Border Environment Cooperation Commission

Water and Wastewater Collection Project in San Isidro, Chihuahua.

1. General Criteria

1.a Project Type

The project consists of the expansion and rehabilitation of the water and wastewater collection systems for the community of San Isidro, Municipality of Juarez, Chihuahua.

This project belongs to the Domestic Water and Wastewater Collection Hookups Sector.

1.b Project Categories

The project belongs to the *Community Environmental Infrastructure Projects – Community-wide Impact*. The project will improve the quality of water and wastewater collection services for San Isidro resulting in a positive impact for this community.

1.c Project Location and Community Profile

The State of Chihuahua is located in the northern part of the Republic of Mexico. It neighbors the United States of America to the north. San Isidro is located at the southeast area of the Municipality of Juarez, which is located in the northeastern end of the State of Chihuahua San Isidro is one of the 23 communities found in the area known as the Juarez Valley. It is a traditionally agricultural community, although, due to its proximity with Ciudad Juarez, a significant portion of its residents are currently employed at *maquiladoras* established in the city.

Figure 1 shows the location of San Isidro, Municipality of Juarez, in the northeastern end of the State of Chihuahua.

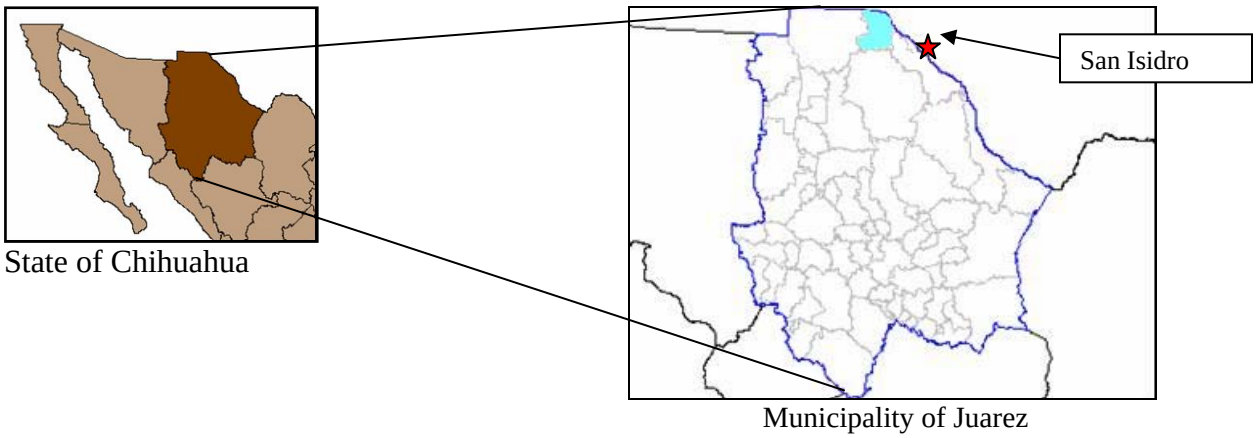

Figure 1. Location of San Isidro, within the Municipality of Juarez

Demographics
Population projections prepared for the development of the Preliminary Design for Improvements to the Water and Wastewater Collection Systems in San Isidro, Municipality of Juarez, Chihuahua (BECC, 2005) were based on census data obtained by the *National Institute of Statistics, Geography and Informatics* (INEGI, for its initials in Spanish, 2000), and *National Population Council* (CONAPO, for its initials in Spanish). By 2005, the population was estimated to be 3,250 inhabitants, and estimations for the year 2010 are 3,664 inhabitants. The median per-capita household income is $ 3,517.00[1] Mexican Pesos per month.

Environmental Services

Water System
The potable water system obtains its supply from a deep well located in San Isidro, (24 lps) and another well in the adjacent Loma Blanca (43 lps). Both water wells have a chlorination system, but it is not operational at this time. The distribution network is irregular and uses asbestos-concrete piping, as well as PVC lines than range in size between 2 and 8 in. Most household connections have pipes and/or hoses that are too long and vary in quality; many of them were purchased and installed by the users themselves. There are very few isolating valves, and some of them are out of service.

The water distribution system works by pumping water to the network, but due to its inefficiency, the water does not reach the town's higher areas, even though the pumping system operates 16 hours a day. San Isidro has a 200 m^3 water storage tank that is also out of operation.

Service coverage is approximately 70%, but a significant percentage of the population does not receive enough water, particularly during the summer season. There is no macro or micro-metering.

