CITY OF ROMA COLONIAS WATER AND WASTEWATER IMPROVEMENTS PROJECT

PDF Format

SECTION 1. EXECUTIVE SUMMARY

Background

The City of Roma received approval from the Texas Water Development Board in August 1997 for funding of $28,977,700 for proposed water and wastewater improvements under the Economically Distressed Areas Program. All proposed improvements are within the corporate city limits and extra-territorial-jurisdiction (ETJ) and within the boundaries of Roma's existing Certificate of Convenience and Necessity (CCN). The project area includes sixty-eight (68) separate colonia/subdivision areas, some of which are in the City of Roma, while others are spread out to the east and west of the City.

Presently, all of the project area is served by the Roma Public Water Supply System. The water system, however, lacks the capacity necessary to properly serve the population and fails to meet a number of Texas Natural Resource Conservation Commission (TNRCC) minimum design criteria (*Appendix A*). Substandard areas include raw water pumping, water treatment, elevated storage and distribution system capacity. In addition, the City has been cited by the TNRCC for numerous monthly violations of the Total Trihalomethane (TTHM) concentrations in finished water. The term trihalomethanes (THMs) is a family name for ten molecules which are made up of carbon, hydrogen and three halogen atoms. THMs include known carcinogens and suspected carcinogens. The City has recently been able to change the disinfectant that was used (free chlorine) to chlorine dioxide and chloroamines. This strategy has kept the TTHM's below limits the past few motnhs.

Only a small portion of the project area is served by Roma's Wastewater System. The collection system serves a few of the areas within the city limits, which represents about one-third of the possible service connections in the area. The remainder of the households utilize sub-standard septic tanks/cesspools to dispose of their wastewater. These facilities pose a significant health threat to the community, since most are placed on inadequately sized lots or soil conditions which are unsuitable for septic systems. The existing Wastewater Treatment Plant (WWTP) has been operating at or near its capacity in recent years and has recently been cited by the TNRCC for being unable to meet the minimum design standard for treatment capacity (*Appendix B*).

The proposed project improvements will provide service to 5,190 existing households. This number is expected to increase to approximately 5,960 by the design year 2015. The Project will provide new wastewater service to 3,688 connections, of which 2,746 are EDAP-eligible connections.

While the TWDB funding will provide wastewater collection lines in the colonia areas and provide expansion of the City's WWTP, there is not funding available from the TWDB to provide private service connections from the property line to the household. It is anticipated that NADBank will provide funding for these 2,746 connections that are EDAP-eligible, while other agencies such as USDA Rural Development or the Texas Community Development Program will fund the remaining 924 new connections.

Obtaining a source of funding for the service connections is critical to the City of Roma so that the community can benefit from the new wastewater collection system thus ending the continuing health risk posed by the present use of inadequate septic tanks or cesspools as noted by the TNRCC Nuisance Finding (*Appendix C*). Adding new connections to the utility system will also provide additional revenues to meet the debt service obligations incurred by the TWDB-EDAP Project (approximately $9.7 million loan to City of Roma).

With the burden of providing wastewater collection lines to service the colonia areas, the City cannot afford additional loans to fund the private connections. Since these are low-income families, the residents themselves cannot afford to pay for the service connections either (median household income of $9,454). In fact, the combined Household Cost Factor that residents pay for water and sewer service is 5.32%.

All housing in the proposed project area currently have indoor facilities. No dwelling rehabilitation will be necessary to allow the use of the proposed water improvements according to the Facility Plan approved by the TWDB. The only rehabilitation of dwellings that will be necessary to allow the use of the proposed wastewater collection system involves those residences that are presently using a septic tank or cesspool. Each of these dwellings will require a yard service line to connect to the dwelling's waste plumbing to the applicable section of the proposed sewer collection system connection.

Consequently, the City of Roma defined the concept and the monetary requirements for implementation of the private service connections to residents that will be served by the proposed wastewater collection and treatment improvements. The outline of the needs and the funding required was submitted as a Step 1 Format to BECC in early May 1998.

In addition to seeking funding for sewer service connections, the City of Roma has also applied for assistance from the NADBank in the form of a Rate Study and Project Management Study. Currently, each of these projects is underway. However, based on previous discussions with the BECC and NADBank officials, it is the intent of this Step 2 Application to request *Transitional Funding Assistance* in the amount of $7,000,000 based upon the results and recommendations of the current Rate Study.

In addition, this Step 2 Application also intends to request funding for a System Control and Data Acquisition (SCADA) System for the proposed water and wastewater improvements based upon the recommendations presented in the Project Management Study. Preliminary cost estimates for the proposed water and wastewater SCADA Systems is $600,000.

A. General Project Description

The City of Roma is located in the southern portion of Starr County directly across from the Rio Grande from *Miguel Aleman, Tamaulipas, Mexico* and approximately 50 miles northwest of McAllen, Texas. Included in the City's proposed improvements is water and wastewater service to 68 colonias located within and outside the City limits.

The proposed water distribution improvements consists of 7,000 linear feet of 6-inch water line, 26,800 linear feet of 8-inch water line, 3,500 linear feet of 10-inch water line, 15,300 linear feet of 12-inch water line, a 200,000 gallon elevated storage tank, and improvements to a booster pump station. The City owns a Water Treatment Plant with a treatment capacity of 1.50 MGD which is proposed to be expanded to a treatment capacity of 5.15 MGD.

