

Border Environment Cooperation Commission

Comprehensive Storm Sewer Project in Nuevo Laredo, Tamaulipas

1. General Criteria

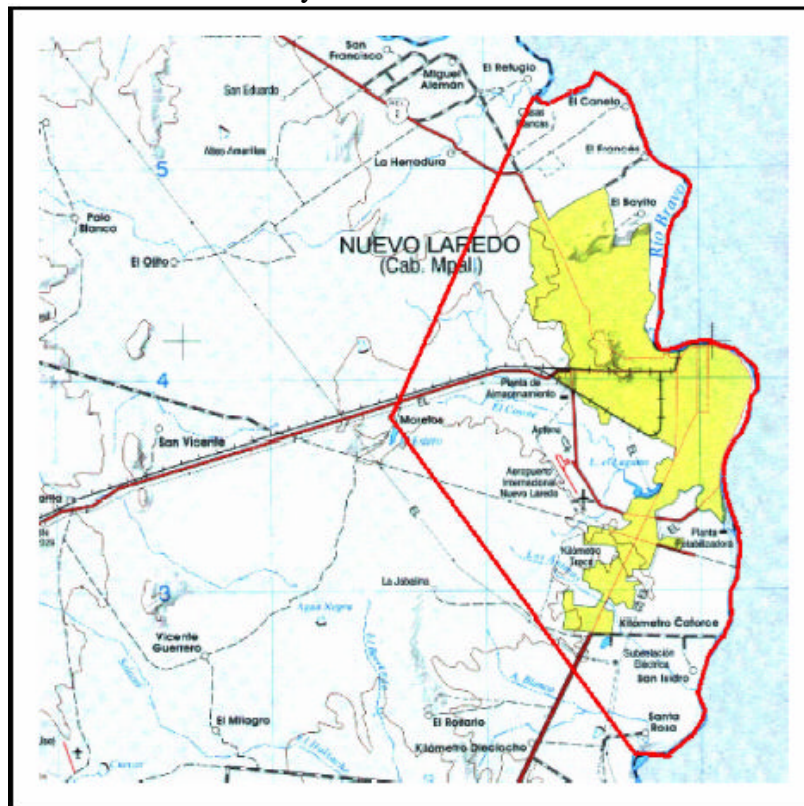
1.1 Project Type

The proposed project will implement priority improvements to the existing storm sewer network in the City of Nuevo Laredo, Tamaulipas, and will include seven components: the construction of six storm sewer collectors and the construction of a canal for storm waters. This project falls under the wastewater treatment category listed among the priorities of the Border Environment Cooperation Commission (BECC).

The project sponsor is the municipal government of Nuevo Laredo, which was assisted by the Municipal Commission of Water and Sewer System of Nuevo Laredo (COMAPA) for the drafting of the final design for components considered in the proposed scope.

1.2 Project Location

The geographical location of the City of Nuevo Laredo is shown in the following figure.



The municipality of Nuevo Laredo is located in the northeast area of the Mexican state of Tamaulipas, bordering to the north and east with the city of Laredo, Texas, USA. It borders to the west with the Municipality of Guerrero and to the southeast with the Municipality of Anahuac in the state of Nuevo Leon.

The Municipal Seat of Nuevo Laredo is located at 27° 29' north latitude and 99°31' west longitude at an altitude of 150 meters above sea level on the border zone of the state's territory, on its northeastern most area. The project is located within one-hundred kilometers of the US/Mexico border.

1.3 Project Description and Work Tasks

Project Description

The City of Nuevo Laredo has storm sewer throughout most of its area, which drains by means of gravity directly into the Rio Grande or smaller streams that eventually flow into that river. Some of the collectors that are part of the current storm sewer system occasionally discharge untreated wastewater due to uncontrolled connections to the sanitary sewer system. These inappropriate connections are in the process of being eliminated as part of the scope for the wastewater project certified by BECC in 2004.

