



# CERTIFICATION AND FINANCING PROPOSAL

## IMPROVEMENTS TO THE WATER AND WASTEWATER SYSTEMS AND CONSTRUCTION OF THE WEST WASTEWATER TREATMENT PLANT MATAMOROS, TAMAULIPAS

*Resubmitted: July 13, 2012*

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## EXECUTIVE SUMMARY

### IMPROVEMENTS TO THE WATER AND WASTEWATER SYSTEMS AND CONSTRUCTION OF THE WEST WASTEWATER TREATMENT PLANT MATAMOROS, TAMAULIPAS

- Project:** The proposed project consists of improvements to the drinking water system, the expansion of the wastewater collection system to provide first-time service to the unserved west and southwest areas of Matamoros, including the construction of the West Wastewater Treatment Plant (WWTP), as well as the rehabilitation of existing infrastructure and other improvements throughout the system and equipment acquisition (the “Project”).<sup>1</sup>
- Project Objective:** The purpose of the Project is to eliminate the discharge of, and exposure to, untreated wastewater by providing access to wastewater collection and treatment services, thus contributing to the reduction of water pollution and the risk of waterborne diseases.
- Expected Project Outcomes:** The environmental and human health outcomes anticipated for the Project include:
- Increase access to wastewater collection services for 7,131 new sewer connections;
  - Increase access to wastewater treatment services for 43,956 new wastewater treatment connections;
  - Increase wastewater treatment capacity of 540 liters per second (lps) or 12.33 million gallons per day (MGD);
  - Reduction of 415 lps (9.47 MGD) of untreated wastewater discharges.
- Population Benefitted:** 160,879 residents of Matamoros, Tamaulipas.
- Sponsor:** The local water utility, *Junta de Aguas y Drenaje de Matamoros* (JAD).
- Borrower:** *Junta de Aguas y Drenaje de Matamoros* (JAD).

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<sup>1</sup>The Project combines three independent project applications submitted and selected through a prioritization process for the Border Environmental Infrastructure Fund (BEIF) program. The single certification and financing proposal is supported by the interrelated treatment capacity for new service.

**Project Cost:** \$944 million pesos (US\$ 69.72 million).<sup>2</sup>

**Loan Amount:** Up to \$165.0 million pesos (US\$12.19 million).

**Uses & Sources:**  
 (Millions of pesos)

Uses	Amount	%
Construction and equipment*	\$944.0	100.0
<b>TOTAL</b>	<b>\$944.0</b>	<b>100.0</b>
Sources	Amount	%
NADB Loan	\$165.0	17.5
NADB BEIF**	\$216.6	22.9
Federal, State and JAD	\$562.4	59.6
<b>TOTAL</b>	<b>\$944.0</b>	<b>100.0</b>

\* Includes costs related to design, construction and equipment, supervision, contingencies and taxes, as well as reserve funding.

\*\*The proposed BEIF contribution is subject to authorization by EPA Region VI through an approved Deal Sheet, which is anticipated to be executed upon confirmation of the Mexican match and completion of the pending land acquisition tasks.

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<sup>2</sup> Unless otherwise noted, all U.S. dollar figures are quoted at an average exchange rate of \$13.54 pesos to the dollar for the period April - June 2012, according to [www.banxico.org.mx](http://www.banxico.org.mx).

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#### 1. ELIGIBILITY

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##### **Project Type**

The Project falls within the eligible categories of drinking water, wastewater collection and wastewater treatment.

##### **Project Location**

The Project is located in the municipality of Matamoros, Tamaulipas, Mexico, which is immediately adjacent to the U.S.-Mexico border.

##### **Project Sponsor and Legal Authority**

The **public-sector** Project sponsor is the *Junta de Aguas y Drenaje de Matamoros* (JAD or the "Utility"), which provides drinking water and wastewater collection and treatment services to Matamoros, Tamaulipas. JAD's legal authority is set forth in decree No. 53 of the XLVIII Legislature of the State of Tamaulipas. Published on December 6, 1972, the document established the creation of the public utility to be independent of the municipality, with legal authority and assets, for the purpose of providing drinking water and wastewater collection and treatment services to the city of Matamoros.