The proposed wastewater collection system improvements consist of 240,660 linear feet of 6-inch sewer line, 99,800 linear feet of 8-inch sewer line, 8,610 linear feet of 10-inch sewer line, 5,650 linear feet of 12-inch sewer line, 4,130 linear feet of 15-inch sewer line, 700 linear feet of 18-inch sewer line, 22 lift stations, and 96,900 linear feet of 3-inch to 20-inch sewer force main. The City owns a Wastewater Treatment Plant with a treatment capacity of 0.360 MGD which is proposed to be expanded to a treatment capacity of 2.36 MGD in two phases, each of which will add 1.0 MGD.

The improvements described on the previous page are currently funded by the TWDB and the City of Roma. However, the project that remains is the funding and the construction of the yard service lines, the costs to pump-out the septic tanks or cesspools, remove tanks, and backfill. Table 1 describes the number of occupied lots, proposed connections and their costs within the Roma city limits; Table 2 describes the colonia areas located east and west of the Roma city limits, the occupied lots, proposed connections and their costs. The total cost for each occupied lot was calculated as follows:

Yard Line (approx. 100 feet) $600/Each

Pump & Abandon Septic Tank/Cesspool $400/Each

TOTAL $1,000/Each

The total construction cost to provide sewer hook-ups to all of the lots that can be served by the TWDB-EDAP Wastewater Project is shown below:

Total No. of Lots x Cost per Lot = Total Construction Cost

2,746 Lots x $1,000.00/Each = $2,746,000.00

The total project costs to provide sewer service to residents is presented below:

Administration $ 200,000.00

Project Management/Design $ 50,000.00

Construction $2,746,000.00

Contingency (10%) $ 411,900.00

TOTAL $3,407,900.00

TABLE 1

OCCUPIED LOTS TO BE CONNECTED BY EDAP PROJECT

TO SEWER COLLECTION LINES

IN OLD ROMA CITY LIMITS

MAP AREA	PROPOSED CONNECTIONS	ESTIMATED COST ($'s)
No. 1	32	$32,000
No. 2	142	$142,000
No. 3	88	$88,000
No. 4	96	$96,000
No. 5	62	$62,000
No. 6	117	$117,000
No. 12	86	$86,000
No. 13	85	$85,000
TOTAL	**708**	**$708,000**

TABLE 2

EDAP PROJECT DESCRIPTIONS AND COSTS

COLONIA AREAS EAST AND WEST OF ROMA

MAP AREA	PROPOSED CONNECTIONS	ESTIMATED COST ($s)

Campo Bella #2	5	$5,000
Campo Bella #3	18	$18,000
De La Cruz	50	$50,000
Nacho Garza	14	$14,000
Central Colonia	138	$138,000
Villa de Frontera	31	$31,000
Villa Charles Marco	15	$15,000
East Colonia	201	$210,000
Alamo Road	50	$50,000
Fronton	89	$89,000
Escobares	312	$312,000
East Escobares	178	$178,000
De los Santos	15	$15,000
U.S. Hwy 83	60	$60,000
Juan Escobar	55	$55,000
West FM 649	91	$91,000
FM 649	55	$55,000
Garceno Drive	129	$129,000
East FM 649	46	$46,000
Los Barreras	58	$58,000
U.S. Hwy 83 South	21	$21,000
U.S. Hwy 83 North	140	$140,000
Miguel Barreras	30	$30,000
Los Ebanos	69	$69,000
Mireles	23	$23,000
Villarreal	30	$30,000
Loma Vista	115	$115,000
TOTAL OUTSIDE EDAP CONN.	**2,038**	**$2,038,000**

B. Compliance with BECC criteria

B.1. General Information

The City of Roma TWDB-EDAP Project consists of both water distribution and treatment improvements and wastewater collection and treatment system improvements. A brief discussion of each is presented below.

Water Treatment. The City of Roma and the TWDB-EDAP staff analyzed two different options for the water treatment plant expansion; expansion of existing site versus acquiring a new site. The alternative chosen was expansion of the existing treatment plant. The City operates an existing water treatment plant on a city-owned site in downtown Roma, adjacent to the Rio Grande River. This site has an "old" water treatment plant and a water treatment completed in 1985 in operation that provides a total treatment capacity of 1.50 MGD. The 1985 plant layout was intended to provide more capacity than originally constructed. The design of the plant provided for adding three more clarifiers and at least four more filters in the future.

The existing 1985 treatment plant is proposed to be expanded by 3.65 MGD to provide a total treatment capacity of 5.15 MGD. All design improvements are in accordance with 30 TAC § 290. The funding for design and construction of these improvements is from the City of Roma and the TWDB.

Water Distribution. A hydraulic analysis was completed for the east and west distribution systems outside the city limits using the model Cybernet. The demands for the model have been based on the TNRCC's requirements including 1.5 gpm per connection for direct service connections and 0.6 gpm per connection for storage supply for those indirectly connected to the system. The analyses showed that severe low pressures occur when the system is forced to supply demands based on the TNRCC's requirements. The TNRCC requires distribution systems to maintain a minimum of 35 psi throughout the system. The existing east and west systems cannot supply TNRCC required demands nor can the systems maintain the required 35 psi at service connections.

The proposed system will replace deficient water lines, booster stations, and storage facilities. The proposed water distribution improvements consists of 7,000 linear feet of 6-inch water line, 26,800 linear feet of 8-inch water line, 3,500 linear feet of 10-inch water line, 15,300 linear feet of 12-inch water line, a 200,000 gallon elevated storage tank, and improvements to a booster pump station. The funding for design and construction of these improvements is from the City of Roma and the TWDB.