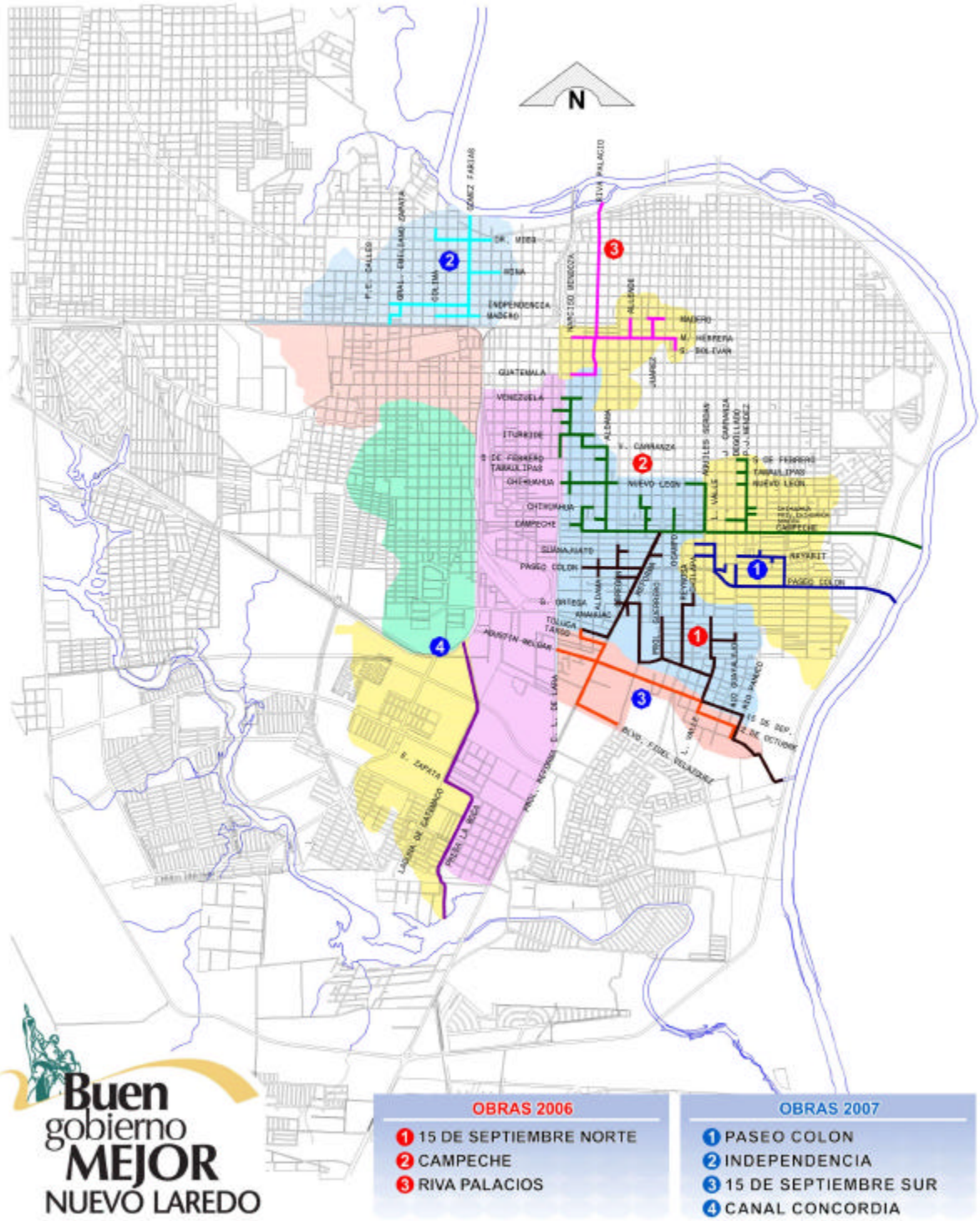
The scope of the project includes the following storm sewer collectors, which will supplement the current infrastructure of the city's storm sewer system:

- Independencia storm sewer collector, 3,320 linear meters of pipework 61 to 305 cm. in diameter.
- Riva Palacio storm sewer collector, 3,528 linear meters of pipework, 61 to 213 cm. in diameter.
- Campeche storm sewer collector, 9,883 linear meters of pipework, 38 to 305 cm. in diameter.
- Paseo Colón storm sewer collector, 3,639 linear meters of pipework, 38 to 183 cm. in diameter.
- 15 de Septiembre Norte storm sewer collector, 9,056 linear meters of pipework 45 to 305 cm. in diameter.
- 15 de Septiembre Sur storm sewer collector, 3,788 linear meters of pipework 38 to 183 cm. in diameter.
- De la Concordia storm sewer canal, 2,915 linear meters.

The project's components are detailed on the following figure.



PROYECTO INTEGRAL DE COLECTORES PLUVIALES PARA LA CIUDAD DE NUEVO LAREDO, TAMAULIPAS



The proposed infrastructure will function by means of gravity, carrying only storm water. The collectors and canal will discharge into the Rio Grande and into streams that also flow into the river.

At the point-of-entry structures of the storm sewer collectors, such as the manholes, there will be grit removal and screens to prevent the entrance of sedimentation solids and other solids of greater size (plastics, bags, branches, etc.) for the purpose of preventing the conveyance and discharge of solids into the river.

Project Task Schedule

The project certification comprehends the construction of a storm-sewer infrastructure for the City of Nuevo Laredo. The Municipality expects carrying out the construction of this project in a two year period and it is scheduled to start the construction in 2006.

Description of the Community

Demographic Information

The 2000 census reported a municipal population of 310,915 inhabitants of which 308,860 live in the city. According to projections by the National Council of Population (CONAPO), the estimated population of the Municipality of Nuevo Laredo is 373,419 in the year 2005.

Current Storm Sewer System

The existing storm sewer system in the City of Nuevo Laredo is made up of twenty-three (23) collectors that drain by means of gravity into the Rio Grande or into its smaller tributaries.

The same situation occurs with the current wastewater system; its pipes have deterioration and damage arising from age, but the system continues to work adequately. The downtown sector and surrounding areas lack storm sewer service. These areas suffer from serious flooding that causes traffic problems and property damage.