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#### 2. CERTIFICATION CRITERIA

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##### 2.1 TECHNICAL CRITERIA

##### 2.1.1. Project Description

##### **Geographic Location**

The Project is located in the municipality of Matamoros in the northeastern corner of the state of Tamaulipas, with the Gulf of Mexico to the east and the U.S.-Mexico border to the north. Matamoros is directly across the Rio Grande from the city of Brownsville, Texas. Figure 1 shows the approximate geographical location of the Project.

**Figure 1**  
**PROJECT VICINITY MAP**



**General Community Profile**

According to the 2010 census, Matamoros has a population of 489,193 with an average annual growth rate of 1.5%.<sup>3</sup>

The City's economic activity is largely based on international trade, focusing on the export of goods (*maquiladoras*), followed by agriculture, industry, and commerce. The city has an economically active population of 177,107. The median annual per capita income is about US\$6,552.<sup>4</sup>

The status of basic services in Matamoros is described in the following table.

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<sup>3</sup> Source: The Mexican national statistics institute, *Instituto Nacional de Estadística y Geografía* (INEGI).

<sup>4</sup> Estimated by BECC using the XIII General Population and Housing Census of 2000 published by INEGI and based on United Nation guidelines for the human development index.

**Table 1**  
**MATAMOROS BASIC INFRASTRUCTURE**

<b>Water System</b>			
Water coverage: <sup>1</sup>	93.5 %		
Water supply source:	Rio Grande		
Number of hookups: <sup>2</sup>	150,928		
<b>Wastewater Collection System</b>			
Coverage: <sup>3</sup>	84.3%		
Number of connections: <sup>2</sup>	136,092		
<b>Wastewater Treatment</b>			
Coverage:	30 %		
Treatment facilities:	Plant	Type	Capacity
	East	Lagoon System (Anaerobic-facultative-polishing)	485 lps (11.1 MGD)
<b>Solid Waste</b>			
Solid waste collection :	> 75%		
Final disposal:	Landfill		
<b>Street Paving</b>			
Street paving coverage: <sup>4</sup>	64.4 %		

<sup>1</sup>Source: INEGI, 2010 Census.

<sup>2</sup>Source: JAD, January 2012.

<sup>3</sup>Source: Calculation based on water and sewer connection data provided by JAD.

<sup>4</sup>Source: "Paving Needs Assessment for Matamoros, Tamps", BECC, 2009.

lps = liters per second; mgd= millions of gallons a day

**Project Scope and Design**

The Project consists of the following major components:

- West Sewer Collection Infrastructure, which includes of six lift stations, along with the corresponding gravity and pressure main collector, and force mains;
- Southwest Sewer Collection Infrastructure, consisting of two lift stations and the corresponding gravity and pressure main collector, and force mains, and the expansion of the sewer collection system to 34 subdivisions in the southwestern areas of the city
- West Wastewater Treatment Plant (WWTP) with the capacity to treat 540 lps (12.33 MGD).

