

Border Environment Cooperation Commission

Potable water and wastewater hook-up projects in seven Texas communities

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1. **Type of Project.** The project is related to the distribution of potable water and collection of wastewater.
2. **Project Location.** The following seven communities in three counties in Texas will benefit with this project.

Cameron County:

City of Combes

City of Primera

City of San Benito

Hidalgo County:

City of San Juan

City of Donna

City of Mercedes

Val Verde County:

City of Del Rio

3. **Description of Projects and Tasks.** The purpose of the project is to expedite the hook-up process for users in different *colonias* in the previously listed communities. This project will provide the necessary resources to hook-up these services to residents in these communities with funds from the North American Development Bank (NADB) and the Texas Water Development Board (TWDB). Likewise, NADB will provide financial assistance to assist local promoters in identifying users and determining their eligibility to receive financial assistance to connect these services. Within the scope of the project, the potable water hook-ups will be limited to the residential meter, and wastewater to the residential discharge system. Currently, 23,155 persons live in these communities and it is estimated that in the next 20 years the population will increase to 33,583 persons.

The following table shows for the *colonias* that will be serviced by the project, the population percentages that currently receive these services and their projection when they are concluded.

Community (Local Promoter)	Service Availability (%)			
	Actual		Projected	
	PW	WW	PW	WW
City of Combes	95	0	100	100
City of Primera	100	0	100	100
City of San Benito	0	0	100	100
City of Donna	0	0	100	100
City of San Juan	100	0	100	100
City of Mercedes	93	0	100	100
City of Del Rio	68	0	100	100

Note: PW = Potable Water, WW = Wastewater

The project tasks include the establishment of a public participation program to identify eligible users for financial assistance, the bid for the construction of these works, and their construction. It is estimated that the construction of the main components of the project will begin in October 1999 and conclude in the year 2001.

- 4. Compliance with International Treaties and Agreements.** The project does not affect any international treaty between the two countries, since the potable water and sewerage services will only be expanded to the *colonias* in these communities.

II. Human Health and the Environment

- 1. Human Health and Environmental Needs.** The current unhealthy conditions in the *colonias* consist of inadequate designs and construction of septic tanks and latrines used to dispose of wastewater. Also, some areas do not provide water supply or sewerage services. Consequently, these conditions have created public health risks for the population of communities involved in the project. The Texas Natural Resource and Conservation Commission (TNRCC) and the Texas Department of Health (TDH) have indicated that the existing conditions do not comply with the minimum sanitation and health standards, as defined by TDH. Such conditions include the exposure of the public to sewage, human excreta and wastewater, the presence of surface privies and overflowing septic tanks, and other conditions that could lead to the transmission disease.

Accelerating the hook-up process to the water supply and sewerage systems, the septic tanks that work inadequately could be removed rapidly, and the related health problems previously described can be eliminated.

- 2. Environmental Evaluation.** The TWDB provided the funds to each one of the communities involved in the project, in order for them to develop engineering plans and complete the corresponding environmental studies. As required by the TWDB, each community developed their own environmental information document (EID). The corresponding local, state and federal agencies have reviewed each one of these documents, and the corresponding FONSI has been issued.
- 3. Compliance with Ecological and Cultural Resources Laws and Regulations.** All applicable documents have been submitted and reviewed. TNRCC issued the Alteration Manifestation documents and TWDB issued the corresponding FONSIs. Currently, USEPA is reviewing all the environmental information. No additional authorization is required from other agencies for these type of projects and the works will be carried out in previously altered zones. This effort is also being carried out in coordination with the Texas Historical Commission (THC). Likewise, no impact is anticipated on historical sites.

• III. Technical Feasibility

- 1. Appropriate Technology.** This project will use basic technology for potable water and

sewerage systems hook-ups in the seven participating communities. The potable water hook-ups will be pressure tested, drained and disinfected before being put in operation. Among other characteristics, the pipes will be of polyethylene ASTM-D-2737 or PVC ASTM-D-1785, and the material for hook-ups should be able to support a minimum work pressure of 160 psi. The sewerage hook-ups will be through a tilted pipe in order for the waters to run-off through gravity. Among other characteristics, the pipes will be PVC SDR or code 40 and should comply with ASTM-D-3034 or ASTM-D-1785 requirements, and the minimum grade will be 1/8 inch per lineal foot.