Water Supply. The proposed water supply project will require additional, permanent water rights to supply the City of Roma's needs throughout the planning period. This amount has been calculated to be 2,058.8 acre-feet of municipal water rights. The purchase of these water rights has been funded by the City of Roma and the TWDB.

Wastewater Treatment. The City of Roma and the TWDB-EDAP staff analyzed six different conventional treatment alternatives for the wastewater in addition to evaluation of on-site septic tank systems, rock reed filters and pond systems.

A 2.0 MGD new treatment plant is proposed. Design of the proposed improvements is in accordance with 30 Texas Annotated Codes (TAC) § 317. Combined with the existing treatment capacity of 0.360 MGD, the City of Roma's wastewater treatment capacity will increase to 2.36 MGD. The proposed 2.0 MGD facility will be constructed immediately adjacent to the existing treatment plant on city-owned property. Incoming raw sewage from lift stations will enter the headworks, with flow splitting between the existing treatment plant and new treatment units. Construction of the wastewater treatment plant expansion will be completed in two phases consisting of 1.0 MGD each. The funding for design and construction of these improvements is from the City of Roma and the TWDB.

Separation of the treatment plant expansion is necessary so that the City can acquire additional utility revenues from new services brought on-line by the proposed wastewater collection system and sewer hook-ups. The addition of these new services will provide an adequate capacity of debt service that will allow the City of Roma to close the second portion of the Clean Water State Revolving Fund (SRF) loan to fund the second phase of the treatment plant expansion.

Wastewater Collection. Significant expansion of the existing wastewater collection system is proposed for areas within and around the city limits of Roma that are not presently served by the system. Currently, only 5,876 persons of the 20,299 population have access to a centralized wastewater collection and treatment system. In other words, almost 75% or 14,423 persons do not have access to a centralized wastewater collection system. The planned improvements will nearly quadruple the present number of dwellings served by Roma's wastewater collection system by the design year 2015. The proposed wastewater collection system improvements consist of 240,660 linear feet of 6-inch sewer line, 99,800 linear feet of 8-inch sewer line, 8,610 linear feet of 10-inch sewer line, 5,650 linear feet of 12-inch sewer line, 4,130 linear feet of 15-inch sewer line, 700 linear feet of 18-inch sewer line, 22 lift stations, and 96,900 linear feet of 3-inch to 20-inch sewer force main. The funding for design and construction of these improvements is from the City of Roma and the TWDB.

All line improvements are planned within the existing public rights-of-way. The rights-of-way however, have not been platted, which is typical of the property in and around the City of Roma. The rights-of-way within the areas, where the improvements are proposed, will have to be platted as part of this project prior to construction. Other planned acquisition includes the sanitary easements necessary to accommodate the new sewage lift stations throughout the project area.

Sewer Service Connections. All housing in the proposed project area currently have indoor facilities. No dwelling rehabilitation will be necessary to allow the use of the proposed water improvements. The only rehabilitation of the individual dwellings that will be necessary to allow the use of the proposed wastewater facilities, involves those residences that are presently using a septic tank or cesspool. Each of these dwellings will require a yard service line to connect from the dwelling's waste plumbing to the applicable section of the proposed sewer collection system connection.

A total of 3,688 occupied lots (service connections) have been identified that currently do not have access to a centralized wastewater collection and treatment system. Of the total 3,688 occupied lots, the TWDB-EDAP Project will provide service to 2,746 of these lots. However, the City does not have funding for these connections and have requested the necessary funds through application submitted to the BECC. The remaining lots will be served by projects funded by the TDHCA or USDA. The construction of the yard service lines, the costs to pump-out the septic tanks or cesspools, remove tanks, and backfill are all costs that are not eligible for funding by the TWDB. Consequently, funding of these improvements are requested from the BECC and NADBank.

Transitional Funding Assistance. The City has also applied to receive transitional funds that would help pay for any portion of a rate increase in order to avoid potential sharp increases in water and sewer rates. NADBank's Contractor, Black & Veatch, LLP, recently completed the City of Roma Water & Wastewater Rate Study that reached the following conclusion. The report found that "*to maintain rate increases within the affordability threshold, the average rate increase needs to be approximately $1 per utility year for the next five years. These smaller rate increases would require that the City of Roma receive sustainability assistance of approximately $7,000,000 over the next four years*."

Subsequently, the City of Roma Step 2 Application is intended to request certification by the BECC and subsequent funding from NADBank for Transition Funding Assistance in the amount recommended in the above-referenced report.

SCADA Systems. It is important to note here that the funding for water and wastewater improvements by the TWDB and the City of Roma did not include any funds for design and installation SCADA systems for the improvements discussed in this report. Subsequently, the lack of any type of system control and data acquisition systems for the proposed water and wastewater improvements has been identified as a serious deficiency in regard to management and operation of the City of Roma's utility system. In addition to obvious concerns associated with the broad scope of proposed improvements, i.e., tripling the number of current lift stations, the lack of any remote monitoring systems and associated concerns are magnified in importance when the current limited manpower and lack of trained personnel are considered.

In addition to the NADBank Rate Study, the City has also received assistance from the NADBank to complete a Project Management Study. Although this study is not complete to date, one recommendation that is included in the report is the recommendation for installation of System Control and Data Acquisition (SCADA) systems for the proposed water and wastewater improvements. The total cost estimated for design and installation of SCADA systems is $600,000 for the Water Treatment Plant, Wastewater Treatment Plant, Water Distribution and Wastewater Collection System. The proposed units and costs are outlined below.