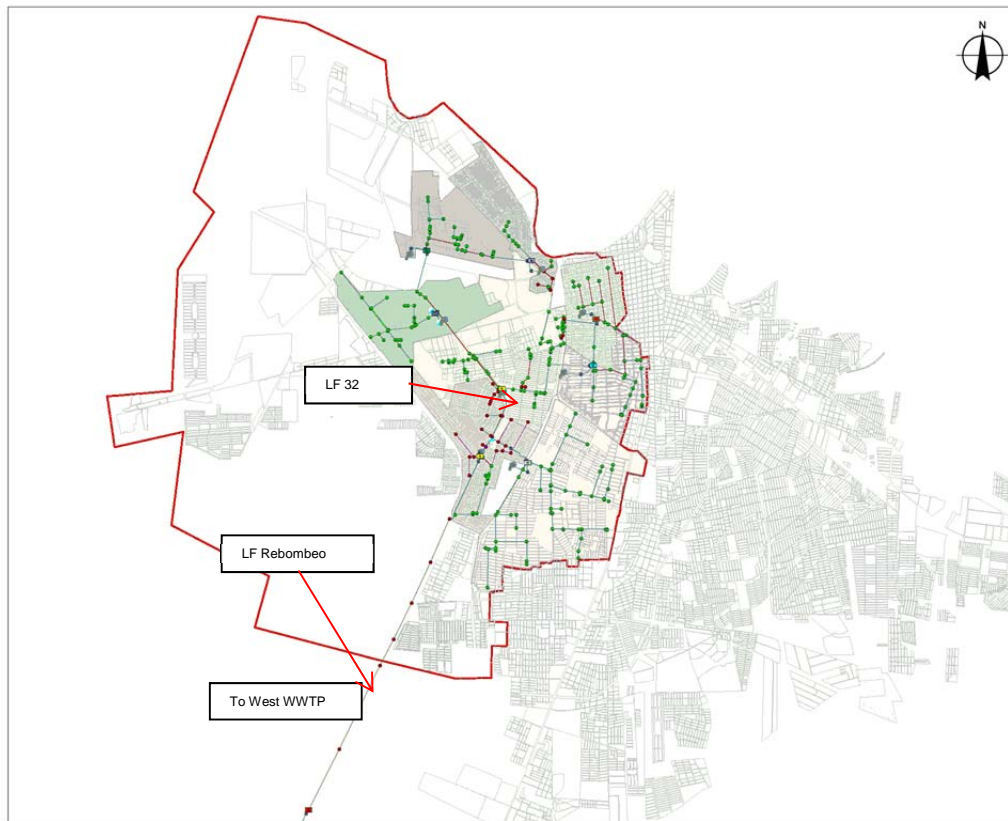
Additionally, the Project includes other system improvements to both drinking water and wastewater infrastructure throughout the city including the rehabilitation of pipelines, the installation of water meters, completion of the necessary looping conditions in the drinking water distribution system, and the acquisition of equipment.

The implementation of the proposed Project will prevent untreated wastewater discharges to storm water drains, which eventually reach the Laguna Madre. The Project will benefit approximately 43,956 households, equivalent to 160,879 residents of the city of Matamoros, Tamaulipas.

The final designs were developed pursuant to the technical standards issued by the Ministry of Urban Development and Environment of Tamaulipas (SEDUMA) for wastewater collection, and the technical specifications contained in the Water, Wastewater Collection and Treatment Manual prepared by the Mexican national water commission, CONAGUA. The designs also comply with Official Mexican Norm NOM-001-CNA-1995 "Sanitary Sewage System – Specifications for Hermeticity." The final designs were reviewed by BECC and NADB, and validated by CONAGUA.

West Sewer Collection Infrastructure. This project component includes the rehabilitation of four lift stations, including the construction of additional capacity to appropriately direct wastewater flows to the conveyance infrastructure that will discharge into the new West WWTP and to divert storm water flows to the city's storm water drain. The Project also proposes the construction of two new lift stations (EB-32 and EB-"Rebombero"). The following figure shows the location of the proposed West Sewer Collection Infrastructure project components.

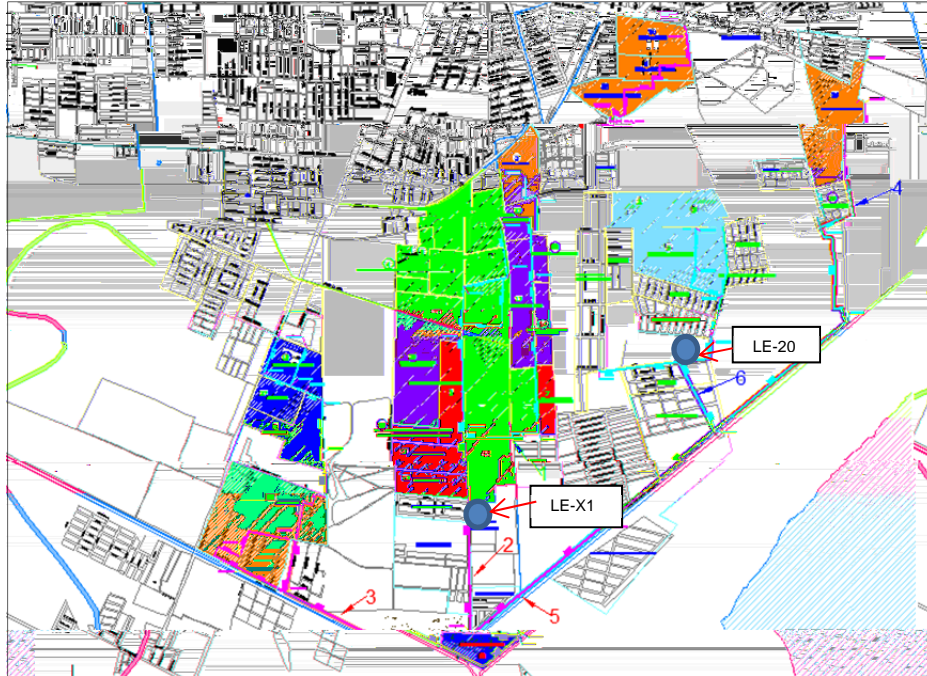
**Figure 2**  
**WEST SEWER COLLECTION INFRASTRUCTURE**