When the roads flood, great volumes of storm water are added to the sanitary sewer, causing the untreated mixture to be diverted into the Rio Grande to prevent extraordinary flows that would require the treatment of large volumes of water. This contributes to the pollution of this important binational body of water that is used as a source of water by Mexican and American communities and for other purposes down stream from Nuevo Laredo.

Moreover, with the overflows of the sewer system along roadways that do not have storm sewer, the risk is increased to the local population for contracting waterborn diseases, and the stagnated waters become an ideal habitat for mosquitoes with the subsequent risk of outbreaks of arboviral diseases, such as malaria, West Nile virus, etc.

Project Alternatives

The serious flooding in the city during and after rains, which sometimes lasts up to three days in a row, causes vehicular traffic problems and damage to property. Given the nature of the project, it was determined that the best way to solve the flooding problem is the construction of collectors in seven areas of the city in order to discharge storm waters to the Rio Grande, taking into consideration the following factors:

- Flooding points
- Roadways that present flooding problems
- Catch basins of the collectors to be built
- Topography of the city
- Wide roadways in order to close only one lane to traffic, leaving the remaining lanes open
- Roadways with less traffic
- Roadways that more easily could use detour routes

Project Justification

In 1976 the Federal Council of Material Improvements built the last storm sewer collector of the City of Nuevo Laredo. Since then, given the accelerated growth of the city, street paving increased without the existing control of grade lines, causing severe flooding resulting in traffic problems and damage to property. For this reason, the municipal government has undertaken the task of solving this serious problem by building the storm sewer collector projects with the purpose of drastically reducing the runoff of storm water into the sanitary sewer system.

1.4 Conformance with International Treaties and Agreements

The project is in conformance with environmental and quality-of-life improvement agreements for the benefit of border residents that Mexico and the United States have signed, such as the La Paz Agreement, the Comprehensive Border Environmental Plan, the Border 2012 Program and the Free Trade Agreement.

One of the mandates of the Comision Internacional de Limites y Aguas/International Boundary and Water Commission (CILA/IBWC) is to assess impacts associated with the construction of a project whose impacted area includes a binational water body such as the Rio Grande. Since this project presents these characteristics a project evaluation is required by CILA/IBWC.

2. Human Health and the Environment

2.1 Human Health and Environment

Human health and the environment issues

Although the City of Nuevo Laredo has twenty-three storm sewer collectors that serve most of the city, the downtown area lacks this service, thus causing street flooding there during the rainy season, as well as the infiltration of large volumes of storm water into the sanitary sewer system. When extraordinary flows are generated, the flows are combined with untreated wastewater and diverted into the Rio Grande, contributing to the pollution of this binational body of water.

The flooding of roadways with storm water that mixes with sewer water contributes to an elevated risk for residents in the affected areas to contract waterborne diseases, and moreover creates the right conditions for the proliferation of mosquitoes that might bring about arboviral disease outbreaks.



The implementation of this project will complement the scope of the project for wastewater certified in 2004 proposing to reduce significantly the amount of untreated wastewater going into the Rio Grande and to eliminate flooding downtown, with the consequent benefit to the health of the residents of the affected areas.

Related information to environment and human health

According to data in the study of the National Water Commission (CNA) "Strategy for a Grand-Vision for Water Supply and Management in the Cities and Basins of the Northern Border for Period 1999-2025", from the City of Acuña to the Gulf of Mexico outlet, the water of the Rio Grande is classified as contaminated. The classification of bodies of surface water is conducted based on the index of water quality (ICA, in Spanish) shown

in the following table according to ICA's categories used by CNA's Water Quality Management.

Classification of water quality according to ICA

ICA Value	Rating
0 to 20	Unacceptable (INA)
20 to 50	Strongly contaminated (FC)
50 to 70	Contaminated (C)
70 to 90	Acceptable (AC)
90 to 100	Excellent (EX)

The following table shows the values reported by CNA's study that was previously mentioned corresponding to monitoring stations located in surrounding areas of Nuevo Laredo, Tamaulipas.

Water quality indicators at monitoring stations located along the Rio Grande, upstream (Station 24d-070) and downstream (Station 24d-074) of the City of Nuevo Laredo, during the drought season.

Zone	Station	State	Body of Water	General ICA	Organic Matter ICA	Bacterial ICA	Ionic Material ICA	Suspended Material ICA	Nutrient ICA	Rating (General ICA)
APNL	24d-070	Tamaulipas	Rio Grande	56	80	2	47	67	87	C
	24d-074	Tamaulipas	Rio Grande	61	100	4	46	62	89	C

As this table indicates, bacterial pollution in this stretch of the Rio Grande reaches unacceptable levels.

In the year 2000, a study was conducted on the quality of the water of the Rio Grande along the section corresponding to Nuevo Laredo, Tamaulipas, and Laredo, Texas, by both CILA/IBWC partners. The results of the monitoring show that the fecal coliform levels increase along the way between both communities, as the following table shows.