Wastewater:

1. *Remote terminal units / radio / antenna for 30 remote sites (lift stations)*
2. *Two (2) personal computers / radio / antenna at the Wastewater Treatment Plant*
3. *Software and configuration*

The estimated cost is $350,000 for design and installation of SCADA for the wastewater collection and wastewater treatment plant.

Water:

1. *Remote terminal units / radio / antenna for 10 remote sites (8 booster pump stations and 2 elevated storage tanks)*
2. *Two personal computers / radio / antenna at the Water Treatment Plant*
3. *Tank level recorders / treatment plant units / transfer pump station units*
4. *Software and configuration*

The estimated cost is $250,000 for design and installation of SCADA for the water distribution system and water treatment plant.

The total estimated cost for the SCADA is $600,000.

The following paragraphs are excerpts from the report prepared by Black & Veatch, LLP, the Contractor for NADBank selected to complete the City of Roma Project Management Study. The excerpts are taken from a memorandum titled "Functional Area Review - Water & Wastewater Utility".

> ***Water - Long Term Requirements***
>
> *The Water Treatment Plants have a number of technical and organizational needs. These must be addressed in order to both meet the basic requirements of modern industry practice and to ensure the City's ability to continue to deliver safe and sufficient drinking water to its citizens in the interim period between now and the completion of new water treatment facilities. Although a final engineering design report for the new facilities is not yet completed, the EDAP program manager is working with a local engineering firm to assemble the elements that will lead to such a report. It is essential that all program participants review the recommended plant improvements to insure that the final scope of work considers and - to the maximum extent possible - justifies and includes program details, provided there is sufficient funding available. Recommended items for the design report include:*
>
> - *A basic SCADA system required to provide equipment monitoring and control capability. Such a system provides the most effective utilization of plant operators, serves as a database, and allows the completion of automated reports.*
> - *A basic mechanical shop maintenance facility that includes adequate tool stockage and repair facilities. There are not existing amenities for employees, and it is suggested that the shop facility should provide break areas, lockers, showers, etc.*

As stated above, the TWDB and City of Roma funding did not include funds for the improvements recommended above due to affordability by the City. Consequently, the City is requesting that BECC certification include funds for design and installation of a SCADA system for the proposed water improvements.

> ***Wastewater Treatment Plant - Long Term Needs***
>
> *It is anticipated that the new treatment facilities will provide sufficient capacity and comply with permitted effluent discharge permit requirements. To optimize current facilities and reap the maximum benefits from new facilities, several following action items are recommended. These include:*
>
> - *A basic plant SCADA system required to provide equipment monitoring and control capability. Given the significant addition of treatment capacity and number of lift stations - coupled with the probable shortfall in certified operators - this standard industry practice provides the best utilization of all resources)plant staff and operating equipment) in an effort to ensure continuing compliance with regulatory and operations requirements.*
> - *A small maintenance shop, necessary to improve plant maintenance and to support lift station equipment.*
> - *Improved employee amenities in the new control building. These should include showers with appropriate emergency wash-down locations, lockers and break area.*
> - *Additional equipment for the laboratory in the new control building so that suspended solids analyses can be performed as part of the process control and operations routines.*

As stated above, the TWDB and City of Roma funding did not include funds for the improvements recommended above due to affordability by the City. Consequently, the City is requesting that BECC certification include funds for design and installation of a SCADA system for the proposed wastewater treatment plant improvements.

> ***Lift Stations - Long-Term Requirements***
>
> *The Wastewater Plant Supervisor is also responsible for operation and maintenance of 8 lift stations in the present collection system. Expansion of the system includes the addition of 22 lift stations within the City and adjacent colonias. The significant increase in size of the collection system coupled with the expansion of treatment capacity and new technology demands increased support for operations personnel. As noted above, the Wastewater Division has only one certified operator who, with existing plant workers, is hard pressed to perform all of the routine inspections, maintenance, tests and operations associated with sewage collection and treatment in the present system.*
>
> *Accordingly, the following action items are recommended:*
>
> - *Install a minimal SCADA system to monitor station sites and provide alarm conditions. In minimal configuration, a single general alarm condition will alert a central monitor and indicate an overall alarm condition for a particular station. City staff will have to respond to determine the nature of the failure. (NOTE: More elaborate systems can be tied to a number of specific station conditions such as power failure, high/low level alarms, pump trip or failure events, etc.)*

- *Establish a SCADA collection and treatment monitoring unit in a central location, most likely the wastewater treatment plant site. Provide transfer of information after-hours to the Water Treatment Plant (which is staffed around the clock) for emergency callout.*
- *Adjust staffing levels based on final development of the lift station system to ensure adequate preventive and emergency coverage. NOTE: In the absence of a SCADA system, all lift stations must be inspected daily in addition to plant operations and maintenance duties.*

As stated above, the TWDB and City of Roma funding did not include funds for the improvements recommended above due to affordability by the City. Consequently, the City is requesting that BECC certification include funds for design and installation of a SCADA system for the proposed lift station improvements.

B.2. Human Health & Environment

Starr County and the City of Roma have seen extreme population growth in the last 25 years, much of it in the form of colonias that were developed in an unregulated environment, as there was no county health department to enforce minimum standards for septic tanks or lot sizes and no subdivision regulation. As a result, many of these substandard subdivisions have lot sizes of 50 feet by 100 feet, rely on septic tanks, cesspools and pit privies for wastewater collection and treatment, and could not meet current standards for septic tanks or subdivisions even were the residents financially capable of improving the systems. Their continued operation poses a threat to human health and safety.

The existing wastewater treatment and collection system presently serves less than 30 percent of potential customers in the planning area, yet its treatment plant is operating at nearly 100 percent of capacity and there is a ban on new connections to the system.