Southwest Sewer Collection Infrastructure. This project component includes the construction of the sewer collection system for 34 subdivisions, the construction of two lift stations (EB-X1 and EB-20); and the gravity main and force main that will discharge into the West Sewer Collection Infrastructure and finally to the new West WWTP. Figure 3 shows the location of the proposed Southwest Sewer Collection Infrastructure project components.

**Figure 3**  
**SOUTHWEST SEWER COLLECTION INFRASTRUCTURE**



Construction of this wastewater collection system infrastructure is projected to be completed within three years. This Project component will provide new service to 34 subdivisions providing access to more than 7,131 connections, benefitting more than 26,099 residents.

West WWTP. This project component includes the construction of a facility consisting of a train of primary sedimentation tanks, followed by facultative and maturation lagoons. The sludge will be treated by anaerobic digesters. In the first phase, two treatment trains will be constructed with a treatment capacity of 540 lps (12.33 MGD). The plant is designed to be expanded to 810 lps (18.6 MGD) by adding another treatment train for future needs. The treated effluent is expected to be reused for agricultural purposes.

The Project also includes improvements to existing water and wastewater infrastructure supported through the Utility's own financial resources. These efforts include 11 drinking water system projects, including the rehabilitation of waterlines, the installation of water meters, and completing looping in various areas of the distribution system. Additionally, 37 wastewater system rehabilitation projects were contracted during 2011 and 2012 and initiated with JAD resources. JAD is also proposing to fund them with the loan.

The following table shows the proposed schedule for Project implementation milestones.

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

Key Milestones	Status
Legal and Administrative Issues – Completion of necessary land acquisition, water rights payment arrangements, debt authorization process and resolution of match credit determination.	On-going
Funding Commitments (pending legal and administrative issues must be completed before final funding commitments can be issued).	On-going
Procurement	On-going
Construction	Anticipated completion: March 2015

Construction activities have already started with Mexican funding and will continue for the next three years, with Project completion scheduled for the first quarter of 2015.

### 2.1.2. Technical Feasibility

#### Design Criteria

Final Designs of the wastewater collection system elements of the Project were developed pursuant to technical specifications contained in the Water, Wastewater Collection, and Treatment Manual prepared by CONAGUA's Deputy General Office for Technical Affairs and Official Mexican Norm NOM-001-CNA-1995 *"Sanitary Sewerage System – Specifications for Hermeticity."*

Based on these design specifications, technical alternatives were selected and final designs were developed, considering also the environmental impacts and mitigation measures based on the Environmental Approval issued by the Mexican Ministry of Environment and Natural Resources (SEMARNAT).

#### Selected Technology

As part of project development, various routing and material alternatives were evaluated based on the following parameters:

- Capital and O & M Cost
- Material and Equipment Reliability
- Environmental Impact
- Social/Community Acceptance
- Topography

The analysis of alternatives considered the use of different materials and pipes in compliance with current norms and regulations. High-density polyethylene (HDPE), PVC, and Fiberglass Reinforced Pipes (FRP) were evaluated based on the soil type. In order to reduce costs and make the best use of the topography in the Project area, the shortest routes were considered for pipe alignments. Crossings through paved avenues were also minimized, as well as avoiding other existing underground infrastructure. Segments of the proposed path for the sewage pipe network runs along municipal rights-of-way and federal rights-of-way managed by CONAGUA.

