Border Environment Cooperation Commission
Project Certification Document
Expansion of the Wastewater Collection System for Areas in the Tijuana River Basin, in Tijuana, BC

1. General Criteria

1.a Project Type

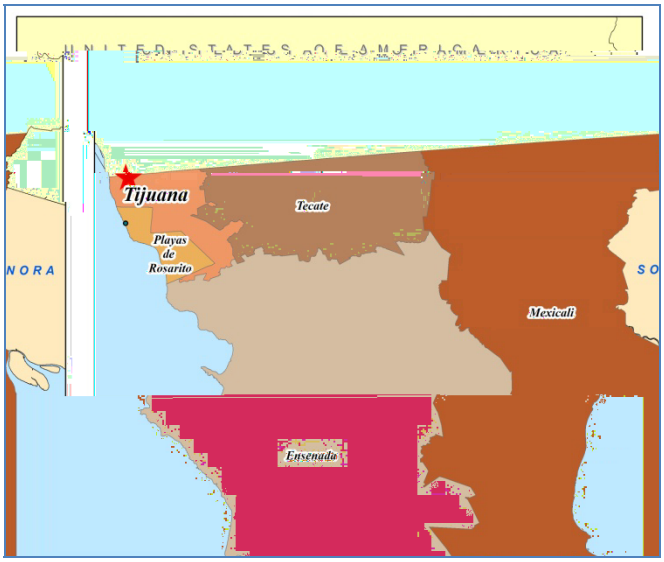
Project Name:	Expansion of the Wastewater Collection System for Areas in the Tijuana River Basin, Tijuana B.C.
Project Sector:	Domestic Water and Wastewater Hookups

1.b Project Category

Category:	Community Environmental Infrastructure Project – Community-wide impact

1.c Project Location and Community Profile

Community:	Municipality of Tijuana, Baja California, Mexico.
Location:	The project is located in the municipality of Tijuana, in the northwestern part of the State of Baja California, Mexico. Tijuana borders the United States of America – San Diego, California Metropolitan Area– to the north, the municipality of Playas de Rosarito to the south, the Pacific Ocean to the west, and the municipality of Tecate to the east.
Location within the border:	The project is located within the 100 km border area. The unserved areas of "Lomas del Valle", "Maclovio Rojas" and "Ojo de Agua" are located within the Tijuana River basin approximately 3.5 miles (5.6 km) southeast of the U.S.-Mexico international border.
Figure:	The following figure shows the location of the municipality of Tijuana.



Tijuana, Baja California, México.

Demographics

Current population:	1,540,072 residents
Growth rate:	3.00 %
Reference:	INEGI year: 2005, CONAPO 2008
Economically active population:	561,002 residents
Reference:	INEGI Year: 2004
Median per capita income:	$ 2,902 Pesos
References:	INEGI, 2000 and the National Commission on Minimum Wages
Economic activity:	Manufacturing industry, tourism, trade, and services
Marginalization rate:	-1.90, Very low

Services

Community:	Tijuana and Playas de Rosarito
Water System:	
Water coverage:[1]	93%
Current length of water pipelines:	247 km.
Water supply source:	Colorado River
Number of water hookups:[2]	475,022

[1] Source: CESPT, as of December 2008
[2] Source: CESPT, as of February 2008

Wastewater Collection System:

Wastewater collection coverage:[3] 79.2 %
Length of sewage pipelines: 222 Km
Number of sewer connections:[4] 413,942

Wastewater Treatment:

Wastewater treatment coverage: 90%

Wastewater treatment:

Plant	Technology	lps
SAB	Activated sludge	1,100
IWWTP	"	1,100
La Morita	"	254
Monte de los Olivos	"	460
Tecolote-La Gloria	"	380

Currently, most of the wastewater generated by the city of Tijuana is collected by the existing wastewater collection system and conveyed by gravity and lift stations to the International Wastewater Treatment Plant (IWWTP) and the "San Antonio de los Buenos" (SAB) plant. Both plants discharge into the Pacific Ocean. The construction process for "La Morita" and "Monte de los Olivos" facilities is underway, and they are expected to start operating at the end of 2008, while the "Tecolote-La Gloria" facility will be operational by 2009.

Solid Waste:

Collection coverage: 99%
Final disposal: Landfill

Street Paving:

Street paving coverage: 44%

1.d Legal Authority

Project Sponsor: Comisión Estatal de Servicios Públicos de Tijuana (CESPT)

Legal representative: Hernando Durán Cabrera

Legal instrument to demonstrate legal authority: Decree No. 44, V Legislature of the State of Baja California

Date of instrument: December 16, 1966

Compliance with agreements:

- 1889 International Boundary Convention
- 1944 Water Treaty
- 1983 La Paz Agreement, or Border Environment Agreement

[3] Source: CESPT, as of December 2008
[4] Source: CESPT as of February 2008

- 1990 Integrated Border Environmental Plan (IBEP)
- 1994 North American Free Trade Agreement (NAFTA)
- Border 2012 Program
- Minute 283 (CILA/IBWC)

1.e. Project Summary

Project description and scope:

The project consists of the construction of a wastewater collection system (WWCS) for the areas Lomas del Valle, Maclovio Rojas and Ojo de Agua in the municipality of Tijuana, Baja California.

Wastewater Collection
- WWCS Construction

The project includes the construction of approximately 94,737 linear meters (310,816 linear ft) of wastewater collection pipelines made of PVC material ranging from 20 to 76 cm (8 to 30 inches) in diameter. All wastewater collected by the new WWCS (approximately 69 lps) will be treated at La Morita wastewater treatment plant (WWTP), currently under construction, which would provide advanced secondary treatment and would have sufficient capacity to treat these flows. The treated wastewater effluent would be discharged into the Tijuana River where along with other river flows would be intercepted before crossing to the U.S and conveyed for disposal to the Pacific Ocean in Mexico.

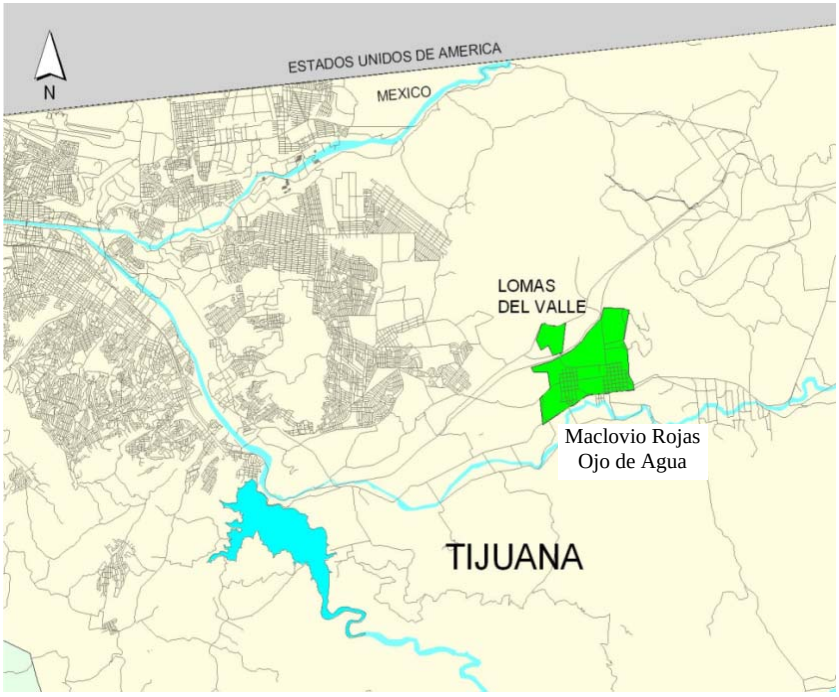
Complementary works necessary to ensure proper treatment and wastewater disposal from the project areas are being implemented by the sponsor. These works will help control the increased flows to the Tijuana River resulting from the start of operations of the La Morita and Monte de los Olivos WWTPs. The complementary works are not part of the proposed BEIF project.

Population served: 33,915 residents

Number of connections: 8,075

Project cost: MX$ 116,298,227.00

Project map: The following figure shows the location of Lomas del Valle, Maclovio Rojas and Ojo de Agua within Tijuana's urban area.



Colonia Lomas del Valle, Maclovio Rojas and Ojo de Agua, Tijuana, BC

1.f Project Justification

Project justification:

- Residents from the areas Lomas del Valle, Maclovio Rojas and Ojo de Agua currently lack wastewater collection services and as a result, rely on latrines, septic tanks, or discharges to open drains for wastewater disposal. The implementation of the proposed project will help provide access to appropriate wastewater collection services to approximately 33,915 residents (100% of residents of the project area); this action will in turn reduce human contact with contaminated water as well as with vectors of waterborne diseases such as pests and other organisms.

- The city of Tijuana has an estimated 20% wastewater collection deficiency. The implementation of the project will help reduce the backlog by installing approximately 8,075 new sewer connections.

- Approximately 69 lps of the wastewater flow generated in the project area will receive treatment before being discharged into the Tijuana River and finally to the Pacific Ocean. By eliminating the use of latrines, septic tanks, and open drains, the proposed project will contribute to reduce the potential for groundwater and surface water contamination resulting from the inappropriate discharge of untreated wastewater.