The existing water supply system is unable to provide adequate water service to its existing customers with particular problems being raw water pumping, treatment, storage, and distribution system capacity. In many areas, particularly along the periphery of the water system, water pressure is nonexistent during periods of greater demand.

On August 1, 1996, under Texas Water Code Section 5.122, the Executive Director of the TNRCC was delegated the responsibility for making appropriate findings under Section 17.933(b) of the Texas Water Code that nuisance conditions dangerous to the public health and safety exist resulting from water supply and sanitation problems in areas to be served by the TWDB-EDAP. Pursuant to Section 17.933(b) of the Texas Water Code, the TNRCC determined that a nuisance condition dangerous to public health and safety does exist regarding drinking water supply and wastewater problems for the Roma area on June 20, 1997.

The construction of the proposed wastewater improvements, and more importantly the ability of the residents to connect to these improvements, will improve the quality of life for the residents and eliminate contamination due to inadequate septic tanks or the use of cesspools in the backyards and the risk of diseases and infections experienced among children and adults. Another benefit will be reflected in the reduction of gastrointestinal diseases and the risk of non-bacterial food diseases.

The construction of the proposed water improvements will provide adequate water supply and treatment to ensure that an adequate, safe supply of water is provided for area residents to the design year 2015. In addition, the improved water distribution system and resultant increases in system pressures will provide water pressure for fire-fighting capability, significantly reducing the publics health and safety risks posed by fire.

As required by the National Environmental Policy Act, 42 USC Section 4321, et seq., and as delegated by the Environmental Protection Agency (EPA) through the Colonia Wastewater Treatment Assistance Program (CWTAP) and 40 CFR Section 35.3140, the TWDB has performed an environmental review pursuant to the state environmental review process adopted by the TWDB in 31 TAC 375.35. The environmental review of the proposed project, which is documented by the Environmental Assessment prepared by the City of Roma, indicates that no significant adverse environmental impacts will result from the proposed project as stated in the TWDB's Finding of No Significant Impact (FONSI). Therefore, the Executive Director of the TWDB made a decision not to require the preparation of an Environmental Impact Statement.

The transboundary impacts will be positive given that the wastewater from the City of Roma will be treated pursuant to quality standards of the EPA and the State of Texas, the potential for contaminated runoff is eliminated due to the elimination of inadequate septic tanks, and will benefit water resources on the Mexico and U.S. side of the border, since the Rio Grande (*Rio Bravo*) is a source of water supply for both sides of the border.

B.3. Technical Feasibility

A detailed description of the technical feasibility of the City of Roma Colonias Water and Wastewater Improvements is provided in the Facility Engineering Plan approved by the TWDB in August 1997. The operation and maintenance plans, safety plan, emergency training, and personnel training programs are also included. In addition, the City has adopted a resolution for the TNRCC and TWDB regarding the commitment to personnel training for the operation and maintenance of the water and wastewater treatment plants.

B.4. Financial Feasibility

The financial analysis of this project considered the following funding sources that were approved by the TWDB and the City of Roma in August 1997. These included:

- $4,185,000 Clean Water State Revolving Fund Loan (SRF Loan) for Wastewater Improvements
- $7,373,660 TWDB-EDAP Sewer Grant (EDAP Sewer Grant) for Wastewater Improvements
- $7,373,660 Colonias Wastewater Treatment Assistance Program Grant (CWTAP Grant) for Wastewater Improvements
- $3,896,000 Drinking Water State Revolving Fund Loan (DWSRF Loan) for Water Improvements
- $1,656,000 Water Supply Account Loan (WSA Loan) for Water Improvements
- $4,490,380 TWDB-EDAP Water Grant (EDAP Water Grant) for Water Improvements

Requested by the City of Roma from the BECC and NADBank, is the following in this Step 2 Format Application:

- $3,407,900 BECC/NADBank Grant for Sewer Service Connections
- Approximately $2,700,000 in *Transitional Funding Assistance*.
- Funding for SCADA systems related to proposed water and wastewater improvements, in the estimated amount of $600,000.

Investment recovery program to cover any increase in O&M costs for the proposed improvements are described below and make the project financially feasible.

1. With regard to the investment amount, the City of Roma will recover the loan amount through the economic benefits resulting from the project. Users benefiting directly by the new service will be charged for construction costs and a connection fee established by the City of Roma.

2. With regard to O&M costs, the City of Roma proposed rate increases are based on a formula that includes increases in the O&M costs. The rates proposed are adequate to cover the loan principal and interest cost, as well as the anticipated O&M costs for the new system. This process is carried out by the Financial Application prepared by the City of Roma's Financial Consultant, Estrada & Hinojosa, Inc. This application also presents the historical fee rate/schedules, user fee structure, demographic and economic information for the proposed service area.

B.5. Community Participation

A public hearing on the proposed project was held on June 16, 1997 following more than 30 days advertisement in the *Roma Starr*. No comments were made. The City of Roma had already initiated a Comprehensive Community Participation Plan for the selection of the engineering design consultants for the water and wastewater improvements. For each selection, the City of Roma developed Initial Selection Teams comprised of representatives from the local community which have backgrounds varying in business, civic, academic, governmental, and educational. Both the short-list and final selection processes were held as public meetings throughout the evaluations.

For the proposed sewer service hook-ups, the City of Roma proposes to develop area steering committees comprised of individuals from the colonias affected by the proposed wastewater improvements, that will coordinate with representatives from the City and the City's Project Manager to develop a sign-up list of residents that have elected to hook-up to the proposed wastewater collection system. A public hearing has been scheduled for January 4, 1998 at the Roma Community Center to discuss the proposed project, funding and impact upon utility rates. A second meeting was held on May 3, 1999 to review the technical aspects of the project.