Sewer pipe diameters were calculated using slopes and velocities aimed at preventing silting and over excavation, and minimizing the use of lift stations that might increase Project costs. Maximum flow rate, full build-out in the Project areas and treatment capacity were also taken into consideration for pipe diameter requirements in order to avoid oversized pipelines. Pipe layout was designed based on existing rights-of-ways, according to urban land use plan.

Final designs were developed on the basis of the above design criteria, considering environmental impacts and mitigation measures pursuant to specifications established by CONAGUA and the local utility. Additionally, the Project designs for the West wastewater collection system were refined through a value engineering (VE) effort conducted in June-July 2009. The main design opportunities recommended in the VE report, which were considered for improvement to the designs of both the West and Southwest collection systems, included:

1. Modifications to the conveyance approach from the EB-REBOMBEO lift station to the WWTP via force main, eliminating the need for an additional lift station at the WWTP.
2. Design modifications to consider management of all wastewater flows within the same lift station, eliminating the need for an additional lift station.
3. Integration of high efficiency energy equipment for all electromechanical components.

During 2011, CONAGUA required additional design reviews, especially focused on the mechanical and operational design of the lift stations to integrate every opportunity for energy efficiency and optimal operations. The recommendations resulted in the integration of energy efficiency changes including a reduction in capacity for back-up generators and transformers; changes in the type and size of cables; and other improvements, such as the use of high efficiency equipment and variable speed drives.

With respect to the WWTP, based on discharge quality requirements established by Official Mexican Norms and the availability of land, as well as climate conditions in the area, the Project proposes a wastewater treatment system utilizing lagoons. This system represents a favorable option due to its low operation and maintenance costs. The review of the following three treatment system alternatives was proposed to identify the most suitable treatment system for Matamoros' west area:

1. Anaerobic Lagoon + Facultative Lagoon + Maturation Lagoon
2. Primary Sedimentation Tank + Anaerobic Reactor + Facultative Lagoon + Maturation Lagoon
3. Primary Sedimentation Tank + Facultative Lagoon + Maturation Lagoon + Anaerobic Digestion

Alternative No. 3 was determined to provide the greatest benefits, including the potential utilization of methane for power generation, which not only provides a new supply to address energy demands but also reduces greenhouse gas emissions. The West WWTP will be procured through a “design-build” scheme; therefore, only preliminary design is currently available. Final design will be developed by the awarded contractor. Along with the review by the local water utility, review and approval of the final design will be conducted by BECC, NADB and CONAGUA.

**2.1.3. Land Acquisition and Right-of-way Requirements**

Rehabilitation components do not require additional land or rights-of-way for implementation. Wastewater collection and conveyance infrastructure will be primarily installed within existing municipal or federal rights-of-way. Land acquisition was required for the WWTP site and several lift station locations. The majority of the sites for these components will be located on land acquired by JAD, either through a direct transfer from the City of Matamoros, or by purchase from private land owners. A status of each permit and land acquisition task is described below.

**Table 3  
 STATUS OF PERMIT AND LAND ACQUISITION**

Permit / Site	Status
Rights-of-way and Construction Permit – West	Complete
Rights-of-way and Construction Permit – Southwest	Complete
West WWTP site	Pending – Deed of Ownership
Lift Station sites:	
EB-X1 and EB-20	Complete
EB-REBOMBEO	Complete
EB-32	Complete

\*For all portions of land, sponsor will provide original copies of final registered deeds for BECC and NADB files.

All pending land acquisition tasks must be completed prior to final funding commitment.

**2.1.4. Management and Operations**

Management and operation of the proposed wastewater collection and treatment Project will be the responsibility of the Project sponsor. The sponsor has an Operation and Maintenance manual that includes the routine tasks as well as procedures to address unexpected conditions needed to ensure a proper operation of the system.