Urgency of the project or consequences of no action:	- The lack of these services jeopardizes the health of area residents, as they are exposed to potentially having contact with wastewater and thus are at risk of acquiring associated diseases. According to morbidity statistics for Tijuana (see Table 2.1); intestinal diseases show the highest incidence among all types of diseases. - The inappropriate discharge of untreated wastewater in the project area results in wastewater runoff, a portion of which eventually reaches the Pacific Ocean, contributing to water contamination.
Prioritization process category:	Category 1

Pending Issues:

None

Criterion Summary:

The project falls within BECC priority sectors and meets basic general criteria.

2. Human Health and Environment

2.a Compliance with Applicable Environmental Laws and Regulations

Environmental and Public Health needs addressed by the proposed project:

- Appropriate wastewater collection and treatment. Project area residents currently lack sewage services and discharge their wastewater to open drains or rely on latrines and cesspools.
- Reduce the risk of waterborne disease transmission caused by human contact with unsafe waters resulting from wastewater runoff as a consequence of the lack of a WWCS in the project area.
- Reduce soil and surface water contamination, inasmuch as it has been estimated that a portion of the runoff resulting from inappropriate wastewater discharges in the project area will eventually discharge to the Pacific Ocean.

The project meets the following applicable environmental laws and regulations:

- Official Mexican Standard NOM-001-SEMARNAT-1996, which establishes the maximum permissible levels of contaminants for wastewater discharges into national waters and territories.
- Official Mexican Standard NOM-002-ECOL-1996, which establishes the maximum permissible levels of contaminants for wastewater discharges to urban or municipal wastewater collection systems.

2.b Human Health and Environmental Impacts

Human Health Impacts

Direct and indirect benefits:

- The project will reduce groundwater and surface water contamination.
- The project will reduce soil contamination.

Health statistics:

Waterborne diseases are caused by pathogenic microorganisms that are directly transmitted as a result of inadequate wastewater disposal practices and unsafe water supplies. 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 dissemination of diseases by direct or indirect human contact. Waterborne diseases may be caused by protozoan, viruses, bacteria, and intestinal parasites.

Supporting figures:

The following figure shows waterborne disease statistics for the city of Tijuana. As shown below, the number of cases has dropped throughout the years which go in hand with an increase in wastewater collection and treatment service coverage. Hence, an argument may be presented that projects of this nature contribute to improving the community's health conditions in addition to residents receiving wastewater collection service.

Table 2.1 – Waterborne Disease Statistics for Tijuana, B.C.

No. of Cases					
Disease	**2002**	**2003**	**2004**	**2005**	**2006**
Intestinal diseases by other organisms	52,699	36,130	22,110	36,930	33,084
Other Helminthiasis	4,215	3,513	2,500	1,812	1,651
Intestinal Amibiasis	3,699	2,881	1,485	1,715	1,636
Scabiosis	3,605	2,140	1,391	1,187	1,275

Source: Secretariat of Health, Epidemiological Surveillance Coordinating Unit, General Morbidity, New Cases. Tijuana 2002-2006

Environmental Impacts

Direct and indirect benefits:

The construction of new wastewater collection systems in Tijuana will reduce health and environmental risks associated to inadequate wastewater collection and lack of wastewater treatment. The proposed project will help CESPT collect and treat wastewater generated in the project area while being in compliance with the existing federal and state laws and regulations.

Environmental impacts:

The project's implementation will help eliminate wastewater discharges to latrines or open drains, positively impacting ground and surface water bodies. It is estimated that a portion of the wastewater generated at the project area may reach the Tijuana River contributing to the pollution of surface waters. The project implementation will help to improve the quality of water in the river since it will supply raw wastewater discharges with treated wastewater.

Minor environmental impacts are anticipated from implementation of the different project phases, provided the project tasks are implemented in accordance with the specifications of the Transboundary Environmental Assessment and the Environmental Impact Document *Manifestacion de Impacto Ambiental* (MIA by its initials in

	Spanish), taking into account the mitigation measures established in it. Potential impacts specified in the MIA include the following: <u>Construction Phase</u> – Fugitive dust emissions. – Gas emissions from construction machinery. – Temporary roadway blockages, presence of workers in the area.
Mitigation measures:	The mitigation measures considered in the MIA include the following: - Application of treated wastewater water to reduce fugitive dust emissions - Construction vehicle tune ups to reduce emissions - Placement of warning signage to prevent potentially hazardous situations
Impacts:	The environmental impact resulting from the project's implementation will be positive overall, since: - The project will increase wastewater collection coverage, reducing environmental contamination and improving the quality of life of area residents by curtailing potential health hazards.
Transboundary Impacts	
	Tijuana is contiguous to the border, neighboring the city of San Ysidro, and therefore, there are frequent border crossings between the United States and Tijuana. The construction of new WWCSs in currently unserved areas will have a direct positive impact on the health of residents of San Ysidro, California and the entire region, since these actions will reduce the risk of waterborne diseases caused by inappropriate wastewater management. Furthermore, the project will reduce human contact with raw wastewater. Additionally, the project's implementation will reduce the potential for contamination of local and shared water bodies, including the Tijuana River. According to the Transboundary Environmental Assessment, significant environmental impacts are not expected. The construction of a WWCS in the areas Lomas del Valle, Maclovio Rojas and Ojo de Agua will allow reducing the percentage of wastewater that would reach the River without treatment. With the construction and

	operation of the La Morita and Monte de los Olivos WWTPs, it is expected to have a reduction of raw wastewater discharges into the river. In addition with the implementation of the Tijuana River Diversion and Conveyance project it is expected to avoid the transboundary impacts associated to the additional flows resulting from the discharge of the La Morita and Monte de los Olivos WWTPs.
Formal Environmental Clearance	
Environmental clearance:	Pursuant to the provisions of the Law of Environmental Protection for the State of Baja California regarding the environmental impacts of this project, the Secretary of Environmental Protection for the State of Baja California (SPA) established, through an official communication, that the project requires a *Manifestacion de Impacto Ambiental (MIA)*, an Environmental Impact Statement in the General Modality, which was prepared and submitted to the SPA on June 28, 2006. Authorization for the project was issued on October 19, 2006 through Finding No. SPA-TIJ-3267/06, after a determination was made that the project complies with all the requirements of the Mexican environmental clearance process. Pursuant to the U.S. National Environmental Policy Act (NEPA), a transboundary environmental assessment was developed and submitted for consideration to the United States Environmental Protection Agency (EPA). A 30-day public review period started on October 17, 2008 to receive comments related to the environmental assessment and Finding of No Significant Impact (FNSI). Ultimately, a Finding of No Significant Impact (FNSI) was issued by the EPA on November 18, 2008, establishing that the project will not result in significant environmental impacts that may affect the U.S. border area.

Pending Issues

None

Criterion Summary:

The project complies with BECC's Human Health and Environment criteria

3. Technical Feasibility

3.a Technical Aspects

The project consists of the construction of a WWCS for the areas Lomas del Valle, Maclovio Rojas and Ojo de Agua in the municipality of Tijuana, Baja California.

Project Development Requirements

Design criteria:

The project was developed pursuant to the Technical Standards for Sanitary Wastewater Collection Projects issued by Baja California's Secretariat of Infrastructure and Urban Development, technical specifications contained in the Wastewater Collection and Treatment Manual prepared by CONAGUA's Technical Directorate, and Official Mexican Standard NOM-001-CNA-1995 "Sanitary Sewerage System – Specifications for Hermetic Seal." Final designs were validated by CONAGUA (Document No. B00.00.R02.02.5.2 /049/126 y /064/302) and reviewed by BECC and NADB.

The project proposes the installation of wastewater pipelines in the areas Lomas del Valle, Maclovio Rojas and Ojo de Agua that will discharge by gravity to the "La Encantada" and "La Morita" collectors, currently under construction. The flows generated in the project areas, approximately 69 lps, will be treated at La Morita WWTP. The facility will have sufficient capacity to treat these flows.

The project includes the following components:

<u>Wastewater Collection</u>
Construction of sewer lines

- Length: 94,737 m (310,816 lf)
- Diameter: 20-76 cm (8 to 30 inches).
- Material: PVC

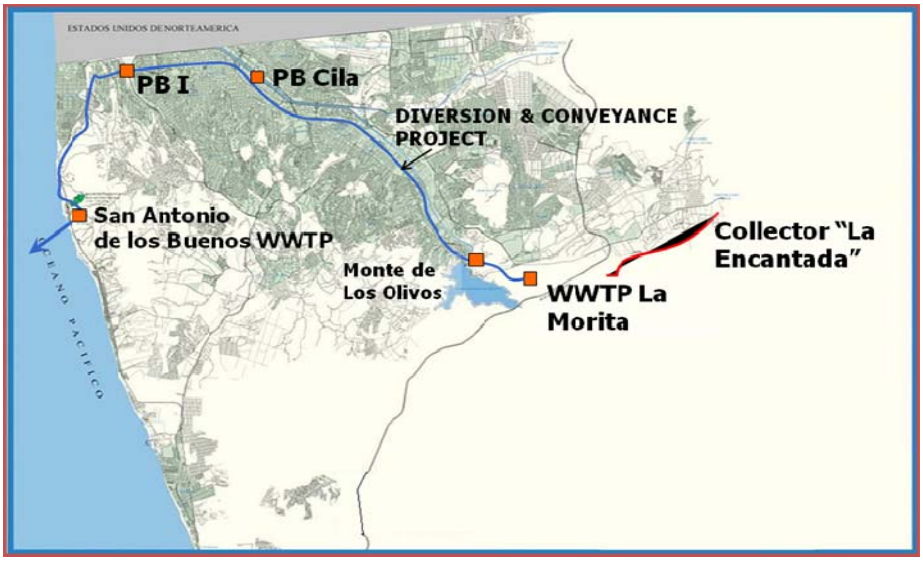
The project considers the construction of wastewater pipelines to collect and convey wastewater to the La Morita WWTP with capacity of 254 lps. The plant will provide advanced secondary treatment using an oxidation ditch activated sludge treatment process followed by filtration and UV. The effluent would be discharged to Tijuana River then to be intercepted by the pump station PB-CILA and conveyed by a pressurized pipeline to the pump station PB1-A, which will transfer the flows to Punta Bandera for its final discharge into the Pacific Ocean, in Mexico. The treatment process will allow the effluent from the plant can be utilized according to the norm NOM-003. The sludge generated in the plant will be managed, treated and disposed according to the NOM-004.

To ensure the discharge and appropriate treatment in the areas of the project, the sponsor will undertake additional works that are not part of the project to be funded by the BEIF (Border Environment Infrastructure Fund, by its initials in English), these works include the construction of the La Morita wastewater treatment plant, La Encantada collector and the Tijuana River Diversion and Conveyance Project.

The collector "La Encantada", with capacity of 1,004 lps will receive the discharges from a number of communities including the Maclovio Rojas and Ojo de Agua, to then connect with the La Morita wastewater main collector which in turn will discharge to the La Morita WWTP. On the other hand the community from Lomas del Valle will be connected directly to the La Morita wastewater main collector.

The Tijuana River and Conveyance Project has been designed to intercept and divert flows in the Río Tijuana before crossing to the United States. The project consist of the expansion of the pump station PB-CILA from 500 lps to 1,500 lps, the construction of a new pipeline with a total length of 2,300 meters (conveying the diverted water to pump station PB1-A), and the rehabilitation of pump station PB1-A. From PB1-A flows will be sent through the rehabilitated parallel conveyance wastewater pipeline (SIDUE collector) to Punta Bandera, and flow directly to the Pacific Ocean.

The following figure shows the location of these complementary projects.



Complementary Projects in Tijuana Baja California

Sustainable BMP:	The final design includes the implementation of green building practices as part of the technical construction specifications. For example the use of materials that will provide a good balance between cost and durability, it also considers the use of materials from the region to avoid transportation costs and emissions. The final design specifications describes the availability of materials and its characteristics so the contractors have the option to select materials with low toxicity such as paint, plaster, pipes, packages etc. It so requires the use of equipment with low energy consumption, solar panels for lighting and automatic controls. It was requested to document any change in materials o action that imply energy savings or improvements to the environment, during the project execution.
Appropriate Technology	
Assessment of Alternatives:	As part of the project's development, various alternatives were evaluated based on the following parameters: - Cost - O & M Cost - Material and Equipment Reliability - Environmental Impacts - Social/Community Acceptance - Technology and sustainable practices The alternative analysis considered the use of pipe materials in compliance with norms and current regulations. PVC and Asbestos-cement pipes were evaluated according to the soil type. In order to reduce costs and make the best use of the project area topography, the shortest routes were considered for pipe alignments. Crossings through paved avenues were also reduced to the minimum as well as crossing with drinking water pipes and telephone lines. Pipe diameters were calculated using slopes and velocities accordingly to avoid silt build up (septic conditions) and at the same time minimize ditch works and the use of lift stations. Maximum flow rate was also considered for pipe requirements. Treatment capacity was also considered and pipe layout was designed based on existing right of ways, according to the Urban Land Use Plan.

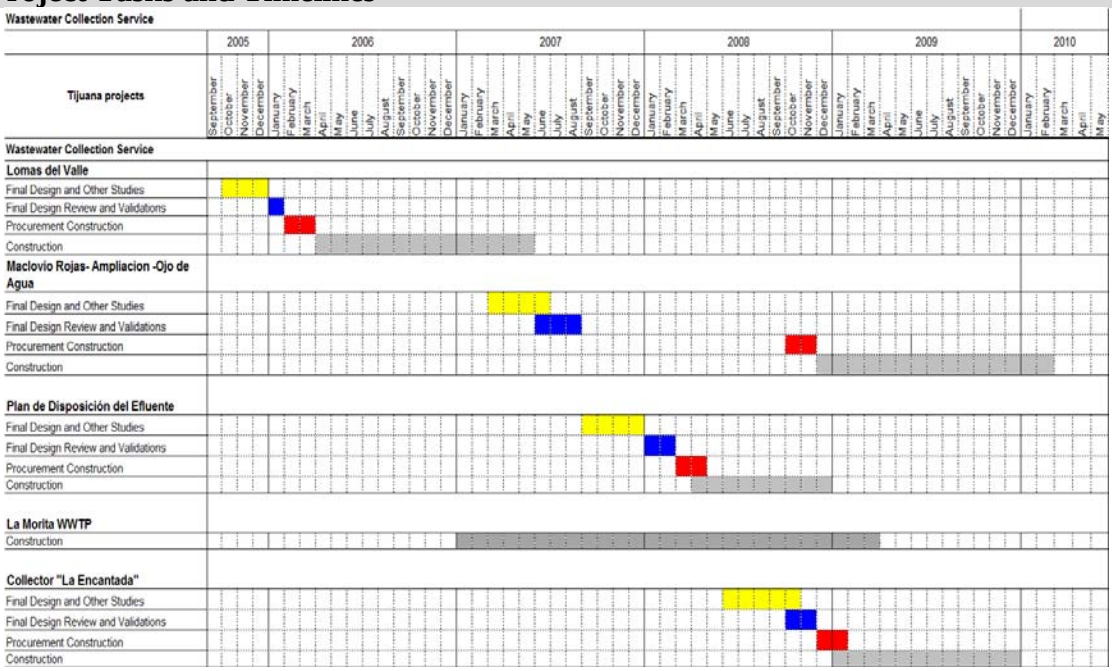
Based on the design criteria mentioned above, an alternative was chosen and final design was developed, considering also any direct environmental impact, according to the specifications of the MIA requested by the Baja California Environment Protection Secretariat.

Property and Right-of-Way Requirements

Requirements:

- Since wastewater pipelines will be laid on existing municipal right-of-way and easements, no additional land needs to be purchased for the project.
- The utility needs permits from the municipality to construct in the right of ways and street closures.

Project Tasks and Timelines



Some components of the project have been constructed and were accepted as a match funds by EPA.

3.b Management and Operations

Project Management

Resources:

The management, construction, and operation of the proposed project will be responsibilities of the project applicant, which has the necessary resources and staff available for these purposes.

Operation and Maintenance	
Organization:	CESPT provides wastewater service to approximately 414,000 connections in the Tijuana-Playas de Rosarito metropolitan area, and has an appropriate Operation and Maintenance plan. The utility is organized in various departments, including: Planning, Wastewater Treatment, Operation and Maintenance, Construction, and Administration.
Pretreatment:	The project applicant has a pretreatment program to control discharges from the industry and small businesses.
Operation plan:	The applicant has an Operation and Maintenance manual that includes the primary tasks needed to ensure a proper operation of the system and to prevent breakdowns in the proposed infrastructure.
Permits, licenses, and other regulatory requirements:	The project applicant has the following documentation available: - Water withdrawal permit (CONAGUA) - Wastewater discharge permit (CONAGUA) - Technical file validation issued by CONAGUA - Federal Environmental Clearance - State Environmental Clearance
Reviewing agencies:	- BECC, NADB, CONAGUA, EPA

Pending Issues:

None

Criterion Summary:

The project complies with BECC's Technical Feasibility criteria

4. Financial Feasibility

4. Financial Feasibility

Financial Conditions

Information submitted:

The financial structure for this project was analyzed together with the project "Expansion of the Wastewater Collection System for Coastal Areas in Tijuana", since both projects are going to be constructed in parallel and will be managed by the same sponsor. The North American Development Bank (NADB) has reviewed the financial information submitted by the Comisión Estatal de Servicios Públicos de Tijuana, Baja California (CESPT) and based on it, determined that the financial structure proposed for the Coastal and Tijuana River Wastewater Collection Projects is adequate. The information submitted and the financial analysis includes:

i) Historical financial statements;
ii) Credit ratings;
iii) Project's financial structure;
iv) Capital investment budget;
v) Historical and pro forma operation and maintenance budget; and
vi) Economic and demographic information about the project area

A detailed analysis of financial information for these two projects is included in the loan proposal that will be submitted to the NADB Board for authorization.

Results of the analysis:

Overall, CESPT presents essentially solid financial and commercial indicators. In addition, the utility has a high degree of institutional development and sufficient financial and administrative capacity to implement the infrastructure projects programmed in its capital investment plan. The historical financial analysis reveals that CESPT has been able to successfully carry out its operations and has met all its financial obligations in the past. Furthermore, its management has taken cost control measures that have impacted positively the organization's financial outcomes. In the future, cost increases associated to a growing demand for services are expected to be offset with gradual user fee increases.

The financial plan submitted by CESPT is expected to generate enough income to meet the utility's financial obligations with satisfactory cash flow levels. Financial projection results indicate that the projected income will be sufficient to achieve the proposed financial objective.

Overall, CESPT's plan reflects a stable revenue stream with a tendency towards continued growth.

Project Costs, Financial Structure, and Other Capital Funding Plans

Item:	Tijuana Projects (Coastal and Tijuana River)	Tijuana River Basin Project
Design cost:	MX$ N/A	MX$ N/A
Construction cost:	MX$ 109.46 million	MX$ 116,298,227.00
Construction management, oversight, tax, and contingency costs:	MX$ 24.98 million	

Final cost: ***MX$ 134.44 million***
(corresponding to the Coastal and Tijuana River Projects)

Funding structure: **Tijuana Projects:**

Source	Type	Amount MX$ Million	%
Mexico (CESPT-EDO-FED)	Internal Cash Flow Funds/Grants	67.57	50
NADB Loan	Loan	31.25	23
BEIF-NADB	Grant	35.62	27
Total:		**134.44**	**100.0**

Primary Source of Income

Source of income: User fees payable to CESPT for water services.

4.b Legal Considerations

Project management: The project will be managed by CESPT, a utility that has adequate staff to manage the contracting and construction of the proposed infrastructure, as well as the capacity to address any potential emergencies related to the project's operation and maintenance.

Status of Funding Agreements: The BEIF Grant Agreement will be signed once the projects obtain BECC certification.

The Loan Agreement will be signed once the projects are certified by the BECC and CESPT is issued authorization by the Baja California State Congress to execute the project's loan component.

Pending Issues:

None

Criterion Summary:

The project complies with BECC's Financial Feasibility criteria

5. Public Participation

5.a Community Environmental Infrastructure Projects – Community-wide impact

Local Steering Committee

Date of Establishment: The Local Steering Committee was formally installed on January 28, 2008 at a meeting held in CESPT facilities.

Local Steering Committee Members: The Local Steering Committee is comprised of the following individuals:

Chairperson:	Ofelia Montoya Arias,
Vice-Chair:	Rosa Emilia Rivera Cruz
Treasurer:	José Luis Saldaña Sánchez
Secretary:	Maria de Jesús Aragón Reyes
Alternates:	Juan Manuel Alvarez
	Ana Teresa Ruiz Zapata
Other members:	Agustín Rojas Arieta, Technical Secretary

Date of approval of Public Participation Plan: The Comprehensive Community Participation Plan developed by the Local Steering Committee was approved by the BECC on March 11, 2008.

Public Access to Project Information

Public access to project information: The project's technical and financial information was made available to the public for review. The Local Steering Committee, with assistance from the project applicant, prepared the following:

- Flyers
- Power Point Presentation

The above was used to inform the community about the project.

Additional outreach activities:

- Development and dissemination of a project fact sheet
- Project surveys to document the community's concerns or support for the project

First Public Meeting: Advance notice to announce the First Public Meeting was published in "El Mexicano," a local newspaper, on 03/11/08. The first meeting was used to inform the public about the technical aspects of the project. The meeting was held at 10:00 am on April 11, 2008 at the CESPT parking lot. Attendees included the Local Steering Committee, as well as CESPT

	representatives. The meeting was attended by 89 residents who answered project surveys. 100 % of those surveyed (73 people) said they were able to fully understand the project and explicitly expressed their support.
Second Public Meeting:	A Second Public Meeting was held on September 18, 2008. The second public meeting was used to inform the community of the project's financial components. To the event assisted 121 people and 100% people surveyed expressed that understood the project and supported it.
Final Public Participation Report	
Final report:	The Local Steering Committee and the applicant prepared the Final Public Participation Report to demonstrate that the proposed objectives were fully met to BECC's satisfaction.
Post-Certification Public Participation Activities	
Post-Certification Activities:	The project applicant, in coordination with the Local Steering Committee, will provide a general description of public participation activities that may be carried out after the project's certification to support its implementation and long-term feasibility.

Pending Issues:

None

Criterion Summary:

The project complies with BECC's Public Participation Criteria

6. Sustainable Development

6.a Human and Institutional Capacity Building

Project operation and maintenance:

The project sponsor will be the agency responsible for operating and maintaining the system as it relates to:

- Wastewater treatment
- Water distribution
- Wastewater collection

The sponsor has the basic institutional and human capacity to operate and maintain the following:

- Proposed wastewater treatment system
- Proposed wastewater collection system
- Proposed water treatment system
- Proposed water distribution system
- The sponsor has as pretreatment program

Human and institutional capacity building:

Actions within the scope of the project that contribute to institutional and human capacity building for the Comisión Estatal de Servicios Públicos de Tijuana (CESPT) include:

- Provide and improve water, wastewater collection, and treatment services in a continuous, efficient, and cost-effective manner.

  Operate a water, wastewater collection and treatment system that meet applicable local, state, and federal regulations.

- Operate a wastewater collection and treatment system that meets regulations applicable to the utility's operating staff throughout its different areas, to provide essential services that meet the needs of the community.

- Provide training and education for the utility's operating staff throughout its different areas, to provide essential services that meet the needs of the community.

- Optimize the use of scare water resources, and raise public awareness about the importance of water for the development of the community.

- Basic technical training to the operations and maintenance staff responsible for the new infrastructure that will be built as a result of the project's implementation.

Additional plans or programs:

The sponsor currently manages an educational program called “Cultura del Agua”, which aims to promote water conservation and the efficient use of natural resources among the community.
There is also a water reclamation program call “Proyecto Morado” which includes the development of studies to find reuse alternatives and its implementation. Currently the sponsor uses

the effluent from the Rosarito Norte WWTP for irrigation and landscaping purposes.

6.b Conformance to applicable Local, State, and Regional Regulations and Conservation and Development Plans

Local and Regional Plans addressed by the project:

The proposed project conforms to applicable plans and actions described in the following documents:

- Master Plan for Improvements to Water, Wastewater and Collection Services
- State Development Plan
- Municipal Development Plan

The Municipal Development Plan sets forth the need to develop basic sanitary infrastructure in Tijuana, such as wastewater collection and treatment services.

The implementation of the project will eliminate risks inherent to inappropriate wastewater management, and treated water will be available for other uses. That will reduce drinking water use for this purpose.

From a regional planning standpoint, the project incorporates actions and tasks included in the National Hydraulic Program (*Programa Nacional Hidráulico*, PNH), such as the reduction of water contamination in a watershed deemed to be a priority area by the PNH due to its bi-national condition due to shared water body in the Pacific Ocean.

The project adheres to the U.S.-Mexico Border 2012 Environmental Program by meeting Goal 1 (Reducing water contamination) and Objectives 1 (promoting an increase in the number of household connections to wastewater collection and treatment services) and 4 (promoting improve water utility efficiency). One of the program's guiding principles is to reduce major risks to public health, conserving and restoring the natural environment.

Laws and regulations met by the project:

The project meets applicable federal regulations pursuant to wastewater collection, treatment, and final disposal.

Impacts to neighboring communities in the U.S.:

The development of this project will prevent untreated wastewater from being discharged into the Pacific Ocean.

6.c Natural Resource Conservation

- The project contributes to reduce environmental deterioration by installing pipelines that will collect and convey wastewater to treatment facilities, so as to reduce contamination to water bodies and human health hazards resulting from the discharge of raw wastewater.

- The final design includes the implementation of green building practices as part of the technical construction specifications.

- The project contributes to reduce environmental deterioration by expanding existing wastewater collection pipelines and providing the necessary means to connect 100% of the project area to this service. Wastewater will be collected and conveyed to the new WWTP to improve its quality, so as to reduce aquifer contamination and human health hazards resulting from the discharge of raw wastewater to streams or agricultural drains.

6.d Community Development

- The completion of this project is crucial to the development of the community. The tasks proposed by the project will contribute to the appropriate disposal of wastewater, which in turn will reduce the conditions that favor the proliferation of water-borne and arboviral diseases.

- The implementation of sanitary wastewater collection systems will promote community development, as it will reduce contamination in the city and improve the quality of life for local residents.

- Treated water will be available for other uses, including agricultural and urban public purposes.

- The project will help the city achieve greater wastewater collection coverage, which in turn will enhance the development of the community, since it will reduce contamination on the streets caused by wastewater runoff. In addition, it supports the harmonious growth of areas that currently lack this service by promoting the development of other infrastructure such as street paving.

Pending Issues:

None

Criterion Summary:

The project complies with the Sustainable Development Criteria

Available Documents

- Final Design, Wastewater Collection system for Lomas del Valle, Maclovio Rojas and Ojo de Agua developed by the CESPT, 2006, 2007.

- "Transboundary Environmental Assessment (EA) for Expansion of Wastewater Collection System for Tijuana River Basin", October 2008.

- Manifestación de Impacto Ambiental, Oficio SPA-TIJ-3267/06, Octubre 2006.

- Master Plan for Water and Wastewater management, CDM 2003

- Environmental Assessment Tijuana and Playas de Rosarito Potable Water and Wastewater Master Plan, CDM 2003

- Validation Documents from CONAGUA

- Final Public Participation Report