Comprehensive Community Participation Plan

1. Local Steering Committee

Just as critical to obtaining a source of funding is the comprehensive community participation plan. For the proposed sewer service hook-ups, the City of Roma proposes to develop a local steering committee to coordinate with residents from the colonias affected by the proposed wastewater improvements through public meetings.

A Local Steering Committee, made up of individuals from a variety of organizations within the Roma area, will continue to develop and implement the Comprehensive Community Participation Plan for this Project. The composition of the Local Steering Committee's eight members is presented below:

Mr. Jose Ramos - Chairman

Dr. Raymond P. Musset - Secretary

Mr. Eric C. Gonzalez - Member

Mr. Jose Maria Piceno

Mr. Israel Rodriguez

Mr. Joel Montalvo

Mr. Robert L. Naranjo

Mr. Monie Palacio

To date, the Local Steering Committee has met three times to discuss the focus and strategy of implementing a public participation plan.

To the extent possible, steering committee representatives have been and will continue to be responsible for:

- Developing outreach activities;
- disseminating information about the project;
- engaging public participation in the process;
- developing public education and media campaigns;
- attending public meetings;
- preparing minutes; and,
- soliciting public support for this project within Roma and the surrounding colonias.

The purpose of the steering committee is to gauge the response of the public concerning the proposed project. This committee, comprised of a diverse group of Roma area business, community and civic leaders, has been and will continue to be involved in the decision making process by offering suggestions to local officials concerning potential environmental and economic impacts resulting from the construction and operation of the proposed project.

This committee will also be responsible for developing methods to further involve the public in the project as well as soliciting public support for the proposed sewer connections and water and wastewater improvements.

The local steering committee will continue progress meetings so the City can continue to keep local businesses and area residents informed as to the status of this project.

2. Meetings with Local Organizations and Residents

The City of Roma has met and will continue to meet with local organizations and/or residents affected by the project to provide information on and develop support for this project. Through the local steering committee and Public Meetings, a communication link between the City and business leaders, civic leaders, community leaders and neighborhood organizations has been established. The City has encouraged individual meetings with these organizations to develop a better understanding of the local perception of the project. This coordination has allowed the City to develop the proposed project in a manner that will achieve the maximum benefits for all residents, businesses and organizations within the Roma city limits and the surrounding colonia areas.

During the preparation of the Roma Facility Engineering Plan prepared by the City under the Texas Water Development Board Economically Distressed Areas Program, two public meetings were held in Roma and broadcast on the public access channel 26. A public hearing on the proposed project was held on June 16, 1997 and January 4, 1999. No comments were received. At the January 4, 1999 meeting, a Project Summary was made available for the public. The Project Summary is available at City Hall in both English and Spanish versions. The availability of the Project Summary to the public has been announced on public access channel 26 throughout the month of January 1999 and will continue to run for the duration of the project.

3. Public Access to Project Information

The City of Roma made the BECC Step 2 Proposal available to the public (in the form of the Facility Engineering Plan, the Environmental Information Document and Step 2 application) 30 days before the Public Meetings held on June 16, 1997 and January 4, 1999. This information has been and will continue to be made available at Roma City Hall, which is a public access location. This information is available for review between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. The availability of the project information was also disclosed in the public meeting notices.

The City also plans to distribute a one-page summary of the project to accompany the February 1999 utility bills sent to every utility customer served by the City of Roma. In addition, the local steering committee is planning to hold public meetings with each of the colonia neighborhood areas affected by the project to fully coordinate and disseminate information about the project and solicit public support.

The last avenue of public information is the public access channel 26. This channel will broadcast all future public meetings, including City Commission Meetings where a status report is given each month for the project in addition to the broadcast of the Design Status meetings held each month between the design engineer, project manager and city commission.

Post-Certification Community Participation Plan

Once certification of the project by the BECC is obtained the City of Roma will provide to the BECC a Post-Certification Participation Plan. This plan will discuss the goal of achieving public involvement in the construction, operation and maintenance phases of the proposed project. The Post-Certification Participation Plan will include:

- Information to provide continuing education regarding the project to the public and outlining the benefits to the community;
- Outline of the past activities of the local steering committee and the continued guidance of this committee to provide citizen input on the implementation of the project plan;
- Encourage citizen participation during the planning and design phases of the project;
- Consider and evaluate incorporating citizen volunteers during the construction and operation phases of the project to assist in public understanding of the various phases of the project; and,
- Encourage local schools to emphasize the importance of the preservation of our natural resources, including but not limited to the City's education efforts during implementation of their water conservation plan.

Education and citizen participation is one of the best means of facilitating community support for the project. Since one of the most important resources in the Roma area is the health and safety of its children, the current and future protection of water resources will encourage a healthy social and economic environment for future generations. Sustainable development is the goal of the project and the citizens of Roma and the surrounding colonias are committed to participating in the long-term sustainable development of this area which is evidenced by the overwhelming public support for this project.

The creation of the Area Steering Committees will accomplish three things:

(1) Disseminate information about the project to the public thus engaging public participation in the process;

(2) Provide education and coordination of construction activities for affected colonia residents; and,

(3) Result in the development of a comprehensive list of dwellings to receive sewer service hook-ups and removal of their existing septic tanks or cesspools.

C. List of Documents submitted to BECC

The list below are the documents provided to the BECC by the City of Roma.