JAD serves approximately 150,903 water hookups and 136,092 wastewater connections in the Matamoros metropolitan area. The Utility is organized in various departments, including: Planning, Wastewater Treatment, Operation and Maintenance, Construction, and Administration.

JAD has a pretreatment program to control industry and small businesses discharges in coordination with Tamaulipas' environmental protection agency, SEDUMA. Wastewater flowing through the city's sewage collection system must comply with Official Mexican Norm NOM-002-SEMARNAT-1997, which regulates the quality of said wastewater until it is delivered to the corresponding treatment facility. The pretreatment program complies with the Border Environment Infrastructure Fund (BEIF) program requirements.

## **2.2 ENVIRONMENTAL CRITERIA**

The implementation of the proposed Project will eliminate the discharge of and exposure to untreated wastewater by providing access to wastewater collection and treatment services, contributing to the reduction of pollution and the risk of waterborne diseases. The Project will provide access to appropriate wastewater collection and treatment services to approximately 160,879 residents. 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.

### **2.2.1. Compliance with Applicable Environmental Laws and Regulations**

#### ***Applicable Laws and Regulations***

The Project is subject to domestic environmental clearance authorization in accordance with the Regulations of the State of Tamaulipas Law of Environmental Protection, determined through SEDUMA and the General Law for Ecological Equilibrium and Environmental Protection determined through SEMARNET. Additionally, the potential contributions of monetary resources from the BEIF, supported by federal appropriations to the U.S.-Mexico Border Water Infrastructure Program of the U.S. Environmental Protection Agency (EPA), require that the transboundary impacts of the Project be examined in compliance with the U.S. National Environmental Policy Act (NEPA).

The Project must also ensure the ability of the infrastructure and utility service to meet the following applicable environmental laws and regulations applied to proper operation of the infrastructure:

- Official Mexican Norm NOM-002-SEMARNAT-1996, which establishes the maximum permissible levels of contaminants for wastewater discharges into urban or municipal wastewater collection systems.
- Official Mexican Norm NOM-001-CNA-1995, which establishes the leak tightness conditions that, must be met by wastewater collection systems.
- Official Mexican Norm NOM-001-SEMARNAT-1996, which establishes the maximum permissible levels of contaminants for wastewater discharges into national waters and territories.

- Official Mexican Norm NOM-004-SEMARNAT-2002, which establishes the maximum permissible levels of contaminants for the utilization and final disposal of biosolids.

#### **Environmental Studies and Compliance Activities**

SEMARNAT, through its Directorate General of Environmental Impact and Risk, Environmental Protection Management Office, issued Official Communication S.G.P.A.-DGIRA.-DG.-0320/09 to reflect a favorable finding with respect to the Environmental Impact Statement for the "Comprehensive Water and Wastewater Project for the City of Matamoros," a project that includes rehabilitation of existing infrastructure, construction of the wastewater collection infrastructure and construction of the West WWTP, as proposed in the certification and financial proposal herein.

In addition and pursuant to the NEPA, a transboundary impact study was developed and submitted for consideration to the EPA. The updated study included pending tasks for the "Comprehensive Water and Wastewater Project for the City of Matamoros." A 30-day public review period for the environmental study and corresponding Finding of No Significant Impact (FONSI) was opened on January 14, 2010. A FONSI was issued by the EPA on February 17, 2010, establishing that the Project will not result in significant environmental impacts that may affect the United States border area.

#### **Pending Environmental Tasks and Authorizations**

There are no formal environmental authorizations pending.

#### **Compliance Documentation**

The following formal authorizations have been obtained for the Project:

- MIA Resolution (S.G.P.A.-DGIRA.-DG.-0320/09)
- FONSI Authorization signed on February 17th, 2010
- CONAGUA's West WWTP validation (BOO.05.06-129, May 4th, 2010)
- CONAGUA's Lift Stations 32 and Rebombeo validation (BOO.05.06-129, February 10th, 2012)
- CONAGUA's Lift Stations X1 and 20 validation (BOO.05.06-121, May 29, 2012)
- SEMARNAT 's permit for use of the Federal Right of Way for west collectors laid-out and for crossing drain numbers 106, 107, 108 and 109 (December 13th, 2012)

## **2.2.2. Environmental Effects/Impacts**

### **Existing Conditions and Project Impact – Environment**

Residents of the west Matamoros Project area currently have wastewater collection services but lack wastewater treatment, the collected wastewater flows are discharged directly into storm drains without any treatment. In the southwest service area, residents rely on latrines, septic tanks, or discharges to open drains for their wastewater disposal.