2. **Operation and Maintenance Plan.** Usually, residential hook-ups are free of significant operation and maintenance, and the main tasks are carried out in the main pipes of the corresponding systems. For this project it is anticipated that each hook-up will have a start-up test for all its components, and prior acceptance by the owners to insure adequate operation.
3. **Compliance with Applicable Design Standards and Regulations.** All the project components comply with the corresponding Texas and federal regulations and no specific permits or licenses are required for these type of programs of connections.

IV. Financial Feasibility and Project Management

1. **Financial Feasibility.** The total estimated costs for the water connections are \$1.5 million, and \$7.4 million for the wastewater connections. Cost estimates for connections are estimated to be \$500/connection for water and \$1,100/connection for wastewater.

Name of Project		Estimated Construction Cost for Connection to Water and W.W. Systems	
		Water	W.W.
County	Applicant		
Cameron	Combes, City of	\$17,500	\$800,800
Cameron	Primera, City of	\$0	\$966,900
Cameron	San Benito, City of	\$75,000	\$165,000
Hidalgo	Donna, City of	\$638,000	\$1,403,600
Hidalgo	San Juan, City of	\$0	\$1,491,600
Hidalgo	Mercedes, City of	\$26,500	\$827,200
Val Verde	Del Rio, City of	\$621,000	\$1,366,200
	Project Coordinatiorn	\$68,900	\$351,100
	Totals	\$1,446,900	\$7,372,400

The financial structure of the project consists of grant funding from the NADB and TWDB. While all the agencies will be participating in the project, it is not possible to determine the exact amount that each agency will contribute. The final amount will be determined after the implementation of the Outreach Plan. The Potable water and wastewater hook-up project in seven Texas communities, will be financially supported by the Environmental Protection Agency funded Border Environmental Infrastructure Fund (BEIF), administered by the NADB. It is estimated that the NADB will be asked to provide approximately \$8 million in BEIF funding. The next table lists the sources and uses of the existing commitments by the TWDB to fund the construction costs for the new water distribution and wastewater collection systems.

Project Financial Structure

Name of Project		Source of Funding						
County	Applicant	EDAP Water Grant	EDAP Water Grant	EDAP Water Loan	EDAP Water Loan	SRF Loan	W.S. Loan	Ineligible Cost
Cameron	Combes, City of	\$11,324,962	\$1,514,813	NA	NA	NA	NA	NA
Cameron	Primera, City of	\$8,122,383	\$393,819	\$298,000	NA	NA	NA	NA
Cameron	San Benito, City of	\$1,113,767	\$923,816	NA	NA	NA	NA	NA
Hidalgo	Donna, City of	\$5,125,000	\$4,950,000	NA	NA	\$2,775,000	\$5,795,000	(\$590,000)
Hidalgo	San Juan, City of	\$7,078,257	NA	\$549,000	NA	NA	NA	NA
Hidalgo	Mercedes, City of	\$5,769,827	\$135,142	\$124,000	NA	NA	NA	NA
Val Verde	Del Rio, City of	\$5,347,051	\$5,130,512	NA	\$533,000	NA	NA	NA
Total		\$43,881,257	\$14,048,102	\$1,071,000	\$533,000	\$2,775,000	\$6,795,000	(\$590,000)

The Sensitivity Analysis involves the potential impacts related to delaying construction of the connections. The next table presents the loss of revenue if connections are delayed. Based on the existing rates of the local sponsors, delaying connections by three months on these projects will, in the aggregate, reduce potential revenue by approximately \$150,000 in lost water sales, and \$240,000 in lost revenues from wastewater treatment. If the process were to be completely delayed by 24 months these communities would lose an estimated \$1.1 million in water revenues and \$1.9 million in wastewater revenues.

Time Delay	Water	WW
3 months	\$134,632	\$238,012
6 months	\$269,264	\$476,023
9 months	\$403,895	\$714,035
12 months	\$538,527	\$952,046
15 months	\$673,159	\$1,190,058
18 months	\$807,791	\$1,428,069
21 months	\$942,422	\$1,666,081
24 months	\$1,077,054	\$1,904,092

Name of Project		Billing Rate (monthly)		
County	Applicant	Water (10,000gal)	W.W. (6,000 gal)	Combined Bill
Cameron	Combes, City of	\$24.00	\$14.42	\$38.42
Cameron	Primera, City of	\$24.40	\$20.69	\$45.09
Cameron	San Benito, City of	\$14.25	\$15.00	\$29.25
Hidalgo	Donna, City of	\$27.50	\$11.90	\$39.40
Hidalgo	San Juan, City of	NA	\$9.72	\$9.72
Hidalgo	Mercedes, City of	\$6.75	\$8.00	\$14.75
Val Verde	Del Rio, City of	\$16.13	\$11.29	\$27.42

2. **Tariff Model:** Each of the applicants have their own organization and rate structure. The monthly billing rate for each one is shown in the following table.

A second factor to be considered in this analysis is the potential savings to the funding agencies through economies of scale in bidding the projects.

3. **Project Administration.** Each of the local sponsors will continue with their own administration.

V. Public Participation

Comprehensive Public Participation Plan. *The objectives of the Comprehensive Community Participation Plan (Plan) are to ensure that the community understands and supports the environmental, health, social, and financial benefits and costs of the project, as well as any changes in user fees.* The State of Texas through the Secretary of State - Colonias Initiative Office submitted a Plan in late August 1999. The Plan comprises the development of three community steering committees; identification of local stakeholder groups; holding at least six public meetings; and develop a final report documenting public support for the project. The activities carried out in fulfillment of this Plan are described below.

1. Steering Committee:

The project encompassed three counties and three separate county steering committees were developed to coordinate the public participation process. The role of the committees was to select meetings times and places, identify outreach methods, develop the agendas and define their post-certification roles. Administrative support was provided by the Secretary of State's office, and the consulting engineers provided additional support. Their composition was as follows:

Cameron County Steering Committee:

Gracie Escobedo, City of Primera; Tammy DeGannes, City of San Benito; Santos Saldivar, City of Combes; Judy Vera, Valley Interfaith; Remi Garza, Cameron County Judge's Office; and Scott Storment, Texas Secretary of State's Office. This committee's organizational meeting was held on August 4, 1999.

Hidalgo County Steering Committee:

Carissa Baldwin and Mody Guzman of Valley Interfaith; Alex Estrada, City of Donna; Jaime Ortiz, City of Mercedes; Rick Rodriguez and Juan Zuñiga, City of San Juan; and Lisa Alemán, Hidalgo County Judge's Office. This committee's organizational meeting was held on August 4, 1999.

Val Verde County Steering Committee:

Enriqueta Quiñones and Maria Luz Saucedo, Border Organization; Pete Maldonado, City of Del Rio; Domingo F. Davalos, Texas Secretary of State's Office; and Rogelio Musquiz, Val Verde County Commissioner-Precinct 2. This committee's organizational meeting was held on September 16, 1999.

2. Local Organizations:

Local organizations identified as key players in the public participation process were the community-based organizations Valley Interfaith and the Border Organization. In addition, cities and counties affected by the project were also part of the local organizations contacted. The cities of Del Rio, Primera, San Benito, Combes, Mercedes, San Juan and Donna, and the counties of Val Verde, Cameron and Hidalgo were contacted and participated in supporting the project.

Valley Interfaith worked in Cameron and Hidalgo counties. Valley Interfaith has worked in grassroots organizing in these counties for the past 12 years. The Border Organization has been organizing in the colonias around Del Rio and Eagle Pass, Texas for the past eight years. Colonia leaders affiliated within the organizational structures of these two organizations organize meetings and the community around issues that affect their neighborhoods.

Resolutions in support of the project were submitted to the State of Texas Secretary of State - Colonia Initiatives Office by the Senator Kay Bailey Hutchinson, the cities of Primera, Combes, Mercedes, Donna and San Juan. Valley Interfaith and Border Organization provided letters of support as well.

3. Public Information:

The Step II application was on file with the County Judges of each county and the local sponsors made this information available at their respective city halls. Notices for the public meetings were published in the local newspapers, church bulletins, and delivered door to door. At each of the meetings an agenda was given to the attendees along with information on how they could qualify for financial hook-up assistance. All this information was supplied in Spanish and English.

The notices delivered door to door included public meeting dates and agenda. The informational network used by Valley Interfaith and the Border Organization was a key element in the colonia outreach efforts. In Primera, San Benito, Mercedes and San Juan, Combes and Donna, Valley Interfaith and city staff went door to door delivering 4000 flyers for the colonia meetings, and in Del Rio the Border Organization delivered 1000 flyers door to door.

The 30-day notices were posted in Del Rio News Herald, McAllen Monitor, Harlingen Valley-Morning Star and Texas Register. Media coverage of the project included a news story in the Harlingen Valley Morning Star on September 2nd, and a story in the McAllen Monitor on October 8th and in KVJY-840 (Spanish radio station) from Harlingen.

Public announcements of the meetings were posted at convenience stores in Primera and Combes and at the respective City Halls and County Courthouses. They were made at the Mercedes Sacred Heart Catholic Church during three masses on August 22; during Valley Interfaith house meetings in Mercedes, San Juan and Donna; at St. John-the-Baptist Catholic Church in San Juan during two masses on August 29; at Christ the King Catholic Church during two masses on August 29 in Donna; and; at the Juan Diego Chapel in Del Rio on September 25.

4. Public Meetings:

Eleven public meetings were held. At each of the public meetings an agenda was given to the attendees along with information on the project and qualifications for financial assistance for the hook-ups.

Public meetings took place on the following dates for colonias residents:

Cameron County:

On August 24 at the Primera Community Center in Primera: 70 people attended.

August 26 in San Benito at the Sacred Heart Catholic Church: 20 people attended.

September 2 in Combes at the Combes Community Center: 123 people attended.

October 6 in Brownsville at the Cameron County Courthouse: 21 people attended.

Hidalgo County:

August 25 in Mercedes at the Sacred Heart Catholic Church: 52 people attended.

August 31 in San Juan at the Reed-Mock Elementary School: 204 people attended.

September 1 in Donna at the Cristo Rey Catholic Church: 69 people attended.

October 7 in Edinburg at the Hidalgo County Courthouse: 5 people attended.

Val Verde County:

September 30 in Del Rio at the Juan Diego Catholic Chapel: 85 people attended.

October 5 in Del Rio at City Hall: 21 people attended.

November 10 in Del Rio at City Hall: 86 people attended.

The numbers above reflect the actual number of persons that signed-in at the meetings. They do not reflect the actual number of colonia residents who attended and overall it is estimated that over 800 colonia residents attended the meetings.

Below is a sample list of questions asked by the residents:

- Will the hook-ups be mandatory?
- When will construction begin?
- Will the septic tanks be taken out of service?
- Will I have to contract a plumber to connect to the system?
- Do I have to own property to qualify?
- If I do not qualify, is there other assistance available?

In general, the answers were that the hook-ups will be mandatory and construction should begin in the spring of 2000. Septic tanks will be taken out of service, and a general contractor will do the connection to the households. Regarding qualifications, the residents were told that they did not have to own property and proof of income is needed to qualify. A 1% loan will be available through the Colonia Plumbing Loan Program for those who do not qualify which is repayable over a 5 year period.

• VI. Sustainable Development

1. **Definition and Principles.** The project agrees with BECC's definition of Sustainable Development: *"An economic and social development based on the conservation and protection of the environment and the rational use of natural resources, but taking into consideration current and future needs, as well as present and future impacts from human activities"*.
2. **Institutional and Human Capacity Building.** These projects will allow for residential connections to the potable water and sewerage system in the colonias, will eliminate the risk to human health that is currently present due to the inadequate use of septic tanks and latrines, and will mean a new source of income for the cities, through proper operation and maintenance of the system and the ability to collect money for these services from the people benefited. The NADB will promote financial assistance and administrative support to assist local promoters in identifying customers and determining their eligibility for financial assistance, in order for them to connect to the new water and/or sewerage system.
3. **Compliance with Local/Regional Applicable Conservation and Development Plans.** The Texas Water Development Board and the Texas Natural Resource and Conservation Commission have authorized and support the connection project for seven communities in Texas, it being consistent with regional guidelines for the State of Texas, to plan for providing potable water, sewerage and sanitation services.
4. **Natural Resource Conservation.** With the elimination of septic tanks and latrines and the connection to the water supply and sewerage systems of the corresponding cities, the contaminant load, which is currently discharged to underground and surface bodies of water, will be greatly reduced.
5. **Community Development.** The project will help satisfy potable water and sewerage needs for colonias involved in a 20-year horizon. The project will also have an important impact in

the colonias, by providing residents with an adequate wastewater disposal system, prior to the date that was originally projected.