- Step 1 Pre-Proposal Format

- Executive Summary from Roma *Facility Engineering Plan*
- TWDB Resolution of Approval for Funding of the City of Roma Colonias Water and Wastewater Improvements Project
- Colonia Locations Map for City of Roma
- Preliminary Project Schedule
- TWDB Letter of Approval and Designation of Funding Sources
- TWDB Finding of No Significant Impact (FONSI)
- Project Location Map
- TNRCC Letter for "Nuisance Finding"
- City of Roma TWDB Financial Application
- City of Roma Personnel Training Resolution
- Ordinance #1996-25-A, City of Roma Rates, Charges, Billing Procedures
- Ordinance #1998-06, Chapter 22 Plumbing Code
- Environmental Information Document (EID) for the City of Roma TWDB-EDAP Project
- Seven-year cash flow projections of existing water and wastewater system, including O&M expenses and debt service for existing system.
- Water and wastewater volume by user type (commercial, industrial, residential and governmental).
- Seven-year cash flow projections for additional water and wastewater projects that are part of the sponsor's intended capital improvement program.
- Outline of the City of Roma Community Participation Plan.
- Estimated Construction Schedule of Project.

SECTION 2. GENERAL INFORMATION

A. Project Type

The Project is called the "City of Roma Colonias Water and Wastewater Improvements Project" and consists of various water distribution and treatment and wastewater collection and treatment improvements to be carried out by the City of Roma. It includes sanitary sewer treatment and wastewater collection in addition to significant enhancement of the water distribution and treatment system which will improve the quality of life of over twenty thousand citizens of the City of Roma as well as the quality of the water of the Rio Grande which defines the international border between the United States and Mexico.

B. Project Location

The City of Roma is located in the southern portion of Starr County directly across from the Rio Grande from *Miguel Aleman, Tamaulipas, Mexico* and approximately 50 miles northwest of McAllen, Texas.

C. Project Description and Work Tasks

1. Project Description

The proposed project improvements will provide service to 5,190 existing households. This number is expected to increase to approximately 5,960 by the design year 2015. Included in the City's proposed improvements is water and wastewater service to 68 colonias located within and outside the City limits. The proposed water distribution improvements consists of 7,000 linear feet of 6-inch water line, 26,800 linear feet of 8-inch water line, 3,500 linear feet of 10-inch water line, 15,300 linear feet of 12-inch water line, a 200,000 gallon elevated storage tank, and improvements to a booster pump station. The City owns a Water Treatment Plant with a treatment capacity of 1.50 MGD which is proposed to be expanded to a treatment capacity of 5.15 MGD.

The proposed wastewater collection system improvements consist of 240,660 linear feet of 6-inch sewer line, 99,800 linear feet of 8-inch sewer line, 8,610 linear feet of 10-inch sewer line, 5,650 linear feet of 12-inch sewer line, 4,130 linear feet of 15-inch sewer line, 700 linear feet of 18-inch sewer line, 22 lift stations, and 96,900 linear feet of 3-inch to 20-inch sewer force main. The City owns a Wastewater Treatment Plant with a treatment capacity of 0.360 MGD, which is proposed to be expanded to a treatment capacity of 2.36 MGD in two phases, each of which will add 1.0 MGD.

A total of 3,688 occupied lots (service connections) have been identified that currently do not have access to a centralized wastewater collection and treatment system. The construction of the yard service lines, the costs to pump-out the septic tanks or cesspools, remove tanks, and backfill are proposed for 2,746 of these lots to eliminate the public safety and health risks posed by the existence of these facilities.

2. Description of the Community

The history of Roma and *Los Saenz* begins with the foundation of the *Tamaulipas, Mexico* town of *Mier* in 1752. As part of this charter and keeping with Spanish practice, surrounding lands surrounded by the colony were broken into tracts, known as *porciones*, and granted to the colonists. The communities are located on two of the *Mier porciones*.

Although probably established as separate ranches and homesteads on the *porciones* and for long recognized as two separate communities, both Roma and *Los Saenz* today fall within the city limits of Roma and merge together in one continuous community.

Today, Roma is the port of entry from *Miguel Aleman, Tamaulipas, Mexico.* This trading center is located south of Falcon Lake on U.S. Highway 83. Boundaries of the City encompass approximately six square miles. The current estimated population within the City limits is just over 10,000, with an additional 10,000 residents that are currently served by the City's Public Water Supply System that reside to the east and west of the city limits of Roma.

The City's economy is based on tourist trade and agriculture. The principal sources of agriculture income include sorghums, cotton and vegetables. Minerals produced in the area include oil, gas, sand, and gravel. Falcon State Park attracts 320,000 visitors annually.

Starr County and the City of Roma have seen extreme population growth in the last 25 years, much of it in the form of colonias that were developed in an unregulated environment, as there was no county health department to enforce minimum standards for septic tanks or lot sizes and no subdivision regulation. As a result, many of these substandard subdivisions have lot sizes of 50 feet by 100 feet, rely on septic tanks, cesspools and pit privies for wastewater collection and treatment, and could not meet current standards for septic tanks or subdivisions even were the residents financially capable of improving the systems. Since these are low-income families, the residents themselves cannot afford to pay for the service connections either (median household income of $9,454). In fact, the combined Household Cost Factor that residents pay for water and sewer service is 5.32%. Their continued operation poses a threat to human health and safety.

3. Project Alternatives

The alternative of taking no action was briefly considered but rejected due to problems associated with the existing water supply and the sub-standard on-site wastewater systems.