Continuous rehabilitation and system improvements such as the installation of water meters help to ensure the long-term reliability of service and sustainable operating conditions of the Utility. Additionally, the proposed wastewater infrastructure tasks will significantly reduce risks of exposure to untreated wastewater and the potential for groundwater and surface water contamination by eliminating direct discharges of untreated wastewater. The environmental benefits anticipated for the Project include:

- Increase access to wastewater collection services for 7,131 new sewer connections;
- Increase access to wastewater treatment services for 43,956 new wastewater treatment connections
- Increase wastewater treatment capacity of 540 lps (12.33 MGD).
- Reduction of 415 lps (9.47 MGD) of untreated wastewater discharges to water bodies or other.

### **Mitigation of Risks**

Minor environmental impacts are anticipated from implementation of the different phases of the Project, provided that the tasks are implemented in accordance with adequate construction practices.

Potential impacts will be present during the construction phase and include the following:

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

Mitigation measures in the MIA include:

- Application of treated wastewater to reduce fugitive dust emissions
- Vehicle tune ups to reduce emissions
- Placement of warning signs to prevent potentially hazardous situations

The environmental impact resulting from the Project implementation will be positive overall, given that it increases wastewater collection and treatment coverage, reducing environmental contamination and improving the quality of life of area residents by curtailing potential health hazards.

**Natural Resources Conservation**

The Project contributes to reduce environmental deterioration by expanding existing wastewater collection lines and providing the necessary means to collect and convey these flows to the proposed West WWTP, in order to reduce risks of groundwater contamination and risks to human health from the discharge of raw sewage into streams and agricultural drains.

The final design includes the implementation of green building practices as part of the technical construction specifications, with an extensive effort made to achieve energy efficiency and optimal operational performance. Additionally, treated wastewater effluent will be re-used for agricultural purposes, reducing the demands on water resources.

**Existing Conditions and Project Impact – Health**

According to the “World Health Organization Water, Sanitation and Hygiene Links to Health FACTS AND FIGURES – \*updated November 2004”, sanitation projects can have the following benefits to human health:

- Improved sanitation reduces diarrhea morbidity by 32%.
- Access to safe water and sanitation facilities and better hygiene practice can reduce morbidity from ascariasis by 29%.

Project implementation is expected to eliminate the use of latrines, septic tanks, and discharges to open drains contributing to the reduction of risks for exposure to untreated discharges and a reduction in the number of cases of waterborne diseases in the unserved areas

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

An individual may become ill after drinking water that has been contaminated with these organisms; eating uncooked foods that have been in contact with contaminated water; or through poor hygiene habits that contribute to the dissemination of diseases by direct or indirect human contact. The following table shows waterborne disease statistics for the city of Matamoros. As shown below, the number of cases of diseases such as Amoebiasis has dropped throughout the years despite the population’s growth. Projects to improve wastewater collection and treatment services contribute to improve the community’s public health.

**Table 4  
 WATERBORNE DISEASE STATISTICS FOR MATAMOROS, TAMPS.**

Disease	Number of Cases					
	2006	2007	2008	2009	2010	2011
Intestinal infections by other organisms	18,109	22,465	24,3467	10,815	22,977	22,462
Other Helminthiasis	1,262	898	911	301	779	943
Intestinal Amoebiasis	1,723	1,548	1,214	706	688	633
Paratyphoid fever and other Salmonellosis	499	545	228	152	171	348

**Source:** Mexican Ministry of Health, Epidemiological Surveillance Coordinating Unit, General Morbidity, New Cases. Matamoros



**Transboundary Effects**

Due to the proximity of Matamoros with several U.S. cities located in Cameron County, Texas, there are frequent border crossings between these communities. The construction of wastewater collection and treatment

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## 3 PUBLIC ACCESS TO INFORMATION

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### 3.1 PUBLIC CONSULTATION

BECC released the Project proposal for a 30-day public comment period beginning June 16, 2012. The following Project documentation was made available to the public:

- *Final Design for the West Matamoros Final Outfall, Matamoros, Tamaulipas. JAD, 2012.*
- *Final Design for the Southwest Matamoros Collection System, Matamoros, Tamaulipas. JAD, 2012.*
- *Basic Engineering for the “West” Wastewater Treatment Plant Project in Matamoros, Tamaulipas. JAD, 2010*
- *Updated Transboundary Environmental Document for the City of Matamoros Water and Wastewater System Improvements Project, BECC/CDM March 2010*
- *(FONSI) Environmental Assessment for the Proposed Water/Wastewater Infrastructure Improvements Project for the City of Matamoros, Tamaulipas, Mexico*
- *Environmental Impact Statement for the Comprehensive Water and Wastewater Project for the City of Matamoros, Tamaulipas.*
- *Environmental Impact Finding, Official Communication No. S.G.P.A.-DGIRA.-DG.-0320/09 issued by the Secretariat of the Environmental and Natural Resources, through its Directorate General of Environmental Impact and Risk, Environmental Protection Management Office.*
- *Value Engineering Report. (Value Engineering Study for The West Sewer Collection Infrastructure & Pressure Main for Conveyance to Wastewater Treatment Plant in Matamoros) BECC/CDM. August, 2009.*
- *Official Communication S.G.P.A.-DGIRA.-DG.-0320/09 (MIA)*

### 3.2 OUTREACH ACTIVITIES

In accordance with the standard operating procedures for the PDAP/BEIF grant program, a broad public outreach effort was conducted for the Project, including activities such as the use of a local steering committee, meetings with local organizations, surveys, and public meetings. Below is a summary of the outreach activities carried out for the Project.

The Local Steering Committee was formally installed on September 2, 2009, at a meeting held at JAD’s facilities. At this meeting, a Board of Directors was selected, consisting of the following members:

Chairman: Hugo Carrillo Estrada  
Secretary: Rodolfo Cázares Garza

Treasurer: Carlos M. Rubio Granados  
Members: Francisco Gallardo López  
Eutimio Navarrete Guevara

The steering committee reconvenes periodically to help the Project sponsor to disseminate information regarding water and wastewater infrastructure works. The committee includes members of civil engineering and economic development associations, as well as city council members. In addition, residents from the benefited areas participate directly with this group as the Project gets closer to being implemented in their specific communities. The Comprehensive Community Participation Plan developed by the Local Steering Committee was approved by the BECC on September 4, 2009.

The Project's technical and financial information was made available to the public for review. The Steering Committee, with assistance from the Project sponsor, prepared a fact sheet and a power point presentation for the Project. Additionally, a survey was disseminated to document the community's concerns or support for the Project. Project information was presented to the community at two public meetings:

- First Public Meeting. The first Public Meeting notice was published in the local newspaper *El Bravo* on November 17, 2009, and was held on February 3, 2010 at the Gran Hotel Presidencial in Matamoros, Tamps. Present at the meeting were City Mayor Erick Silva Santos; Homero de la Garza Taméz on behalf of Tamaulipas Governor Eugenio Hernández Flores; Jorge Zapata Valdez from COANGUA, and JAD Director Jesús de la Garza del Guante, as well as members of the Steering Committee. The meeting was attended by more than 800 residents who answered a Project survey. Of these, 100 % said they were able to fully understand the Project and explicitly expressed their support.
- Second Public Meeting. A second public meeting was held on March 22, 2012. During the meeting the community was informed of the Project's financial components for the second phase of this project. The meeting was attended by 540 residents, 358 of them answered a Project survey and 100 % said they were able to fully understand the Project and explicitly expressed their support.

The steering committee carried out several meeting with social and professional organization to provide project information. Activities conducted by the Project sponsor and Steering Committee demonstrate that the public outreach requirements for the funding programs have been met.