Results from parameters analyzed by Mexico during the binational monitoring of Rio Grande waters along the banks of Nuevo Laredo, Tamaulipas and Laredo, Texas

Sampling Site at the Rio Grande	Fecal Coliforms MPN/100 ml		
	High	Low	Average
Colombia Bridge (32 km upstream of Nuevo Laredo)	930	23	188
Masterson Road (1.6 km upstream from Arroyo El Coyote outlet)	46,000	4,300	12,831
1.6 km downstream from Arroyo El Coyote outlet	24,000	7,500	11,056

Source: Mexican Section, International Boundary and Water Commission

With the purpose of providing a reference point for the impacts that the proposed project may have on the health of the residents of Nuevo Laredo, the Sanitary Jurisdiction No. V

headquartered in Nuevo Laredo, provided rates of morbidity for those diseases that have water as their main carrier for transmission, as presented in the following table:

Disease	1999	2000	2001	2002	2003
Diarrhea/Gastroenteritis	23,748	20,499	21,920	-	20,250
Hepatitis	125	19	12	0	8
Parasitosis	1,392	950	1,300	1,500	1,500
Typhoid	214	215	179	0	317
Paratyphoid fever	0	352	54	0	177

2.2 Environmental Assessment

In accordance to the Regulations of the General Law of Ecological Balance and Environmental Protection with regard to the Environmental Assessment, the Department of Environment and Natural Resources (SEMARNAT), officially determined that the storm sewer project for Nuevo Laredo does not require an authorization with respect to environmental impact because it is located away from delicate ecosystems, protected natural areas, or regions considered a priority due to biodiversity. In addition, it does not entail flooding, removal of trees or dislocation of residential settlements, nor does it affect the habitat of any protected species, nor does it hinder the free movement of natural populations either local or migratory.

Environmental impact

During the implementation of the project, the following activities will not be conducted: land clearing, stripping, cutting, or dredging. All of the works will be conducted in areas already urbanized.

For installation of the storm sewer infrastructure and for construction of the manholes, activities related to excavation, backfilling, and compacting will be performed. The adverse impacts associated to air and soil quality, housing, public utilities, and landscape esthetics will be insignificant, reversible, and temporary. The extent of these impacts will be contained within the limits of the urban area and near the place of actual construction.

The following tables describe the preventive and mitigating measures to be employed to mitigate the adverse environmental impacts that may be caused by project construction. In the first column, the actions of the project are indicated and on the second, the measures are described that will be followed to prevent, mitigate or offset the environmental impacts caused by that implementation.

ACTION	MEASURES THAT WILL BE FOLLOWED
Hiring of workers	<p>PREVENTION:</p> <ul style="list-style-type: none"> * Contracting with local labor will avoid the need to provide worker accommodations.
Demolition	<p>MITIGATION:</p> <ul style="list-style-type: none"> * Immediate removal of materials resulting from demolition to avoid damage to the urban landscape.
Excavation, and Land Compacting	<p>PREVENTION:</p> <ul style="list-style-type: none"> * Obtain, in a timely manne, the required local construction permits and observe the permit restrictions. * Before excavating ditches, existing underground infrastructure will be identified to avoid its damage during construction. * Alternate routes for vehicular traffic will be established. The reticular configuration of the roadway network of the city will allow for other routes to be offered to motorists in order to allow them to reach their destinations. * Advance notice to the population concerning the project by means of the local communication media and advance notices in the areas that will be affected. * In case that it is necessary, shoring up the walls of ditches, whenever there is risk of damaging the foundations of a nearby structure. <p>MITIGATION:</p> <ul style="list-style-type: none"> * Every possible measure will be conducted to prevent the risk of dust generation. * Established construction schedules will be followed for completion for each task, with the purpose of preventing those effects that are related to movement of materials (total suspended particulates, occupation of additional surfaces of land by equipment and machinery, deterioration of the urban landscape, and obstruction to pedestrian and vehicular traffic) from affecting the population for more than the duration of the minimum time required to finish the works. * If for reasons beyond control, a task is stopped, all affected services will be restored, including the backfilling of ditches, pavement replacement (if the stoppage time is deemed to be greater than one month) and the area will be cleaned. Under no circumstances will a ditch be left open because of the danger to pedestrians and vehicles. * The immediate repair will implemented for any damage caused during excavation activities to other types of infrastructure such as the drinking water or wastewater collection systems, electric lines, or telephone cables.
Operation of machinery and equipment	<p>PREVENTION:</p> <ul style="list-style-type: none"> * Machinery and equipment used will be in good working condition to guarantee that the production of suspended particulates and gases is within the range permitted by Mexican laws. * Appropriate maintenance will be provided to the machinery and equipment in such a way that it will not exceed required standards for noise and pollutants. * Performing work at night will be avoided to prevent noise production that might alter the sleep cycles of the population.

