37,768
Typhoid fever	920	1242	644	961	636	318
Other salmonellosis	621	783	641	569	322	285
Intestinal amoebiasis	1,317	959	547	554	501	215
Scabies	174	211	195	347	280	293

Source: Ministry of Health, Epidemiological Monitoring Coordinating Unit, General Morbidity, New Cases in Mexicali (ISSESALUD de BC).

Due to its proximity to the New River, wastewater spills on local streets in the Project area are likely to flow into the river. Since the New River flows from Mexico into the U.S. and discharges into the Salton Sea, the poor quality of the river flows reaching the Salton Sea may lead to health alerts in Imperial County, California.

B. Project Impacts

The Project will provide adequate infrastructure to safely convey wastewater flows to the existing Zaragoza and Las Arenitas WWTPs, which are in compliance with NOM-001-SEMARNAT-1996 and CONAGUA's discharge permit requirements.⁷ The rehabilitated infrastructure will improve system reliability by preventing leaks and spills and thus significantly reduce the risk of exposure to

⁷ Source: CESPM, *Parámetros de calidad de las PTAR de Mexicali* [Mexicali WWTP Quality Parameters], 2019.

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 conveyance infrastructure for up to 41,637 existing residential wastewater connections and benefit approximately 146,000 residents.⁸
- Reduce the risk of pumping failure resulting in untreated or inadequately treated wastewater discharges to the New River, which would prevent:
 - Up to 380 liters per second (lps) or 8.7 million gallons per day (mgd) of uncontrolled wastewater discharges.⁹
 - Transboundary wastewater flows to the U.S.

To enhance the benefits of the Project, the final designs include the implementation of green building practices as part of the technical construction specifications, with a specific focus on energy efficiency and optimal operational performance.

C. Transboundary Impacts

The proposed Project is expected to have an overall positive impact on the New River, which is a transboundary water body flowing from Mexico into the United States. Implementation of the Project is intended to prevent future spills from the small lift stations and thus contamination of the river water, which will help protect water resources in California.

Moreover, according to the transboundary environmental assessment, no significant negative impacts are expected because 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.

⁸ Source CESPM, *Subdirección General de Agua y Saneamiento* [Assistant Office of Water and Wastewater], *Habitantes Beneficiados por el Proyecto de Rehabilitación de Cárcamos de Bombeo* [Residents Benefitted by the Lift Station Rehabilitation Project], April 2020. The number of connections and population served by the Project were calculated based on actual flow measurements at each lift station and based on 225 liters (59.44 gallons) of wastewater generated per person a day as indicated by the Government of Baja California in the 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 3.5 persons per household as reported by INEGI.

⁹ The total flow volume is the sum of the actual flow measurements at each lift station.

- 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 Ministry of Environmental Protection (SPA) determined that an environmental impact assessment (MIA) for the Project was not required and subsequently authorized its implementation, through official letter No. SPA-TIJ-4196/19 issued on September 27, 2019.

However, to be eligible for a BEIF grant supported by federal appropriations to EPA's 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. The EID presented an assessment of the Project alternatives with respect to the following environmental factors:

- Air quality, odors and greenhouse gas emissions;
- Noise impacts;
- Water quality, hydrology and floodplain impacts;
- Impacts to biological resources and wetlands;
- Impacts to cultural and historical resources;
- Impacts to the geology and soils;
- Impacts to municipal and public services;
- Public health, hazards and waste management;
- Socioeconomic conditions;
- Land use and planning;
- Transportation and circulation;
- Utilities and service systems; and
- Environmental justice.

Based on the findings and conclusions of the EID, EPA Region 9 found that the proposed Project conforms to the category of action eligible for exclusion from a detailed environmental review and will not involve any extraordinary circumstances. On December 12, 2019, 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, because all construction related to the small lift stations will be restricted to previously disturbed urban areas.

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. As described in the EID, potential impacts include:

- Potential wastewater discharges resulting from the rehabilitation of the lift stations.
- 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.
- 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.
- 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 used construction debris, oil, etc.—may be generated during the construction and operation phases.
- Potential loss of vegetation, which may be a habitat during bird migration or nesting.

Typical mitigation measures to be implemented include:

- Temporary pump stations must be implemented to prevent discharges during construction.
- Application of water to reduce the emission of dust particles and soil erosion;
- Construction to be scheduled between 8 a.m. and 5 p.m. to prevent extended disturbances from noise;
- Vehicle tune-ups to reduce emissions and noise effects;
- Placement of warning signs to prevent potentially hazardous situations;
- Hay bales or silt fences to be placed along rights of way to prevent erosion and contamination of surface water resources;
- Construction that disturbs vegetation will be avoided during the nesting periods from March through August. A qualified biologist will conduct a preconstruction survey within the Project area to identify any sensitive species in the area; and
- All construction personnel will attend a briefing to familiarize workers with potential construction impacts and mitigation measures.

By following the best management practices described in the EID, the temporary impacts due to construction will be minimized. 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 the Baja California State Sustainable Economy and Tourism Ministry

(SEST) and must comply with any water quality requirements, authorization procedures or recommendations that the state ministry may issue throughout the life of the Project.¹⁰

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\$4,112,272, which includes construction, supervision, contingencies and taxes. The Sponsor requested a BEIF grant to support implementation of the Project. Based on a thorough analysis of both the Project and the Sponsor, NADB has determined that the Project meets all BEIF program criteria and is recommending that EPA approve a BEIF grant of up to US\$2,055,770 for its construction. Table 4 presents a breakdown of the sources of funding for the Project.

Table 4
USES AND SOURCES OF FUNDS
 (US\$)

Uses	Amount	%
Construction	\$ 3,659,256	89.0
Supervision and contingencies	453,016	11.0
TOTAL	\$ 4,112,272	100.0
Source	Amount	%
Mexican federal funds	\$ 616,951	15.0
Mexican state and local funds	1,439,551	35.0
NADB-BEIF (EPA grant)	2,055,770	50.0
TOTAL	\$ 4,112,272	100.0

The BEIF grant is expected to fund the rehabilitation of the Aurora, Campestre, Hidalgo, Jardines del Lago and Coronado Lift Stations. The cost of other seven lift stations will be covered with Mexican funds. In the case of projects located in Mexico, EPA requires that every BEIF grant dollar be matched with funding from other sources. As indicated in the above table, total funding from Mexican sources for this Project is estimated at nearly US\$2.1 million and will cover 50% of the cost.

¹⁰ In November 2019, the new state government of Baja California established SEST to replace the Ministry of Environmental Protection (SPA).

4. PUBLIC ACCESS TO INFORMATION

4.1. Public Consultation

NADB published the draft certification proposal for a 30-day public comment period beginning June 26, 2020. The following Project documentation is available upon request:

- Final design for rehabilitation of 12 small lift stations in Mexicali, September-December 2019.
- Environmental exclusion letter No. SPA-TIJ-4196/19 issued by SPA on September 27, 2019.
- Categorical Exclusion issued by EPA on December 12, 2019.
- Technical validation BOO.807.06/088 issued by CONAGUA on February 18, 2020.
- 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 July 25, 2020, with no comments received.

4.2. Outreach Activities

CESPM conducted extensive outreach efforts to publicize the Project, including its costs and fees, and 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 August 13, 2019, and includes members of the community, civic organizations and utility staff. The steering committee developed the Public Participation Plan and met periodically 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. The technical information about the Project was made available to the community at the public meeting held on September 25, 2019, in the meeting room of the National Chamber of the Manufacturing Industry (CANACINTRA) in Mexicali.¹¹ Approximately 70 residents attended the meeting. A survey conducted during the event indicated that 100% of the attendees fully supported the Project.

A second public meeting to present the proposed Project and its financial structure was not possible due to public health concerns and protocols prohibiting large gatherings of people. To provide an update to the affected population regarding the Project and its financial impact,

¹¹ *Cámara Nacional de la Industria de Transformación (CANACINTRA).*

CESPM will distribute a fact sheet with the final Project scope, proposed financial structure and implementation timeline to Mexicali residents.

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.

- *la Voz de la Frontera* (November 2019) “*Emergencia en Imperial por contaminación*” [Emergency in Imperial due to contamination]. Imperial County confirmed that raw wastewater is flowing through the New River due to the deficient wastewater system in Mexicali. According to the Imperial County Board of Supervisors, the bypass and diversion of raw sewage from the failing wastewater system in Mexicali has increased pathogens in the New River and the Salton Sea.
<https://www.lavozdelafrontera.com.mx/local/emergencia-en-imperial-por-contaminacion-4422238.html>
- *CANAL 66* (October 2019) “*Urgente cambio de drenajes sanitarios en colonias de Mexicali: Cespm*” [CESPM: Replacing sewer lines urgent in Mexicali neighborhoods].
<https://www.youtube.com/watch?v=TmNxzOO-bCc>
- *La Voz de las Fronteras* (October 2, 2019) – “*Aguas negras se desbordan en El Vidrio*” [Wastewater spill in the El Vidrio subdivision] As is common during the rainy season, the sanitary sewer system overflowed, which caused large pools of sewage in the streets.
<https://www.lavozdelafrontera.com.mx/local/aguas-negras-se-desbordan-en-el-vidrio-2041760.html>
- *La Voz de las Fronteras* (September 25, 2019) – “*Se forma socavón en Jardines del Lago*” [Sinkhole in Jardines del Lago]. A sinkhole approximately five meters deep has formed at the intersection of Lago Rudolf and Lago de Ginebra Avenues, in the Jardines del Lago neighborhood. <https://www.lavozdelafrontera.com.mx/local/se-forma-socavon-en-jardines-del-lago-4231868.html>
- *La Voz de las Fronteras* (June 19, 2019) – “*Desborda drenaje en “Zona Dorada”* [Sewage overflows in the "Golden Zone"]. The lack of storm water infrastructure in the "Golden Zone" has caused sanitary sewer overflows affecting residents in 24 subdivisions for more than a year.
<https://www.lavozdelafrontera.com.mx/local/desborda-drenaje-en-zona-dorada-3788050.html>

- *La Voz de las Fronteras* (December 8, 2018) – “*Estan tuberías por colapsar en Centro Civico*” [Pipes in danger of collapsing in Centro Civico area]. The main roadways in the Centro Cívico area of Mexicali could collapse at any moment due to the erosion of the wastewater system, which has practically disintegrated. CESPM has identified eight areas at imminent risk of failure due to the deterioration of the 50-year-old infrastructure built with concrete pipe.
<https://www.lavozdelafrontera.com.mx/local/estan-tuberias-por-colapsar-en-centro-civico-2816406.html>
- *La Crónica* (December 27, 2017) – “*Registran 20 colapsos de tubería de CESPM*” (Collapse of 20 CESPM pipelines reported). CESPM recorded and addressed the collapse of 20 pipelines located in colonies with the oldest asbestos and cement wastewater infrastructure. <https://www.elimparcial.com/mexicali/mexicali/Registran-20-colapsos-de-tuberia-deCespm-20171227-0029.html>
- *Notivisa al amanecer* (June 12, 2017) – News story on sanitary sewer blockage in the Oscar Garzón subdivision that has gone unattended for over a month.
<https://www.youtube.com/watch?v=kiz7Ym-l0Lk>
- *Contacto Matutino (Canal 66)* and *Notivisa al amanecer* (May 19, 2017) – News reports on sanitary sewer blockages causing wastewater to back up in homes in various subdivisions, and CESPM’s efforts to desilt and clean the lines.
<https://www.youtube.com/watch?v=4oVLxfjWa2M>
- *Notivisa al amanecer* (May 5, 2017) – News story on sanitary sewer spills in the streets of the El Condor subdivision and their effect on residents.
<https://www.youtube.com/watch?v=V4DXGZAacZQ>
- *CANAL 66* (February 2017) “*Inundaciones de aguas negras debido a fallas en la red del drenaje y cárcamos, en la colonia Aurora y Esperanza Agrícola*” [Sewage flooding the Aurora and Esperanza Agrícola neighborhood due to sewer line and lift station failures].
<https://www.youtube.com/watch?v=wYiXDOJOXWk>
- *Notivisa al amanecer* (January 4, 2017) – News report of a neighborhood without basic infrastructure, including wastewater collection, storm water drainage and paving.
<https://www.youtube.com/watch?v=ZAM5wov-Xxc>

The activities carried out by the Project Sponsor and the articles identified above demonstrate that the public has received updates related to the infrastructure problems and need for wastewater collection system improvements. The Project Sponsor informed NADB 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.

5. RECOMMENDATION

Certification Criteria Compliance

The Project falls within the eligible sector of wastewater and is located in the border region, as required under NADB Charter. The 30-day public comment period ended on July 25, 2020, with no comments received. The Project review performed by the NADB 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 is expected to be approved by EPA to receive a BEIF grant for up to US\$2,055,770 for its construction.

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

ANNEX

REHABILITATION OF SMALL LIFT STATIONS IN MEXICALI, BAJA CALIFORNIA

ANNEX A: RESULTS MATRIX

REHABILITATION OF SMALL LIFT STATIONS 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 Eliminate untreated or inadequately treated wastewater discharges (protection of natural resources)	Improve wastewater collection and conveyance infrastructure (Target = 41,640 improved residential connections) (Target =146,000 residents) Eliminate untreated or inadequately treated wastewater discharges. (Target = 8.7 mgd) Reduce risk of line failures resulting in wastewater discharges to the New River / transboundary flows. (Target = 0)	[2019] 41,640 existing connections 8.7 mgd 2 per year (2019)	Reviewed by NADB during project closeout process. Measurement supported by available information provided by project sponsor.
2 Improved financial self-sustainability	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) Maintain appropriate reserve levels for O&M and repair and replacement (Target >=MX\$2,040,000)	NA NA	Reviewed by NADB on an annual basis, during the BEIF project with the financial statements report. Reviewed by NADB on an annual basis, during the BEIF time period with the bank account statement of each reserve.
3 Strengthen institutional capacity	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.
Outputs: Goods and services that the project will deliver			
Technical:*			
The rehabilitation of 12 small lift stations: Aurora, Calle G, Campestre, Centro Civico, Cipresito, Esperanza Agricola, Hidalgo, Jardines del Lago, Nueva Esperanza, Zacatecas, San Marcos and Coronado, and includes the acquisition and installation of the following components			
1. 24 motors and eight (8) centrifugal pumps, ranging from 3 to 30 horsepower, distributed among the 12 lift stations;			
2. Automated fine screens for the removal of solids;			
3. SCADA system, including software and hardware, such as the programmable logic controller PLC, antenna and communication equipment;			
4. Flowmeters and new control panels; and			
5. Discharge manifolds with control and air valves.			
Additionally, all lift station sites will include building improvements, such as updates to the control room, wet well rehabilitation, installation of travel hoist equipment, a perimetral fence and site improvements to accommodate access for vacuum trucks			
*subject to construction implementation results.			

**BOARD DOCUMENT BD 2020-19
 CERTIFICATION PROPOSAL
 MEXICALI, B.C.**

Financial:			
Utility annual financial statement	Net cash flow ≥ MX\$0		
Operations and Maintenance Reserve	MX\$1,010,000		
Repair and Replacement Reserve	MX\$1,030,000		
Implementation			
Inputs and Activities:			
Technical:			
<i>NADB Implementation Activities</i>			
Procurement process	Initiated in Third quarter 2020		
Construction	24 months from NTP		
Project financial closeout	One year after construction completion		
Project closeout	One year after construction completion		
Financial:			
Inputs			
NADB-BEIF construction assistance	US\$2,055,770.00		
CESPM	US\$1,439,551.00		
CONAGUA	<u>US\$ 616,951.00</u>		
TOTAL	US\$4,112,272.00		
Activities			
Execution of grant agreement NADB/CESPM			
Compliance with disbursement conditions			
NADB Auditing - covenants compliance review			
Public Participation:			
Outreach activities - construction updates; education / awareness			