Wastewater Collection System
San Isidro has 32% wastewater collection coverage. The system consists of 8 in. and 12 in. piping diameter, manholes, and a main; the system is in fair condition. In addition, most of the streets are unpaved, and a large amount of dirt and debris get into the system and clog up the lines.

The utility does not have sufficient equipment or personnel to provide appropriate maintenance to the system. Wastewater collected by the system is sent to an agricultural canal. In the past, the wastewater was conveyed to a treatment plant that is currently out of service. Residents who are not connected to the wastewater collection system dispose of their wastewater in latrines and cesspools.

Wastewater Treatment
Wastewater treatment is non existent, as the wastewater treatment plant is out of service.

1.d Legal Authority

The project sponsor is the state utility, Junta *Central de Agua y Saneamiento de Chihuahua* (JCAS) in coordination with the local utility, the *Junta Rural de Agua y Saneamiento de San Isidro* (JRAS), Municipality of Juarez. JRAS's legal authority is established in Article 1564 of the

[1] Source: NADB estimation based on statistics by INEGI and the National Commission of Minimum Wages.

Administrative Code for the State of Chihuahua.[2] JRAS has the jurisdiction to provide water and wastewater collection services to the locality, while JCAS is the regulatory agency responsible for developing infrastructure improvement projects for San Isidro.

The project falls within the scope of agreements targeted at improving the environment and the quality of life of border residents, which have been signed by Mexico and the United States. The United States and Mexico have signed six major bilateral agreements related to air, water, land protection, and pollution control issues. These include:

- 1889 International Boundary Convention
- 1944 Water Treaty
- 1983 La Paz Agreement, or Border Environment Agreement
- 1990 Integrated Border Environmental Plan (IBEP)
- 1994 North American Free Trade Agreement (NAFTA)
- Border 2012 Program

The project complies with the spirit of all these agreements, and all of them have been considered since the project was originally conceived.

1.e Project Summary

Project Description

The project consists of the expansion and rehabilitation of water and wastewater collection systems.

For the water system, the project consists of the expansion of water service to areas that are currently unserved, increasing coverage from 71% to 100%; which include improvements to the pumping system; construction of a 200 m^3 distribution tank; construction of a 10 m^3 elevated tank, and installation of a chlorination system. Improvements to the distribution system include:

- 40,748 ft of 3 in PVC piping
- 28,274 ft of 4 in PVC piping
- 1,299 ft of 6 in PVC piping
- 877 metered household connections
- Lift Station

Figure 2 shows a schematic of the water system improvements project.

[2] http://info4.juridicas.unam.mx/adprojus/leg/9/174/default.htm?s=

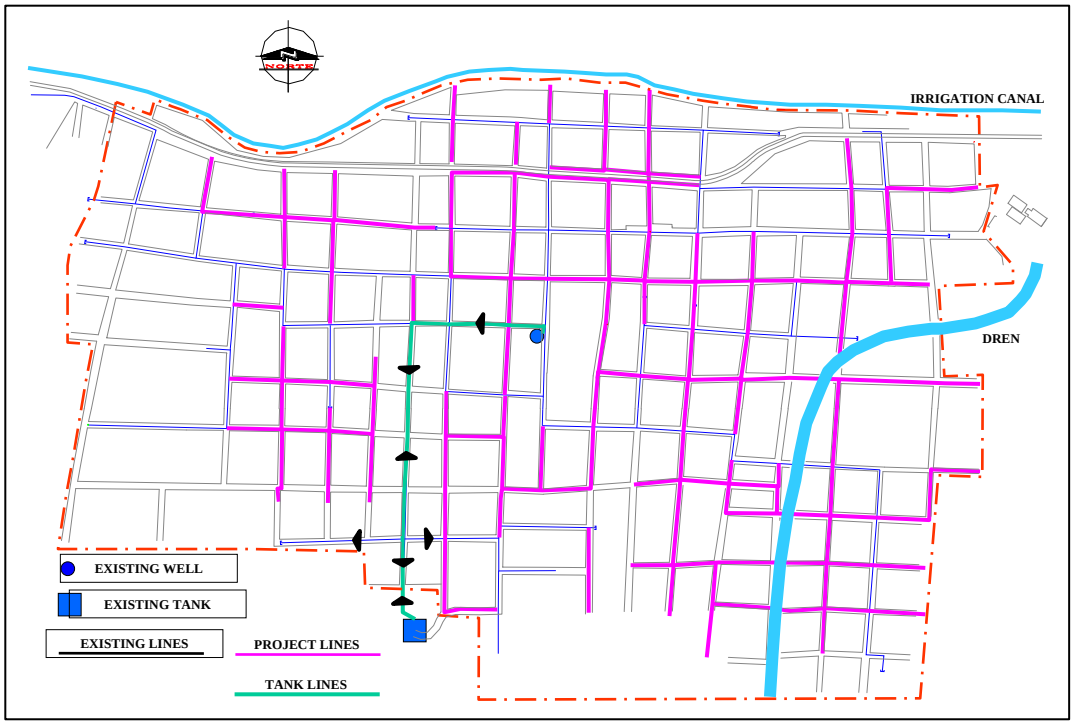

Figure 2. Improvements to the Water System.

For the wastewater collection system, the project includes the expansion of the wastewater collection system from 32% to 100% of the community, and consists of the following:

- 88,162.7 ft. of 8in PVC piping
- 3,848.4 ft. of 12 in PVC piping
- 312 ft. of 15 in PVC piping
- 304 manholes
- 1,020 household connections

The wastewater collection system will discharge into an outfall that is part of the future Juarez South-South wastewater treatment plant, which will be situated in the community of Jesus Carranza, southeast of San Isidro. The JCAS has committed to ensuring that the South-South plant will be constructed and operational by the time the proposed project for San Isidro is completed.

The cost of the water distribution and the wastewater collection project is US $2.2 million.

Figure 3 shows a schematic of the wastewater collection system improvements project.

Wastewater will be sent to the "South-South" wastewater treatment facility that is projected to be built during the 2008-2009 period to meet Ciudad Juarez's wastewater treatment needs. Treated wastewater will be discharged to agricultural drains and eventually to the Rio Grande, creating an environmental and human health benefit for residents of the Juarez Valley and adjacent areas in the United States.

Project has been evaluated as category one during the U.S. Environmental Protection Agency (EPA) prioritization process for funding 2005/06 due to the lack of potable water services for 30% of the population and the lack of wastewater collection and treatment infrastructure.

Important issues for Certification:

The Project falls within the BECC's priority sectors and complies with General Criteria.

Pendent issues:

None.

2. Human Health and Environment

2.a Compliance with Applicable Environmental Laws and Regulations

The development of the proposed project will follow the guidelines established by CONAGUA for the construction of this type of infrastructures. Additionally, the project to be developed is not expected to impact protected areas or ecological reserves. During the implementation of the projects, the JCAS will oversee the tasks for conformance with the aforesaid guidelines.

The National Institute of Anthropology and History (INAH, for its initials in Spanish), through Official Communication No. E/007-D/2006 established no objection to the development of this project in the San Isidro area, inasmuch as there is no evidence of archeological or historical settlements in the area. Based on the above, no impacts to cultural resources are anticipated as a result of the project's implementation.

2.b Human Health and Environmental Impacts

Human Health Impacts

The community of San Isidro is within the area known as the Juarez Valley, southeast of Ciudad Juarez, and adjacent to the Rio Grande. Approximately 30% of the population lack water distribution service, 68% of the population lack wastewater collection service, and wastewater treatment is nonexistent, a condition that represents a human health and environmental issue.

The lack of an adequate water distribution system represents a major water contamination risk. Low water pressure creates a potential for cross-connections that allow for contaminated water to enter the system; this water may potentially be distributed to end users. The lack of chlorination allows for bacterial growth in the lines, with the associated health risk. Finally, the local practice of transporting water from the water well source to their houses involves water contamination.

The public health impact resulting from an improved water service will be positive, as there will be available water with the necessary quality to prevent health risks, water disinfection will be appropriate, and the community will have water in sufficient quantity and quality to ensure their wellbeing.

The lack of wastewater collection for 68% of the population, in addition to the existence of clay soil and shallow water tables, has resulted in wastewater overflows and runoffs, creating a risk for the transmission of diseases due to the residents' contact with these unhealthy wastewaters. The purpose of this project is to address the existing public health and groundwater contamination risks and to prevent these threats.

The development of this project will help address the aforementioned issues, and will improve public health conditions for local residents as follows:

(1) Improvements to the water system will reduce the risk for the transmission of infectious diseases associated to inadequate water management.
(2) Human health conditions will be improved by reducing or eliminating wastewater leaks and overflows as a result of an improved wastewater collection system; the risk of the residents' contact with wastewater will also be reduced.

(3) Reduced potential for soil and aquifer contamination that may result from the inadequate use of latrines and septic tanks in areas that lack wastewater collection service, as well as from the use of poorly maintained lines and the discharge of raw wastewater to agricultural canals.

(4) The construction and operation of the proposed Juarez South-South WWTP, the construction of new lines, and the improvements to existing wastewater collection lines, will reduce groundwater, surface water, and soil contamination.

Human health statistics for the San Isidro area are limited, but there is information regarding a high incidence of diseases that include hepatitis A, measles, shigellosis, and tuberculosis. Table 1 shows the most recent public health studies conducted in communities adjacent to the United States-Mexico border. The conditions in the Juarez Valley are very similar to those of communities in the State of Texas. As shown in Table 1, occurrence rates for diseases such as hepatitis or shigellosis are significantly higher in the Texas border than in the rest of the United States.

Hepatitis A is a liver disease associated to unhealthy wastewater disposal and the use of an inadequate or contaminated water supply. Shigellosis is often the result of poor sanitation, lack of water or wastewater infrastructure, the use of contaminated water and food, and is a condition common to underprivileged areas.

Table 1

Diseases and Occurrence Rates in United States-Mexico Border Communities

AREA	Disease				
	Hepatitis A	Measles	Shigellosis	Tuberculosis	AIDS
Overall U.S. population	12.64	11.2	10.9	10.3	16.7
Arizona Border	39.4	9.8	38.3	6.9	15.1
California Border	30.7	61.9	22.1	12.7	22.0
New Mexico Border	46.9	14.6	21.2	7.3	3.9
Texas Border	40.4	38.9	49.1	26.5	7.9

Source: National Center for Health Statistics. Centers for Disease Control and Prevention, Vital Statistics Database. HRSA, n.d. http://bphc.hrsa.gov/bphc/borderhealth/table1.htm

The most common organisms or parasites found in untreated wastewater include: E. coli (*Escherichia coli*), cholera (*Vibrio cholerae*), hepatitis A (*Enterovirus ssp*), Giardia (*Giardia lamblia*), Cryptosporidium (*Cryptosporidium parvum*), and helminth eggs. 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 having bad hygiene habits that contribute to the dissemination of diseases by direct or indirect human contact.

Table 2 shows the high incidence of gastrointestinal diseases in the project area. The sum of infections and gastrointestinal problems represents 47% of the most frequent cases of disease in the area.

Table 2
Most frequent diseases in the Juarez area

Diseases	% of Total
Gastrointestinal infections	28%
Respiratory Infections	27%
Diabetes	24%
Gastrointestinal conditions	19%
Fractures and accidents	19%
Gynecological conditions	16%
Hypertension	16%
Psychiatric conditions	12%
Orthopedic conditions	9%
Neurological conditions	7%

Note: N = 348 interviews. Source: Suárez, *et al*, 1998[3].

Environmental Impacts

The environmental impact resulting from the project will be positive overall, as water service conditions will improve and wastewater collection service will be made available to 100% of the residents, reducing thus the risk for wastewater seepage caused by the use of latrines and cesspools. In addition, all the project tasks will be carried out in areas of the city that have been previously disturbed.

During the construction phases, minor environmental impacts will result from the excavation needed to install the wastewater collection and water pipes; said impacts include fugitive particulate matter emissions, gas emissions by construction machinery, temporary street blockage, presence of workers in the area, and risk conditions for people.

A number of mitigation actions will be implemented to reduce environmental impacts during the construction phase, including the application of treated water to reduce fugitive dust emissions, vehicle tune ups to reduce emissions, placement of warning signage to prevent hazardous situations, placement of portable toilets, etc.

No negative impacts are expected during the project's operational phase, provided that the project tasks are carried out according to specifications, pursuant to timing and development conditions in the final design.

Transboundary Impacts

No negative transboundary impacts are anticipated as a result of the development of water and wastewater collection project. On the contrary, the wastewater treatment provided by the Ciudad Juarez South-South facility, where the San Isidro wastewater will be conveyed, is anticipated to

[3] Suárez, José Enrique, G. de la Vega, and M. López, 1998. *"Health Profile of Ciudad Juárez, Chihuahua, México."*

create a beneficial effect to the United States, as the water that flows into the Rio Grande through the *"Interceptor Drain"* will have improved quality.

Formal Environmental Authorization

Pursuant to the provisions of Chihuahua State Law on Ecological Balance and Environmental Protection, the Chihuahua State Directorate of Ecology determined through official communication DOEIA.IA 2038/2007 that there is no objection to the development of this project, inasmuch as it will improve local conditions by ensuring better wastewater discharge control.

As for the U.S. environmental assessment process (NEPA), a transboundary impact study was developed and submitted for consideration to the U.S. Environmental Protection Agency (EPA). Based on this assessment, the EPA issued a Draft Finding of No Significant Impact (FONSI) on December 7, 2006, which established that the project will not result in significant environmental impacts that may affect the U.S. border area. After a 30-day public review period in which no comments were issued, the FONSI was officially approved on January 6, 2007.

As part of the environmental assessment process, the final design was submitted to the International Boundary and Water Commission (IBWC) in the United States and its corresponding commission in Mexico (CILA, for its initials in Spanish). No negative comments were received from neither of the regulatory entities.

Important issues for Certification:

The project resolves a significant human health and environmental problem.

Pendent issues:

None.

3. Technical Feasibility

3. a Technical Issues

Project Development Requirements

The final designs of the water distribution and wastewater collection systems were developed pursuant to technical specifications contained in the Wastewater Collection and Treatment Manual prepared by CONAGUA's Technical Directorate and the Official Mexican Standard NOM-001-CNA-1995 "Sanitary Sewerage System – Specifications for Hermeticity".

The water system design includes the expansion of water service to areas that are currently unserved, improvements to the pumping system; construction of a 7063 ft^3 distribution tank; construction of a 353 ft^3 elevated tank, and installation of a chlorination system.

Improvements to the water distribution system include:

- 40,748 ft. of 3" PVC piping
- 28,274 ft. of 4" PVC piping
- 1,299 ft. of 6" PVC piping
- 877 metered household connections

The development of the Final Design for the wastewater collection project was based on the review of alternatives and the preferred option; i.e., it included the design of a gravity collection system with conveyance to a single lift station and discharge point, and subsequent pumping to the Juarez South-South treatment facility.

Table 3 shows the lengths and sizes of proposed wastewater collection lines.

Table 3
Sizes of PVC wastewater collection pipes.

PVC Wastewater Collection Lines	
Diameter (cm.)	Linear Feet
8	88,162.7
12	3,848.4
15	312

Additionally, the system includes 304 manholes and 1,020 household connections.

The wastewater collection project's final design was developed in strict adherence to National Water Commission standards, and has been validated by said agency, as well as by the BECC and the NADB.

Appropriate Technology

Water Distribution System

In order to count with an appropriate an efficient water system, a preliminary engineering project was developed considering various technical alternatives. The project alternatives reviewed consisted basically of the following scenarios:

a) **No-action alternative**. Under this alternative, approximately 30% of the San Isidro community would not have water service and would have to continue hauling water from the well's discharge point to their households; the available water service would continue being by rotation, from 6 a.m. to 5 p.m.; there would not be an adequate chlorination system, so the risk for bacteriological contamination would be high; there would not be household water meters, so there would be no control over water usage. In view of all these issues, the alternative was determined to be unacceptable.

b) **Expanding the water system to 100% of the community, pumping water into a storage tank and from the tank to the distribution system.** This alternative was reviewed and considered to be the preferred alternative, as it includes the rehabilitation of the water well, expansion of the service to 100% of the community, construction of two new storage tanks, and regulation and installation of macro and micro metering at the lowest annual cost, considering the initial capital investment and operation and maintenance costs.

c) **Expanding the water system to 100% of the population, pumping water directly to the distribution system and excess water to a storage tank.** This alternative was reviewed because it presents the same benefits as alternative b), but it was considered to be unviable due to a higher initial cost and higher operation and maintenance costs.

Wastewater Collection and Treatment System

The project alternatives reviewed consisted basically of the following scenarios:

d) **No-action alternative**. Under this scenario, the community of San Isidro would not be able to merge its wastewaters into a single location and send it off to the wastewater treatment facility. Residents who lack wastewater collection service would continue to discharge their wastewater into latrines and septic tanks, with the resulting risks for aquifer contamination and transmission of water borne diseases. In sum, this alternative presents environmental, human health, social, and political implications that render it unviable.

e) **Expand the wastewater collection system to 100% of the community and make in converge into a single location for it to be pumped to the Ciudad Juarez South-South wastewater treatment plant located in Jesus Carranza.** This alternative was reviewed and considered to be the preferred alternative, inasmuch as it allows for the entire population of San Isidro to have wastewater collection service at a reasonable initial cost, with adequate subsequent operation and maintenance costs.

f) **Expand the wastewater collection system to 100% of the population of San Isidro and make it converge into a single site for it to be pumped to a wastewater treatment plant located in San Isidro.** This alternative was reviewed considering different treatment systems, including facultative ponds, aerated ponds, and activated sludge with extended aeration systems. Issues were identified in all proposed systems, such as the unavailability and high cost of land in the area, the need to have specialized personnel for the operation and treatment of mechanical systems, and high power costs. These factors rendered this option as unviable for San Isidro.

Land Acquisition and Right-of-Way Requirements

Since the water and wastewater lines will be installed on municipal rights of way and thoroughfares, no additional land needs to be purchased for the project.

Water storage tanks will be installed in *ejido* (community-owned) properties. BECC has received copies of the corresponding approval documentation.

Work Tasks and Schedule

The project has been scheduled to be developed concurrently with the Juarez "South-South" wastewater treatment plant. Figure 4 shows actions required for project completion.

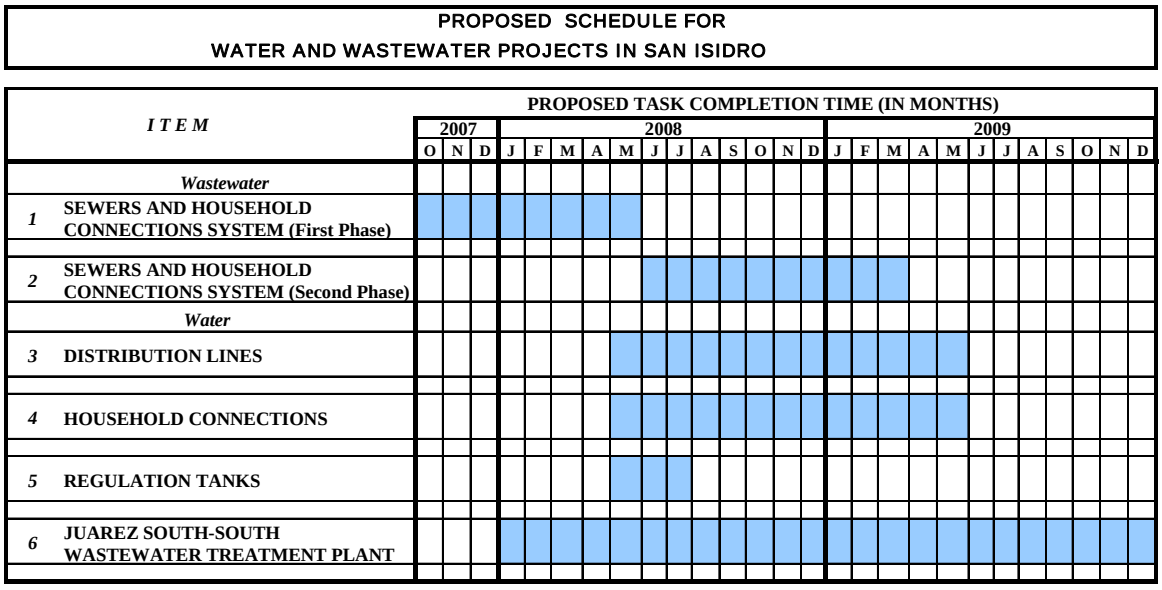

Figure 4. Project Construction Schedule.

Technical Process

The treatment process is sufficient to generate treated wastewater that provides adequate quality for wastewater reuse and eliminates health risks for residents who may have contact with treated water, pursuant to the applicable environmental regulations contained in Official Mexican Standard NOM-001-SEMARNAT-1996, which establishes the maximum permissible levels of contaminants for wastewater discharges to national waters and properties.

The technology to be used for the wastewater treatment process is a technology that has been widely employed as a solution for wastewater sanitation in small and medium-size communities. The treatment system will generate treated wastewater with sufficient quality to be used for urban public uses. (BOD of 75 mg/l, TSS of 75 mg/l).

The results acquired from the mathematical model indicated that biochemical oxygen demand (BOD) values from the convergence of the Rio Grande and the "*Interception Drain*" range from 20 to 30 mg/l, with dissolved oxygen concentrations (DOC) from 5.6 to 6.4 mg/l. These values comply with quality standards required by the Texas Commission on Environmental Quality (TCEQ).

In order to evaluate the potential impacts on water quality at the discharge point between the *"Interception Drain"* and the Rio Grande, the BECC developed a study named "Preliminary Study on Self-Depuration of WWTPs' Effluent from Ciudad Juarez, Chihuahua and the Merging Flows from Communities at Guadalupe and Praxedis G. Guerrero, Chihuahua.

3. b Management and Operations

Project Management

The project's management will be the responsibility of the *Junta Rural de Agua y Saneamiento* de San Isidro, with the assistance and supervision of JCAS.

Operation and Maintenance.

Organization

The *Junta Rural de Agua y Saneamiento* de San Isidro has a president, secretary, treasurer, three alternates, and an assistant for the system's operation and maintenance. In addition, it has support from JCAS, a utility that has staff specialized in operation and maintenance of water and wastewater system. Additionally, the Juarez JMAS provides JRAS assistance in wastewater collection system housekeeping and maintenance activities.

JCAS is preparing an institutional development program so that, once household meters are installed, a computer billing system is implemented to improve collection rates and generate enough revenues to adequately operate and maintain the water and wastewater collection infrastructure.

Operation and Maintenance

With assistance from JCAS, the project sponsor will develop a preventive maintenance plan for the water distribution system that will include pumps, valves, chlorination systems, and storage tanks. This plan must be finalized before constructions tasks are completed.

As with the water distribution system, the project sponsor must develop a preventive maintenance plan for the wastewater collection system to ensure that the system will operate appropriately throughout the year.

JCAS provides training to JRAS members for a better system management and operation.

Pretreatments Program

By virtue of the project area only comprises domestic users; the JCAS has dictated that Official Mexican Norm NOM-002-ECOL-1996 needs to be complied as part of the treatment process. The norm establishes the permissible maximum contaminant levels of wastewater discharge to the urban or local wastewater collection systems. The JRAS will ensure that norm is being followed with the support of the JCAS.

Permits, Licenses, and Other Regulatory Requirements

San Isidro has CONAGUA-issued permits to make water extraction and wastewater discharges. It also has the applicable environmental authorizations for the development of the proposed project. The water distribution and wastewater collection project has been reviewed by EPA and validated by CONAGUA, BECC, and North American Development Bank (NADB).

Important issues for Certification:

Final Design was reviewed by the EPA, JRAS, BECC and NADB and was validated by the CONAGUA.

Pendent issues:

None.

4. Financial Feasibility and Project Management

4.a Financial Feasibility

The North American Development Bank (NADB), after reviewing the financial information submitted by the Project Sponsor ("JRA-San Isidro"), determined that the financial capacity and structure proposed by the JCAS are adequate. The information submitted and the financial analysis includes but is not limited to:

i) Historical information;
ii) Project's financial structure;
iii) Investment budget and;
iv) Economic and demographic information on the project area

A detailed analysis of the project's financial information is contained in the loan proposal that will be submitted to the NADB Financial Committee for authorization. Following is a summary of the financial analysis.

The total cost of the project is estimated at US$2.22 million, including loan closing costs, design, supervision, construction, value-added- tax, and contingencies.

Item	Amount (Dollars)
Wastewater Collection and Treatment System	2,218,203
TOTAL	$2,218,203

JRA, JCAS, CONAGUA, EPA, and NADB have proposed a financial structure that will allow for the implementation of the project. The table below summarizes the proposed structure:

Funding Source	Type	Amount (Dollars)	%
NADB-BEIF	Grant	800,000	36.07%
Local/State/Federal	Grant	1,418,203	63.93%
NADB	Loan	0	0.00%
TOTAL		$2,218,203	100.00%

JRA exhibits a solid financial situation as reflected by their level of revenue and expenditure control. JCAS will earmark part of their revenues to service the debt.

JCAS has efficient finance management practices. Their sensible use of resources and financial discipline has translated into an operational surplus. The NADB loan will not affect the utility's financial situation, so JMAS will be able to continue addressing future infrastructure needs.

4.b Rate/Fee Model

Due to the Project's characteristics, JRA will not require the implementation of a rate scheme. Currently, JRA has an adequate rate scheme which allows the support of operation and maintenance, as well as a service debt.

4.c Project Management

The project will be managed by JRA with the support of JCAS. The utility has adequate personnel to manage the proposed infrastructure and address any potential emergency related to the project's operation and maintenance.

Important issues for Certification:

The project was analyzed and determined to be viable.

Pendent issues:

None.

5. Public Participation

Comprehensive Public Participation Plan

The Comprehensive Public Participation Plan developed by the Steering Committee was approved by the BECC on March 24, 2007. The Steering Committee set to the task of preparing an outreach program, including the benefits resulting from the project, as well as the associated costs and economic impacts for the community. Following is a summary of the activities carried out in each of the categories:

Local Steering Committee

The Steering Committee was formally installed on May 18, 2007, at a meeting held at the Salon *Ejidal* in San Isidro, Municipality of Juarez. A Board of Directors was elected, comprised of the following individuals:

Steering Committee Chairman: Mr. Juan Silva Tellez, local resident.

Steering Committee Vice-Chairman: Mrs. Eustolia Velazquez Buendia, local resident

Alternates:

- Lorena Gonzalez Palomares
- Priest Jose Hernandez
- Mrs. Francisca Rivera Cedillo

Public Access to Project Information

The Steering Committee, with assistance from JCAS, prepared written information about the project and designed flyers and brochures that were distributed at public meetings. Project information was available with the steering committee in order to be consulted by the general public at any time.

Additional Outreach Activities

Information meetings were held with local residents in anticipation of BECC public meetings.

Public Meetings

First Public Meeting

An invitation to the First Public Meeting, scheduled to be held on Friday, May 25, 2007, was published on May 23rd in the "Diario de Juarez." The meeting started at 8:00 P.M. at the local Salon *Ejidal* in San Isidro. The meeting was attended by members of the Steering Committee and the President of the JRAS de San Isidro, Mr. Lorenzo Herrera. There were approximately a total of 200 attendees to the meeting. Additionally, 100 surveys were administered during the meeting, and 98% of those surveyed expressed their agreement with the project.

Second Public Meeting
Second public meeting has been scheduled to be held by July 13.

Final Public Participation Report

The Steering Committee and the applicant will prepare the "Final Public Participation Report" to demonstrate that the proposed objectives were fully met to BECC's satisfaction. This document will be submitted after the completion of the second public meeting.

Important issues for Certification:

The project is strongly supported by the community.
Corresponding approval documentation has been received.

Pendent issues:

Hold 2nd public meeting and complete final public participation report.

6. Sustainable Development

6.a Institutional and Human Capacity Building

Actions within the scope of the project that contribute to institutional and human capacity building at the *Junta Rural de Agua y Saneamiento* in San Isidro include the following:

- Improve the utility's infrastructure needed such as water, wastewater collection, and treatment
- Operating a wastewater collection system that meets applicable state and federal regulations.
- Training operating staff

The JCAS will provide basic technical training to JRAS staff for the operation and maintenance of the new infrastructure that will be built as a result of the project's implementation. The staff will be provided operation and maintenance training prior to the commencement of the new water distribution and wastewater collection operations. JCAS technical staff will provide guidance to (s)2(e 1 Tf-0.00to the c(nd kq8 Tw 2.459 0 Td3BDC /T9142Tf-0.0002 Tc 0.0055 Tw .b C th361 nfaffor)5(al 1 n 1 (m

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 reduce the conditions that favor the proliferation of water borne and arboviral diseases related to inadequate wastewater disposal.

The implementation of an appropriate water distribution and wastewater collection system promotes the development of the community, as it will help reduce contamination in local areas and to improve the quality of life of San Isidro residents.

Important issues for Certification:

The project complies with all sustainable development principles.

Pendent issues:

None.

Available Project Documentation.

- *"Estrategia de Gran Visión para el Abastecimiento y Manejo del Agua en las ciudades y Cuencas de la Frontera Norte en el Período 1999-2025"* [Global Vision Strategy for Water Supply and Management in Northern Border Cities and Basins during the 1999-2025 Period], CONAGUA, December 1999.
- Official Communication DT-010/2006 requesting a finding by INAH regarding the existence of archeological sites in the San Isidro area.
- Official Communication No. E/007-D/2006, in which INAH finds no objection for the development of this project in the San Isidro area, inasmuch as no archeological settlements exist in the area.
- EPA's "Finding of no significant impact" (FONSI) dated December 7, 2006.
- Response from the State of Chihuahua Directorate of Ecology. Official Communication DOEIA.IA. 2083/2007 stating no objection from this agency for the development of the project.
- Preliminary Water, Wastewater Collection and Treatment project for San Isidro, Municipality of Juarez, Chihuahua, Juarez Valley I. Developed by Sistemas de Ingeniería e Informática, S. C. (BECC, May 2005).
- Final Design for a Water Project for San Isidro and Loma Blanca (JCAS, February 2007).
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- Master Plan for Improvements to Water, Wastewater and Collection Services in Riparian Communities in the Upper Rio Grande, Juarez Valley. Developed by ICISA, (BECC, December 2000).