ACTION	MEASURES THAT WILL BE FOLLOWED
	<p>MITIGATION:</p> <ul style="list-style-type: none"> * Silencers will be installed in machinery and equipment to decrease noise production. * Canvases will be used to cover vehicles that transport materials to avoid the loss of materials. * Personal protection equipment will be used (ear plugs for personnel working near loud noise-emitting machines or for those who are exposed for long periods to noise over seventy decibels). * As much as possible, heavy machinery will be transported to the job sites at night to avoid interruptions to vehicular traffic.
Procurement of water for construction	<ul style="list-style-type: none"> * It is proposed that the water necessary for the construction tasks be obtained from the wastewater treatment plant, by transporting it by means of trucks to avoid using potable water in such activities.
Procurement of construction material	<p>PREVENTION:</p> <ul style="list-style-type: none"> * The material will be obtained from material banks or from producers who hold the necessary authorizations. * Construction companies will be notified that it will be strictly forbidden to conduct any activities of extraction, of their own accord, of sand or any other building material.
Generation and disposal of solid wastes	<p>MITIGATION:</p> <ul style="list-style-type: none"> * Any materials produced because of excavation or clean-up will be removed immediately to avoid emission of total suspended particulates and of odors, to avoid the additional use of land to deposit these materials, as well as to prevent infiltration into the sewer system, streams, or surface water bodies. This action will prevent the propagation of harmful species, urban landscape deterioration, and additional obstructions to pedestrian and vehicular traffic, as well as harm to the health of the workers and of the population in general. * Using trash containers with lids, and placing those containers in strategic places so that wastes generated throughout the project will be deposited in the closed containers. * Daily removal of all trash generated. * Disposal of these wastes at the place determined by the proper authorities.
Generation and disposal of liquid wastes	<p>PREVENTION:</p> <ul style="list-style-type: none"> * Open air defecation will be prohibited with the purpose of avoiding the emission of odors; creating eyesores, altering the urban landscape, and placing the health of the workers and of the population in general at risk. <p>MITIGATION:</p> <ul style="list-style-type: none"> * A sufficient quantity of portable toilets will be available for workers to easily access. The facilities will have the necessary periodic maintenance. * The services of a company specialized in handling liquid wastes will be hired to handle wastes generated throughout the site preparation and construction activities. The company credentials will be verified to confirm that it has sufficient means to conduct treatment of these wastes in such a way that will guarantee their proper discharge. * Verified deliveries of burned greases and oils will be made to a company authorized in the handling and final disposal of hazardous wastes. Under no circumstance will these wastes be disposed of into the city's sewer system.

None of the identified adverse effects will have repercussions on the structure and function of the environmental system, especially when the mitigating measures are applied. Moreover, no adverse environmental impacts are anticipated which could be considered cumulative or synergistic.

To avoid erosion along the river banks, discharge structures will be built at the outlet of the storm sewer collectors and of the Concordia Canal, and energy-dissipation structures will be built also discharge structures of the collectors that have super-critical flow regimen.

The implementation of the project will allow a significant reduction to the waste and rain water loads into the Rio Grande with the consequent positive impact on this important binational body of water.

2.3 Compliance with Natural and Cultural Resource Protection Laws and Regulations Applicable.

The determination that there is not a need for an environmental impact authorization was issued by the General Directorship of Environmental Impact and Risk of the Undersecretariat of Environmental Protection Management with document SGPA-DGIRA-DEI-1599/05 of June 21, 2005.

Because the project will be conducted on existing easements, there has been no need to confer with the National Institute of Anthropology and History with regard to the impact of cultural resources or historical sites.

Pending issues:

- CILA/IBWC have completed the review of the project and are developing recommendations to improve the design of the discharge structures to avoid erosion to the bank of the Rio Grande. No major problems are anticipated as a result of the recommendations.

3. Technical Feasibility

3.1 Appropriate Technology

The six collectors and the canal that make up the storm sewer project have final design, which has been reviewed by BECC and NADB. The basic data of the final designs are detailed in the two following tables.

Project's Basic Information				
Item	Independencia Collector	Riva Palacio Collector	Campeche Collector	Paseo Colón Collector
Benefiting Neighborhoods	Hidalgo, Roma, Roma II, Altavista, Jardín Juvencia, Buena Vista, Alianza para la Producción, Maclovio Herrera, Buenos Aires, Peña Benavides, Matamoros, Donaldo Colosio, 20 de Noviembre, Haciendas, J. Longoria, Lomas del Poniente	Sector Centro, Ojo Caliente, Antiguos Patios Ferrocarril, Juárez	Guerrero, Juárez, Morelos, Postal, Jardín	Madera, Riberas del Bravo, SUTERM II, Los Álamos
Benefiting Population	22,000 direct inhabitants 15,000 indirect inhabitants	5,000 direct inhabitants 15,000 indirect inhabitants	10,000 direct inhabitants 25,000 indirect inhabitants	16,000 direct inhabitants 15,000 indirect inhabitants
Surface of the catch basin (hectares)	277	65	198	79
Hydraulic Flow (liters/second)	17,488	6,665	12,558	5,010
Period of Return (years)	2	5	10	10
Rainfall intensity (mm/hr)	28.31	45.83	28.52	28.52