Wastewater. Alternative wastewater treatment plant locations were not seriously considered as the City currently owns adequate land, roughly four acres, adjacent to the existing facility and outside the Rio Grande floodplain. Utilizing a separate plant site would entail operating two facilities at separate locations or abandoning one that has no significant problems other than lack of capacity, the acquisition of a new plant site and increased costs. Six separate wastewater treatment processes were examined in addition to on-site systems, rock-reed filters and lagoons. An oxidation ditch (activated sludge, extended aeration) process was selected on the basis of cost.

Due to the terrain of the planning area -- virtually everything drains towards the Rio Grande--a gravity collection system was chosen, although small diameter gravity sewers, vacuum systems and pressure systems were briefly evaluated. Because of the terrain, very little of the proposed collection system will be located outside of existing road and street easements, minimizing impacts to previously undisturbed areas.

The construction of sewer service lines in the resident's backyards is not expected to have any adverse environmental impacts since these areas have been previously disturbed by the construction of the dwelling and human habitation.

Water. Alternative water treatment plant locations were examined due to the small amount of land available at the existing facility and its location immediately adjacent to a Historic District in central Roma. However, the location does have access to the Rio Grande--the only source of raw water in the planning area--and the existing facilities were constructed or upgraded in 1985. Therefore, it was decided to retain the existing plant site.

The proposed elevated storage tank location is in a previously cleared pasture at an elevation above the area to be served. Given the potential for endangered species in the areas of native vegetation, this location avoids many potential environmental impacts that would be presented elsewhere. As the proposed water pipeline consists of replacement lines, no alternative routings were examined.

4. Project Justification

The Project "City of Roma Colonias Water and Wastewater Improvements Project" and consists of various water distribution and treatment and wastewater collection and treatment improvements to be carried out by the City of Roma. It includes sanitary sewer treatment and wastewater collection in addition to significant enhancement of the water distribution and treatment system which will improve the quality of life of over twenty thousand citizens of the City of Roma as well as the quality of the water of the Rio Grande which defines the international border between the United States and Mexico.

The construction of the proposed wastewater improvements, and more importantly the ability of the residents to connect to these improvements, will improve the quality of life for the residents and eliminate contamination due to inadequate septic tanks or the use of cesspools in the backyards and the risk of diseases and infections experienced among children and adults. Another benefit will be reflected in the reduction of gastrointestinal diseases and the risk of non-bacterial food diseases.

The construction of the proposed water improvements will provide adequate water supply and treatment to ensure that an adequate, safe supply of water is provided for area residents to the design year 2015. In addition, the improved water distribution system and resultant increases in system pressures will provide water pressure for fire-fighting capability, significantly reducing the public's health and safety risks posed by fire. In addition, the proposed improvements will eliminate the potential health risk associated with historically high levels of TTHM's that exceeded the maximum required level set by the United States Environmental Protection Agency. The presence of high levels of TTHMs have been shown to pose a risk of cancer and thus are considered carcinogens when present at levels above the maximum allowed for water treatment plant operations.

D. Conformance with International Treaties and Agreement

An investigation of conformance with International Treaties and Agreements has not been completed for this Project with the exception of review by the IBWC.

SECTION 3. HUMAN HEALTH AND ENVIRONMENT

A. Existing Needs

Starr County and the City of Roma have seen extreme population growth in the last 25 years, much of it in the form of colonias that were developed in an unregulated environment, as there was no county health department to enforce minimum standards for septic tanks or lot sizes and no subdivision regulation. As a result, many of these substandard subdivisions have lot sizes of 50 feet by 100 feet, rely on septic tanks, cesspools and pit privies for wastewater collection and treatment, and could not meet current standards for septic tanks or subdivisions even were the residents financially capable of improving the systems. Their continued operation poses a threat to human health and safety.

Only a small portion of the project area is served by Roma's Wastewater System. The collection system serves a few of the areas within the city limits, which represents about one-third of the possible service connections in the area. The remainder of the households utilizes sub-standard septic tanks/cesspools to dispose of their wastewater.

Presently, the Roma Public Water Supply System serves all of the project area. The water system, however, lacks the capacity necessary to properly serve the population and fails to meet a number of Texas Natural Resource Conservation Commission (TNRCC) minimum design criteria. Of most importance is the past violation during operations of the City's Water Treatment Plant for TTHMs levels. Since THMs are considered carcinogens (cancer causing agents), the past violations of THMs pose a significant health risk to the citizens of Roma.

Other substandard areas include raw water pumping, water treatment, elevated storage and distribution system capacity. The existing water supply system is unable to provide adequate water service to its existing customers with particular problems being raw water pumping, treatment, storage, and distribution system capacity. In many areas, particularly along the periphery of the water system, water pressure is nonexistent during periods of greater demand.

The project described herein will improve the water quality by extending the treatment capacity and storage of treated water, providing alternative disinfection methods that will eliminate the risk from high TTHM's, and provide adequate water supply for the future growth of the City of Roma.

While the TWDB funding will provide wastewater collection lines in the colonia areas and provide expansion of the City's WWTP, there is not funding available from the TWDB to provide private service connections from the property line to the household for 2,746 occupied lots.

Obtaining a source of funding for the service connections is critical to the City of Roma so that the community can benefit from the new wastewater collection system thus ending the continuing health risk posed by the present use of inadequate septic tanks or cesspools. Adding new connections to the utility system will also provide additional revenues to meet the debt service obligations incurred by the TWDB-EDAP Project (approximately $9.7 million loan to City of Roma).

With the burden of providing wastewater collection lines to service the colonia areas, the City cannot afford additional loans to fund the private connections. