

Border Environment Cooperation Commission Water Distribution and Wastewater Collection and Treatment Project in Ciudad Mier, Tamaulipas

1. General Criteria

1.a Project Type

Project Name:	Ciudad Mier, Tamaulipas, Mexico. Construction of a Wastewater Treatment Plant and Expansion of Water Distribution and Wastewater Collection Systems
Project Sector:	- Wastewater treatment - Domestic water and wastewater hookups

1.b Project Category

Category:	Community environmental infrastructure project – Community-wide impact
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1.c Project Location and Community Profile

Communities:	Mier
Location:	Located in the northeastern part of the State of Tamaulipas.
Location within the border:	Within the 100 km border area

Figure 1 shows the location of Mier, in the northeastern part of the State of Tamaulipas.

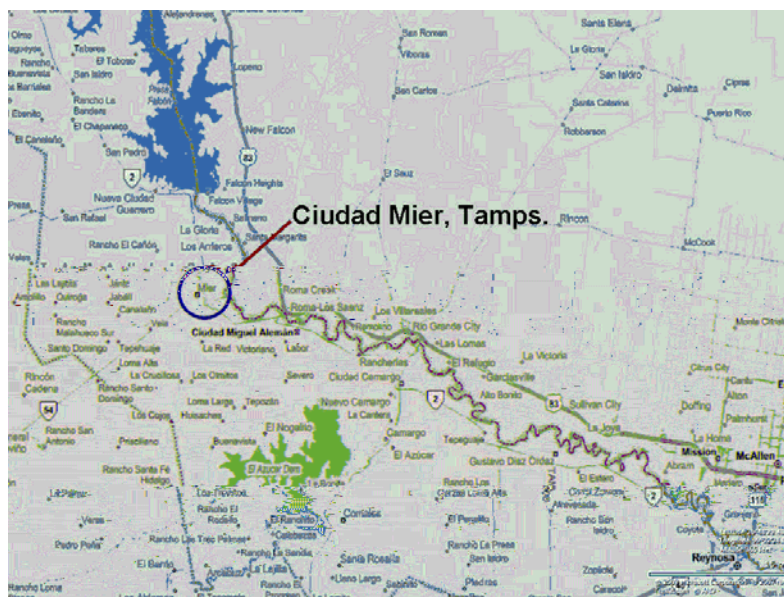


Figure 1. Location of Ciudad Mier within the state of Tamaulipas

Demographics

Current population:	6,435 (estimated CONAPO 2008)
Growth rate:	-1.17 %
Reference:	INEGI Year: 2005
Economically active population:	2,519
Reference:	INEGI Year: 2004
Median per capita income:	\$ 4,226 USD/year
Reference:	BECC estimations based on statistics by INEGI and the National Commission on Minimum Wages
Primary economic activities:	Agriculture, trade and services
Marginalization Rate:	-1.6600, Very Low

Services

Water System

Water coverage:	97%
Domestic hookups:	94 %
Commercial hookups:	4 %
Industrial hookups:	2 %
Water supply source:	Rio Grande
Connections:	2205

Wastewater Collection System

Wastewater coverage:	86 %
Wastewater collection lines:	34 Km
Wastewater hookups:	1947
Domestic hookups:	95 %
Commercial hookups:	4 %
Industrial hookups:	2 %

Wastewater Treatment

Wastewater treatment coverage:	0 %
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Solid Waste

Solid waste collection coverage:	90%
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Street Paving

Street paving coverage:	70%
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1.d Legal Authority

Project applicant: La Comisión Municipal de Agua Potable y Alcantarillado (COMAPA) de Cd. Mier

Legal representative: Homero Fernández Vivanco

Legal instrument to demonstrate legal authority: Diario Oficial de la Federación [*Official Federal Daily Journal*]

Date of instrument: Mar/19/2003

Compliance with Agreements:

- 1889 International Boundary Conventions
- 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

1.e. Project Summary

Project Description and Scope: Construction of a Wastewater Treatment Plant and Expansion of Water and Wastewater Collection Systems

Components:

Water

Expansion of the water system to currently unserved areas

- 3.65 miles of 2.5"-6" PVC piping.
- 200 domestic hookups.

Wastewater Collection

Expansion of the wastewater collection system

- Construction of 5.96 miles of sewers along streets that lack wastewater lines, including Colonia Riveras del Alamo, an area that is presently unserved.
- 103 manholes.
- 581 wastewater hookups.
- Force main to the Wastewater Treatment Plant.
- Main sewer from a location close to the current discharge point near the Alamo River, southeast of the city and running towards the south, up to the site of the proposed Wastewater Treatment Plant, using 14" diameter PVC piping (1.30 miles)
- Pump station to the WWTP, including 3 wastewater pumps with 40 HP and 60 lps capacity each.

Wastewater Treatment

Construction of a lagoon-based Wastewater Treatment Plant with capacity for 0.46 MGD, including a treatment train consisting of two anaerobic lagoons, two facultative lagoons, and a maturation pond.

Population Benefited: 6,435 residents
Project Cost: US \$3.37 million

Project Map:

Figure 2 shows the primary components of the water, wastewater collection, and treatment systems.

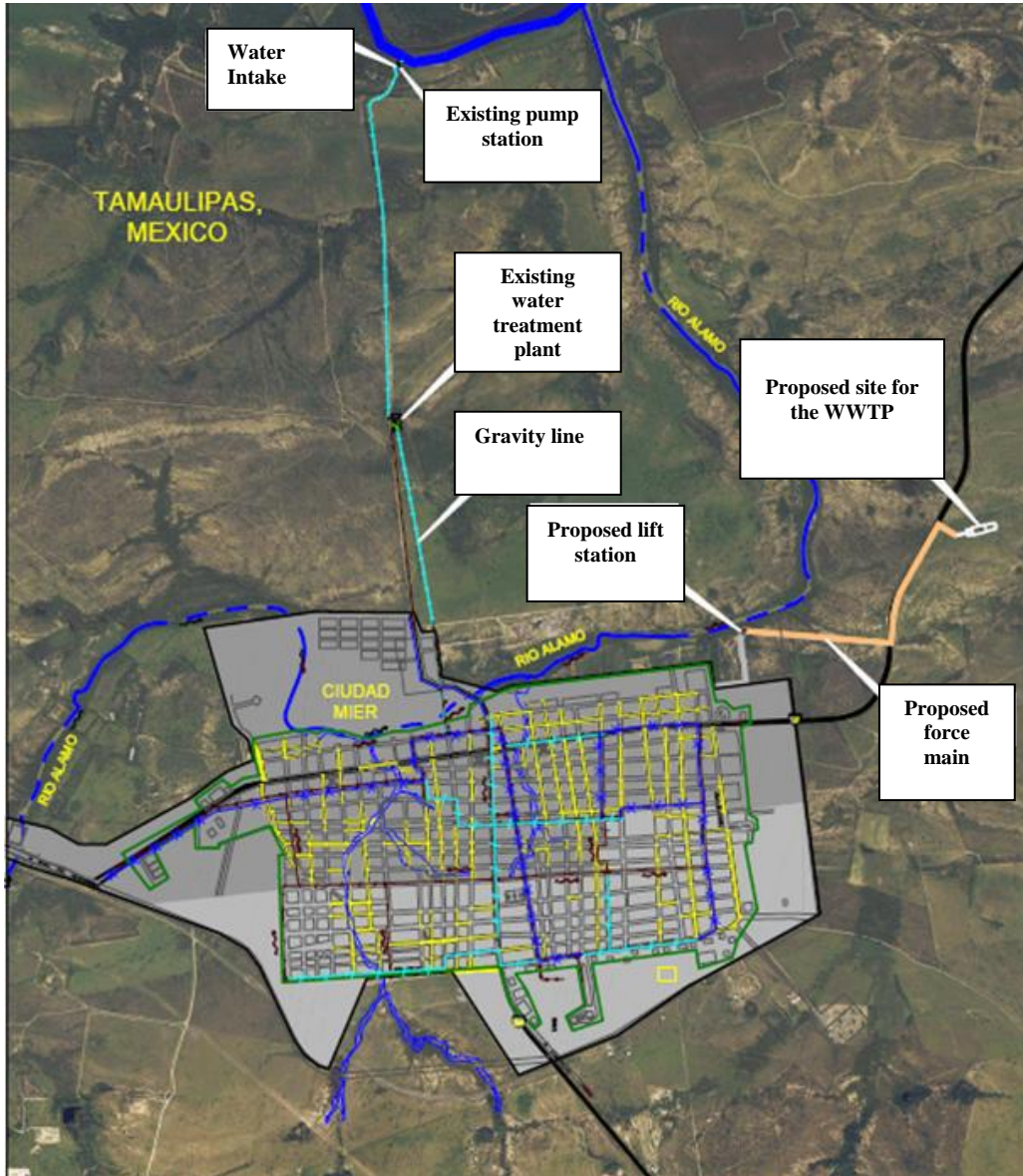


Figure 2. Location of the proposed wastewater treatment plant, lift stations, and force mains in Mier, State of Tamaulipas.

Project Justification: The proposed wastewater collection system will help collect wastewater generated in the project area,

reducing thus the potential for human contact with raw wastewater and organisms that are vectors for diseases.

The project also aims to reduce the potential for groundwater and surface water contamination by eliminating the use of latrines, septic tanks, wastewater discharges to open-air drains, and contamination resulting from the discharge of untreated wastewater. Additionally, new water service to currently unserved populations in the project area is proposed.

Project Need or Consequences of the No Action Alternative:

The lack of these services jeopardizes the health of area residents, inasmuch as there is no reliable source at present to meet their basic needs.

The existing situation may contribute to an increase in the prevalence of gastrointestinal diseases.

Prioritization Process Category:

Category 1

Pending Issues:

None.

Criterion Summary:

The proposed wastewater collection system will help collect 100% of all wastewater generated by the community of Mier, reducing thus the potential for human contact with raw wastewater and organisms that are vectors for diseases; it also aims to reduce the potential for groundwater and surface water contamination by eliminating the use of latrines, septic tanks, and wastewater discharges to open-air drains. The effluent from the proposed wastewater treatment plant will be used for agricultural purposes, creating an environmental and human health benefit for residents of this community and adjacent areas in the United States. Additionally, new water service to currently unserved populations in the project area is proposed.

2. Human Health and Environment

2.a Compliance with Applicable Environmental and Cultural Resource Laws and Regulations

Environmental and Public Health needs addressed by the proposed project:

Wastewater collection is not available to residents of the project area, and thus wastewater is discharged to open air areas, latrines, or cesspools.

The lack of wastewater collection in the project area results in wastewater runoffs, which create a risk for the transmission of diseases due to the potential for human contact with unhealthy waters and soil contamination.

The wastewater collection system in Mier discharges an average of 0.35 MGD of raw wastewater to the Alamo River, which eventually discharges into the Rio Grande, as there are no sewers to collect and convey said wastewater to a treatment site. This practice creates a human health and environmental hazard, and jeopardizes the health status of both Mexican and United States communities downstream of Mier that obtain their water supply from the Rio Grande.

The project meets the following applicable environmental laws and regulations:

Once the construction of the Wastewater Treatment Plant is complete, the City of Mier will be able to meet Official Mexican Standard NOM-001-SEMARNAT-1996, which establishes the maximum permissible levels of contaminants for wastewater discharges to national waters and properties. The discharge permit issued by National Water Commission (CONAGUA) for this project establishes that the quality of the effluent must meet a maximum monthly average of 1000 mpn/100 ml of fecal coliforms, and 15 mg/l of grease and oil, since the effluent will be used for agricultural irrigation. As for the Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS), the values that will be obtained, according to the project design, will be lower than 75 mg/l.

The National Institute of Anthropology and History (INAH), through an Official Communication dated March 9, 2007, established that the area proposed for the development of the force main and the Wastewater Treatment Plant "presents a high potential for the existence of archaeological remains corresponding to groups hunting/collecting groups that existed during prehistoric periods (approximately 5,000 to 1,000 years b.C.)," "and an archaeological survey is necessary." The rest of the proposed project tasks will be carried out in urban areas that

have already been developed.

As a result of the archaeological survey, on March 3, 2008, INAH issued a report and the corresponding clearance through Official Communication No. 292/2008. The report included a recommendation that any subsequent archaeological discoveries in the area must be notified to the agency for it to conduct the applicable archaeological salvage operations.

2.b Human Health and Environmental Impacts

Human Health Impacts

Direct and indirect benefits to human health:

- Groundwater contamination will be reduced
- Surface water contamination will be reduced
- Soil contamination will be reduced

Health statistics:

Human health statistics and information for Ciudad Mier are limited. Table 1 shows the results of a public health study conducted in communities adjacent to the United States-Mexico border. The conditions in the project area 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.

Water borne diseases are caused by pathogenic microorganisms that are directly transmitted as a result of inadequate wastewater disposal practices and unhealthy 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 having bad hygiene habits that contribute to the dissemination of diseases by direct or indirect human contact. Water borne diseases may be caused by protozoans, viruses, bacteria, and intestinal parasites.

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>

Table 2 shows the incidence of transmissible diseases in the State of Tamaulipas in comparison with the rest of the country. Note that the rates for hepatitis A and intestinal infections are higher in Tamaulipas than in the rest of the country. The above substantiates the need to provide adequate management to wastewater generated by the locality and then treat wastewater for safe reuse and disposal.

Table 2
Intestinal diseases in the State of Tamaulipas and Mexico

Gastrointestinal Diseases and Hepatitis A in Tamaulipas and Mexico										
E= State N= National	Hepatitis A		Amoebiasis		Paratyphoid and other Salmonellosis		Shigellosis		Undefined Intestinal Infections	
	Cases	Rate ¹	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
2000-E	343	12.5	14,086	511	4,617	167	361	13.1	124,792	4533
2000-N	7,792	8	1,025,276	1052	60,654	62.2	22,301	22.9	3,021,542	3099
2001-E	895	31.8	18,433	656	1,713	60.9	558	19.9	218,594	7777
2001-N	18,864	19	1,250,186	1260	80,346	81	32,758	33	5,043,775	5083
2002-E	744	25.9	15,313	534	1,405	49	436	15.2	213,353	7439
2002-N	16,807	16.6	1,186,221	1175	80,494	79.7	31,473	31.2	5,374,980	5323
2003-E	298	10.2	ND	ND	2,255	77.1	493	16.9	136,812	4676
2003-N	12,275	12	ND	ND	79,646	77.5	26,940	26.2	4,318,940	4205

¹ Cases for each 100,000 residents

Environmental Impacts

Direct and Indirect Benefits:

Environmental Impacts:

Minor environmental impacts are anticipated from the development of the different project phases, provided the project tasks are implemented in accordance with the specifications of the Environmental Impact Assessment and taking into account the mitigation measures established in it. Potential impacts include the following:

Construction Phase

- Fugitive dust emissions
- Gas emissions from construction machinery
- Temporary roadway blockages, presence of workers in the area

Operational Phase

- Odor emissions resulting from operational failures.

Mitigation Measures:

Mitigation measures will include:

- Application of water to reduce fugitive dust emissions
- Vehicle tune ups to reduce emissions
- Placement of warning signage to prevent hazardous situations
- Training programs for workers

Impacts:

The environmental impact resulting from the project will be positive overall, inasmuch as:

The project intends to increase wastewater collection from 86 to 100 % by adding 581 new sewer hookups and treatment coverage by constructing a new 0.46 MGD WWTP, reducing environmental contamination and improving the quality of life of area residents by curtailing potential health hazards.

Drinking water is proposed to be provided to the whole community served by the project, increasing the coverage from 97 to 100%, adding 200 new water hookups, improving the quality of life of area residents by reducing the risk associated to inappropriate water management practices.

The COMAPA will provide loans to consumers for the costs of water and sewer hookups.

Transboundary Impacts:

No negative transboundary impacts are anticipated as a result of the development of water and wastewater collection tasks. On the contrary, a beneficial effect is anticipated on the U.S. side of the border, as the project intends to prevent 0.35 MGD of raw

wastewater from reaching the Rio Grande, improving thus the quality of the river, which is the main source of water supply for various communities downstream.

Formal Environmental Authorization

Environmental Authorization:

The Secretariat of Public Works, Urban Development, and Ecology –Environmental Directorate (SOPDUE)– established through official communication SOPDUE/DGMA/047/2007 dated March 23, 2007 that the project requires a Manifestación de Impacto Ambiental (MIA, or an environmental assessment), which was submitted to the aforesaid office for review in April 2008. The corresponding finding is expected to be available by early September.

Pursuant to the U.S. National Environmental Policy Act (NEPA), a Transboundary Environmental Information Document was developed and submitted for consideration to the United States Environmental Protection Agency (EPA). A Finding of No Significant Impact (FONSI) was issued by the EPA on February 23, 2008, after which a 30-day public review period was opened. Finally, on March 25, 2008, EPA issued a final FONSI establishing that the project will not result in significant environmental impacts that may affect the U.S. border area.

During the environmental assessment process, the International Boundary and Water Commission (IBWC) and its Mexican counterpart (CILA) were given notice of the project. No negative comments have been issued by these agencies.

Pending Issues

Issuance of MIA environmental clearance

Criterion Summary:

The project addresses a major human health and environmental issue.

3. Technical Feasibility

3.a Technical Aspects

Project Development Criteria

Design Criteria:

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

Project Components:

Water

Expansion of the water supply system to areas that lack water service.

Length: 3.64 miles

Diameter: Between 2.0 and 6"

Material: PVC

Installation of domestic hookups

Number of domestic hookups: 200

Sectorization of circuits

Wastewater Collection

Expansion of the wastewater collection system to unserved areas.

Expansion of wastewater collection system in Colonia Riveras del Alamo, including a lift station.

Construction of wastewater lines

Length: 5.96 miles

Diameter: 8"

Material: PVC

Construction of force mains

Number of force mains: 1

Length: 1.30 miles

Diameter: 14"

Material: PVC

Construction and outfitting of pumping station(s)

Capacity: 60 lps

Number of stations: 2

Wastewater hookups

Number of wastewater hookups: 581

Force main from the lift station to the WWTP site

Wastewater Treatment

Construction of a Wastewater Treatment Plant
Capacity: 0.46 MGD
Technology: Stabilization lagoons

The wastewater treatment system includes an anaerobic treatment lagoon, two facultative lagoons, and a maturation pond with capacity for 0.46 MGD.

Other Design Criteria:

The final design includes the implementation of green building practices as part of the technical construction specifications. The project will minimize the requirements for pavement replacement, landscape disturbance, and intrusive construction practices, and will maximize energy efficiency and effluent reuse options. Green areas will be irrigated with treated water to conserve potable water. Only small sections of pavement will be replaced, and no demolition of existing structures will take place. Small areas will require paving for the movement of equipment and these roads will use local soils as road base. The treatment design is a low energy consumer. The design proposes the use of materials that meets the properties and characteristics suitable to the project requirements, and minimizes the use of concrete with replacement and combination of other less energy intensive materials, preferably of on-site and unprocessed origin such as the excavated material from the treatment lagoons.

Appropriate Technology

Assessment of Alternatives:

With the purpose of designing appropriate water, wastewater collection, and treatment systems that operate in an efficient manner, a preliminary project was developed considering various technical alternatives. The project alternatives reviewed consisted basically of the following scenarios:

Water:

- Alternative 1. No Action. The no action alternative involves continuing to operate under the current water supply conditions, which fail to meet acceptable regulations established for the water system as to quantity, or appropriate operation, leaving a sector of the population without service.
- Alternative 2. Expanding the water system to the unserved community. This alternative was reviewed and considered to be the preferred alternative, as it includes the expansion of water service to 100% of the community, an action that will reduce the risk of water-borne diseases associated to inadequate water management.

Wastewater Collection:

- Alternative 1. No Action. The no action alternative involves continuing operating under the current conditions that pose hazards to the human health and environment, by not having a wastewater collection and disposal system disposing of wastewater inappropriately.
- Alternative 2. Construction of wastewater collection and conveyance structures to the proposed treatment site. This alternative was selected with the purpose of improving the operation of the sanitary sewage system by proposing the construction of a sewer for Ciudad Mier, the construction and outfitting of a pump station, and the corresponding force main, to prevent raw wastewater from being discharged to surface bodies of water and convey it to the treatment site.

Wastewater Treatment:

- Alternative 1. No Action. The no action alternative involves continuing operating under the current conditions that pose hazards to the human health and environment, by not having a system that disposes of wastewater appropriately.
- Alternative 2. Construction of a wastewater treatment system based on aerated lagoons –sedimentation-maturation lagoons. This option was reviewed but finally ruled out. Although it would use a smaller land area compared to other alternatives, its operation and maintenance costs (\$2.05 pesos/m³ of treated wastewater), as well as the need to employ specialized personnel for its operation, render this alternative financially unacceptable.
- Alternative 3. Construction of a wastewater treatment system based on facultative-maturation lagoons. Although this alternative involves a lower initial capital cost than the above and does not require specialized personnel, it does require a larger surface. Additionally, operation and maintenance costs are high (\$1.23 pesos/m³ of treated wastewater) in comparison with the alternative based on natural methods, which makes this an unacceptable option.
- Alternative 4. Construction of a wastewater treatment plant based on anaerobic, facultative, and maturation lagoons. This fourth alternative requires less surface area than alternative 3 and does not demand specialized personnel for its operation. In addition, operation and maintenance costs under this scenario are the lowest (\$1.17 pesos/m³ of treated wastewater). These factors render this as the most appropriate option for this

community.

Property and Right-of-Way Requirements

Requirements:

- Inasmuch as wastewater lines will be laid on municipal rights of way and thoroughfares, no additional land needs to be purchased for the project.

- Inasmuch as wastewater lines will be laid on municipal rights of way and thoroughfares, no additional land needs to be purchased for the project. With regard to the land required for the construction of the Wastewater Treatment Plant for Mier, the COMAPA has signed an agreement with the owner of the property to use it for the construction of the wastewater treatment facility. The surface area is 7 ha. BECC has copies of the corresponding proof of ownership documentation.

Project Tasks and Timelines

Project Timeline:

The construction of the proposed water, wastewater collection and treatment projects is scheduled to be developed during the 2008-2010 period.

Figure 4 shows the proposed project schedule.

PROPOSED TIMELINE FOR WATER, WASTEWATER COLLECTION, AND TREATMENT PROJECTS FOR MIER, TAMAULIPAS																											
T A S K	PROPOSED TASK COMPLETION TIME (MONTHS)																										
	2008			2009												2010											
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
<i>Water</i>																											
1	EXPANSION OF WATER SUPPLY LINES (HIGH AREA)																										
2	EXPANSION OF WATER SUPPLY LINES (LOW AREA)																										
<i>Wastewater Collection</i>																											
3	SEWERS AND HOUSEHOLD CONNECTIONS																										
4	WASTEWATER COLLECTION SYSTEM AND MAIN SEWER																										
5	FORCE MAIN AND LIFT STATIONS																										
<i>Wastewater Treatment</i>																											
6	WASTEWATER TREATMENT PLANT																										

Figure 4. Project Timeline

3.b Management and Operations

Project Management

Resources: Management of the proposed project will be the responsibility of COMAPA Mier, with the assistance and supervision of Comisión Estatal de Agua de Tamaulipas (CEAT).

Operation and Maintenance

Organization: The COMAPA has a General Manager, Treasurer, Administrative Assistants, and Technical Assistants for the system's operation and maintenance. In addition, it has support from CEAT, a utility that has staff specialized in operation and maintenance of water and wastewater systems.

Pretreatment: Inasmuch as the project area only includes residential users, COMAPA has determined that the pretreatment program will conform to 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. Compliance enforcement will be a responsibility of COMAPA with assistance from CEAT.

Operation Plan: The Final Design incorporates 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.

The purpose of the Operation and Maintenance Manual is to make available a tool to help carry out the activities related to effluent quality control, facility operation, and prevention of system breakdowns. Ensuring the proper operation of treatment units will generate a good effluent quality. The conservation of treatment unit components, including pumps, screens, gates, valves, as well as structures such as brims, slopes, etc., must be a scheduled and consistent task.

Permits, licenses, and other regulatory requirements: The project applicant has the following documentation available:

- Water withdrawal permit (CONAGUA)
- Wastewater discharge permit (CONAGUA)
- Finding of No Impact to historical or cultural properties (INAH)
- Technical File validation by CONAGUA
- State Environmental Clearance
- FONSI

Reviewing Agencies:

- BECC
- Tamaulipas State Water Commission [*Comisión Estatal de Aguas de Tamaulipas*, CEAT]
- NADB
- CONAGUA
- EPA

Pending Issues:

None

Criterion Summary:

The treatment process is adequate to obtain high quality treated wastewater for reuse, eliminating thus health risks for residents who may have contact with treated wastewater, pursuant to the applicable environmental regulations set forth 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 discharge permit issued by CONAGUA for this project establishes that the quality of the effluent must meet a maximum monthly average of 1000 nmp/100 ml of fecal coliforms, and 15 mg/l. of grease and oil, since the effluent will be used for agricultural irrigation. As for the Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS), the values to be obtained, according to the project design, are lower than 75 mg/l.

The project's final design included the implementation of green building practices that were included in the technical specifications for the construction.

4. Financial feasibility

4.a Financial Feasibility

Financial Conditions

Information submitted: COMAPA Income Statements.

Financial Analysis Results: COMAPA has an adequate user fee structure to contribute to the generation of annual revenues sufficient to operate and maintain the system and to achieve and maintain the required reserve levels.

Project Costs, Funding Structure and Other Capital Investment Plans (CIP)

Item:

Construction Costs : \$ 3,289,281

Construction management oversight, and contingency costs: \$ 80,722

Final Cost: \$ 3,370,003

Funding Scheme:

Source	Type	Amount	%
Mexico	Grant	\$1,990,003	59
NADB-BEIF	Grant	\$1,380,000	41
Total:		\$3,370,003	100

Dedicated Revenue Source:

Source of Income: COMAPA revenues.

4.b Legal Considerations:

Project management: The project will be managed by the COMAPA-Mier, who has adequate staff to manage the proposed infrastructure and address any potential emergency related to the operation and maintenance of the project.

Status of Funding Agreements: Grant agreement to be signed once project is certified.

Pending Issues:

None.

Criterion Summary:

5. Public Participation

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

Steering Committee

Date of establishment: The Steering Committee was formally installed on 11/29/2007 at a meeting held at Casino Arguelles in Mier, Tamaulipas.

Steering Committee members: At this meeting, an executive committee was elected, comprised of the following individuals:

Chairman: Antonio Guerra Díaz,
Secretary: Luis Enrique Pena Lozano,
Alternates:

- Emma Bely Ríos Franco
- Hiram Peña López
- Isai Rodríguez Martínez

Date of approval of Public Participation Plan : The Comprehensive Community Participation Plan developed by the Steering Committee was approved by the BECC on 12/10/2007.

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

- Flyers
- Brochures
- Megaphone advertising
- Web announcements

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

Additional outreach activities:

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

First Public Meeting: A 30-day advance notice to announce the First Public Meeting was published on "Gran Frontera," a local newspaper, on Sunday, December 9, 2007. The meeting was used to inform the public about the technical aspects of the project. The meeting was held at 17:00 hrs. on January 15,

2008 at Casino Arguelles of Ciudad Mier. Attendees included the Mayor Elect, Jose Ivan Mancias Hinojosa; the General Manager of COMAPA de Mier, Homero Fernandez Vivanco, and the representative of the Tamaulipas State Water Commission, Jose Arturo Vargas Carreño. The meeting was attended by 50 residents who answered project surveys. 100% of those surveyed said they were able to fully understand the project and explicitly expressed their support.

Second Public Meeting:

A second public meeting will be scheduled for September 11th 2008 to inform the public of the project's financial components.

Final Public Participation Report

Final 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.

Post-Certification Public Participation Activities

Post-Certification Activities:

The project applicant, in coordination with the 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:

Second public meeting and Final Public Participation Report.

Criterion Summary:

The project has extensive support from local residents.

6. Sustainable Development

6.a Human and Institutional Capacity Building

Project Operation and Maintenance:

The project applicant will be the agency responsible for operating and maintaining the following systems:

- Wastewater treatment
- Water distribution
- Wastewater collection

The applicant, with assistance from CEAT, will have the basic institutional and human capacity to operate and maintain:

- The proposed wastewater collection system
- The proposed water distribution system

Human and Institutional Capacity Building :

Actions within the scope of the project that contribute to institutional and human capacity building for COMAPA of Ciudad Mier include:

- Provide and improve water, wastewater collection, and treatment services in a continuous, efficient, and cost-effective manner.
- Operating 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.
- Training and education for the utility's operating staff throughout its different areas, to provide essential services that meet the needs of the community.
- Basic technical training to the operations and maintenance staff responsible for the new infrastructure built as a result of the project's implementation.

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

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

Laws and Regulations addressed by the project: The project meets applicable federal regulations pursuant to wastewater collection, treatment, and final disposal.

6.c Natural Resource Conservation

- 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 lines and providing the necessary means to connect 100% of the community to this service. Wastewater is to 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.
- The project will contribute for water savings for approximately 551.5 acre - foot/year that will be used for agricultural purposes.

6.d Community Development

- The completion of this project is crucial to the development of the community. The project proposes the adequate treatment of wastewater and the reduction of the conditions that favor the proliferation of water-borne and arboviral diseases.
- The proposal is for treated wastewater to be diverted to other purposes, such as urban and agricultural uses.
- The project aims to help the city reach a higher level of wastewater collection coverage, which in turn would help further the development of the community, as it proposes to reduce contamination resulting from wastewater runoffs. In addition, it promotes the development of other infrastructure projects such as street paving.

Pending Issues:

None

Criterion Summary:

The project meets all sustainable development principles.

Available Project Documentation:

- Official Communication No. 292/2008 dated March 3, 2008, in which INAH showed the result of the archaeological survey, and issued a report and the corresponding clearance.
- EPA's "Finding of no significant impact" (FONSI) dated February 23, 2008.
- Consultation with the State Secretariat of Public Works, Urban Development, and Ecology –Environmental Directorate to determine jurisdiction and environmental assessment modality, dated March 20, 2007, COMAPA.
- Response from the Directorate General of the Environment, Secretariat of Public Works, Urban Development, and Ecology regarding Environmental Impact Statement modality. Official Communication SOPDUE/DGMA/047/2007SEMARNAT. March 23, 2007.
- Final Designs for Water and Wastewater Collection projects in Mier, Tamaulipas. Developed by CEAT, 2007, 2008.
- Final Design for Wastewater Treatment infrastructure for Mier, Tamaulipas. Developed by CEAT. March 2008.
- Master Plan for improvements to the Water, Wastewater Collection, and Treatment services in Mier, Tamaulipas. Developed by "Servicios de Ingeniería e Informática" (BECC, April 2004).