Project's Basic Information			
Item	Septiembre Norte Collector	Septiembre Sur Collector	Concordia Canal
Benefiting Neighborhoods	Campestre, Los Álamos, Burócratas, México, Jardín	Campestre, Electricistas II, SUTERM I, Reforma Urbana, México	Desarrollo Concordia, Rosita, Mirador, Las Torres, Loma Bonita, La Esperanza, La Unión, Anáhuac Sur, Parque Industrial Dos Laredos, Parque Industrial Río Grande, Ferrocarrilera, La Central, Lagos.
Benefiting Population	14,000 direct inhabitants 30,000 indirect inhabitants	4,000 direct inhabitants 12,000 indirect inhabitants	14,000 direct inhabitants 30,000 indirect inhabitants
Surface of the catch basin (hectares)	175	49	432.80
Hydraulic Flow (liters/second)	13,313	3,052	39,213
Period of Return (years)	10	10	10
Rainfall intensity (mm/hr)	34.23	34.23	40.67

The hydraulic flow was calculated using the Rational Method described in CNA's Storm Sewer Manual. The periods of return used for design of the storm sewer structures for the city were recommended by the CNA Manual. The values of rainfall intensity were obtained from intensity-duration-period curves reported by the weather station in Nuevo Laredo.

Alternatives

Due to the nature of the project, it was determined that the best way of solving the flooding problem was the construction of collectors for seven areas for the discharge of storm water into the Rio Grande taking into consideration the factors described in Chapter 1.

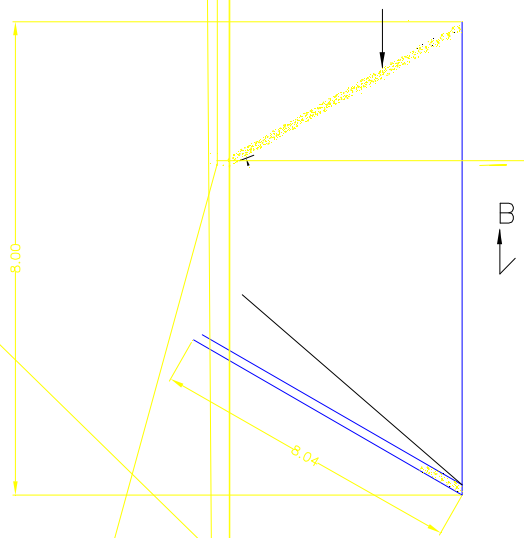
3.2 Technical Process

The structures included in the project do not require electromechanical furnishing and are only the infrastructure for conveying storm water by means of gravity. However, because of the importance of this project for the City of Nuevo Laredo, the collectors were designed with reinforced-concrete pipes resistant to sulfates and furnished with hermetical joints with the purpose of giving the collectors a useful life of fifty years.

The design of the structures for the manholes and the hydraulic calculations for the collector pipe and the Concordia Canal were developed according to the specifications described in CNA's Storm Sewer Manual. Additionally, the entrance structures, such as manholes, include components for grit removal and screening to prevent the entrance of sedimentation solids and other solids of greater size (plastics, bags, branches, etc.) with the purpose of preventing the conveyance and discharge of solids into the river.

The discharge structures for collectors and canal were designed according to the construction specifications of CNA's Storm Sewer Manual. These structures have the purpose to both prevent the collector's erosion and the erosion of the riverbank where the discharge into the river will occur. The discharge flow regimen that is expected (turbulence intensity) at the discharge structures was revised with the purpose of determining the need of building energy-dissipation structures.

The collectors that present a sub-critical discharge flow schedule do not require an energy-dissipation structure. In the following figure, a discharge structure is shown without an energy-dissipation structure.



CUT

forced concrete with 1/2"5rods

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2"5rods @ 20 cm
forced concrete

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Operation and Maintenance Plan

The Municipality has a maintenance program for the existing storm-sewer system. Currently the Municipal General Services Department of Nuevo Laredo is in charge of

4. Financial Feasibility and Project Administration

4.1 Financial Feasibility

The North American Development Bank (NADB) reviewed the financial information submitted by the Sponsor and determined that the financial capability and structure proposed by the Municipality of Nuevo Laredo are adequate. The information submitted and the financial analysis includes, among other elements, the following:

- i. Financial statements historic and pro forma;
- ii. Financial structure of the project;
- iii. Investment budget;
- iv. Budget of operation and maintenance historic and pro forma; and
- v. Economic and demographic information of the Project's area.

The detailed analysis of the financial information of the Project is found within the credit proposal that will be submitted for authorization to NADB's Board. The following discussion provides a summary of the financial analysis.

The total cost of the Project is estimated as MX\$ 483.93 million, and includes the credit's closing costs, design, supervision, construction, Value Added Tax and unforeseen expenses.

Item	Amount (Millions of Pesos)
Construction	479.57
Design	4.21
Credit Closing Costs	0.15
TOTAL	483.93

The Municipality and State agreed on a financial structure that will allow for the implementation of the project as follows:

Source of Financing	Amount (Millions of Pesos)	%
Municipality / State	241.96	50
NADB Credit	241.96	50
TOTAL	483.92	100

The Municipality of Nuevo Laredo has a solid financial situation that is reflected in the level of its revenues and the control of its expenditures. The Municipality will commit part of its revenues to pay the debt service.

Nuevo Laredo has an efficient administration of its finances. The effective management of its resources and its financial discipline has translated into an operational surplus. NADB's loan will not affect the financial situation of the Municipality, so it will be able to continue to meet its future infrastructure needs.

4.2 Rate / Fee Schedule

Because of the characteristics of the Project, the Municipality of Nuevo Laredo will not have to implement a rate and fee structure for this particular project.

The Municipality of Nuevo Laredo has sufficient revenues to cover the service of its debt to NADB. Also, the Municipality will commit the necessary resources to complete the project's construction, as well as to operate and maintain the project's associated infrastructure.

4.3 Project Management

The Project will be administered by the Municipality of Nuevo Laredo, Tamaulipas, which has the adequate personnel to administer the proposed infrastructure and has the capacity to resolve any potential emergency related to the operation and maintenance of the works.

The sponsor will submit the organization charts to reflect the management structure of the project during the construction and operation phases, prior to project certification.

5. Public Participation

5.1 Public Participation Plan. The public participation plan was submitted to BECC by COMAPA on June 13, 2005 for revision and approval. BECC approved the public participation plan on the 16th of that month. The Plan includes the development of a steering committee, a list of local organizations to contact to present the project and solicit support for it, provide public access to project information and hold public meetings. A summary of the activities held in each category is presented below.

5.2 Steering Committee. The steering committee was composed of Tomas R. Valdes Dávila, Steering Committee President, of the Consejo Desarrollo Industrial; Rene González de la Hoya, Committee Secretary, of the Consejo Coordinador Ciudadano; José Gpe. Covarrubias Rodríguez, Technical Secretary, of COMAPA; Héctor Hugo Santos, of the Colegio de Ingenieros Civiles; Jorge Viñals, City Councilman; Carlos Montiel Saeb, Local Assemblyman; Rogelio Ortega Escobedo, Lions Club; José Ramos Zapata, of the Cámara Mexicana de la Industria y Construcción; Desiderio González, Rotary Club; Eusebio Salas Mancillas, local NGO; José María Morales Domínguez, of the Confederación de Trabajadores de México; Arnulfo Tejada Lara, of the Asociación de Colonos Populares; David Negrete Arroyo, of the Comisión Internacional de Limites y Aguas; and Samuel Esquivel, of the Colegio Nacional de Educación Profesional Técnica.

The committee had a technical support group, whose primary responsibilities were to advise the committee about the project, present the technical and financial aspect of the project at the public meetings and the media, and provide support to the committee during outreach to local organizations presentations.



5.3 Local Organizations. Presentations of the project were made to the Asociación de Construcción; Asociación Mexicana de Profesionistas Inmobiliarios; Colegio de Ingeniero; Consejo de Instituciones; Agentes Aduanales; Transportistas; Barra de Abogados; Colegio de Notarios; Confederación de Trabajadores de México; Social Clubs; Rotary and Lions Clubs; Maquiladoras; Academic Institutions (Universities); the Asociación de Colonos Populares and the Confederación Nacional de Organizaciones Populares. Twenty letters of support were received by these organizations and more than 500 people attended the presentations.

5.4 Public Access to Project Information. Specifics of the project were made public through brochures, project maps, newspaper coverage, and public meeting notices, which

were published in El Mañana, El Diario and Primera Hora newspapers.



The final design documents of the seven project components were available for public review at the central offices of COMAPA and City Hall 30 days prior to the public meetings.



5.5 Public Meetings. Two public meetings were held. The first public meeting was held on July 2, 2005 with approximately 1200 people attending. Exit surveys taken at the public meeting show that 95% support the project, the need of it and understood its benefits. The second public meeting was held on August 17, 2005 with about 120 participants. The financial aspects presented at this meeting included no water or wastewater rate increase for the project will take place. Exit surveys at this meeting showed that 95% support the financial aspects of the project. Newspaper and television covered both meetings.

5.6 Final Public Participation Report

The Final Public Participation Report was delivered to BECC with the supporting documentation that shows the extent and fulfillment of the public participation objectives and public support for the project as outlined in the BECC certification requirements.

Conclusion

The implementation of the required public participation process led to public understanding and support of the technical, financial, and social risks and benefits of the Storm Sewer project for the City of Nuevo Laredo. The public participation objectives were met and achieved through the participation and support of the local Institutional Council, which includes 52 local organizations; through Labor Organizations such the Worker Federation of Nuevo Laredo, neighborhood associations, universities, professional associations and the general public, who expressed their support to find a solution to the constant inner city flooding caused by the seasonal monsoons. And throughout the process, COMAPA made it clear that the project will not require a rate increase in water or wastewater to pay for the project, as the funding will come from State and Municipal Governments and the NADB loan.

6. Sustainable Development

6.1 Definition and Principles

The Comprehensive Storm sewer collectors' Project for the City of Nuevo Laredo meets the definition of sustainable development promoted by BECC: “an economic and social development based on the preservation and protection of the environment and the rational use of natural resources, taking into account current and future needs, as well as the present and future impact of human activities.”

The purpose of the project is to implement improvements to the existing storm-sewer network of the city. In general terms the proposed project will promote important benefits to the environment, human health and social health because the following feasible goals are set:

- The elimination of the combination of wastewater and storm water discharged into the Rio Grande.
- Avoiding flooding through storm-sewer service in areas of the city, mainly in the downtown area, affecting houses, streets, shops, and the economic and everyday activities of the residents.
- Eliminating conditions that foster the proliferation of water-borne and arboviral diseases in the area impacted by the project.

6.2 Institutional and Human Capacity Building

Because of the project's nature, actions toward strengthening institutions have not been necessary, since the Municipality has the existing technical and economic capacity to operate and maintain the new infrastructure to be constructed with the project.

6.3 Conformance with Applicable Local and Regional Conservation and Development Plans

This project complies to the short-term actions considered in the Drinking Water and Sanitation Master Plan of Nuevo Laredo, like the need to implement projects to disconnect the sanitation and storm water infrastructure. Through the project's implementation, great volumes of storm water will be diverted from the sanitation sewer system in order to avoid overloading the existing wastewater treatment plant and the subsequent diversion of untreated sewage into the Rio Grande due to storm water.

In regard to regional planning, the project incorporates actions included in the National Water Plan 2001-2006 (PNH), placing special attention on one of the plan's national goals, which looks to foster the extension of coverage and quality of services of drinking water, and sanitation. The project is geared toward the reduction of water pollution in a basin considered by Plan PNH as a priority because of its binational nature, because of its

economic activities, and because of the great number of communities that are located along the banks of the Rio Grande downstream from Nuevo Laredo that use this body of water.

The project adheres to Goal #1 of the México-United States Border 2012 Environmental Plan, which promotes the reduction of water pollution. One of the guiding principles of this program is reducing greater risks to public health, and to conserve and restore the natural environment.

The 2001-2006 National Program on Natural Resources and the Environment establishes that due to its demographic and economic dynamics as well as its environmental characteristics, Mexico's northern border is singled out as a priority region for the design and application of environmental policies and programs.

6.4 Natural Resources Conservation

The project's implementation will decrease the discharge of untreated wastewater and storm water into the Rio Grande and consequently will reduce the pollution levels of this important binational body of water.

6.5 Community Development

The works that make up the project will benefit directly the community, mainly those zones that due to a lack of storm sewer suffer repeatedly from flooding that harm houses and businesses and disrupt everyday-life activities of the residents. In addition, the conditions that are ideal for the spread of water and arboviral diseases will be eliminated.

Project available documents (only in Spanish)

- "Manual de Alcantarillado Pluvial", Subdirección General Técnica de la Comisión Nacional del Agua (CNA), 2002
- "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", Comisión Nacional del Agua (CNA), Diciembre 1999.
- "Cinco Principales Causas de Morbilidad 2004-2005", Oficio No. 6018-147, Secretaría de Salud, Jurisdicción Sanitaria No. V, 8 de Junio del 2005.
- "Consulta ante SEMARNAT para determinar competencia y modalidad de evaluación ambiental", Oficio No. PS-2005-05-091, Comisión Municipal de Agua Potable y Alcantarillado del Municipio de Nuevo Laredo, 24 de Mayo del 2005.
- "Determinación de no requerimiento de una Evaluación Ambiental", Oficio No. SGPA-DGIRA-DEI-1599/05, Dirección General de Impacto y Riesgo Ambiental

- de la Subsecretaría de Gestión para la Protección Ambiental, SEMARNAT, 21 de Junio de 2005.
- “Envío de Proyectos Ejecutivos de Colectores de Drenaje Pluvial a la Comisión Internacional de Límites y Aguas”, Oficio No. PS-2005-05-101, Comisión Municipal de Agua Potable y Alcantarillado del Municipio de Nuevo Laredo, 13 de Junio del 2005.
 - “Comentarios a Proyectos Ejecutivos de Colectores Pluviales”, Oficio No.NL-216/05, Comisión Internacional de Límites y Aguas, 7 de Julio del 2005.
 - “Respuesta a Comentarios a Proyectos Ejecutivos de Colectores Pluviales de la Comisión Internacional de Límites y Aguas”, Oficio No. GT-2005-09, Comisión Municipal de Agua Potable y Alcantarillado del Municipio de Nuevo Laredo, 26 de Agosto del 2005.
 - “Proyectos Ejecutivos de Drenaje Pluvial”, Comisión Municipal de Agua Potable y Alcantarillado del Municipio de Nuevo Laredo, Octubre 2005.
 - “Plan Integral de Participación Pública”, Comité Ciudadano del Proyecto Integral de Drenaje Pluvial, 16 de Junio del 2005.
 - “Informe Final de Participación Pública”, Comité Ciudadano del Proyecto Integral de Drenaje Pluvial, Octubre del 2005.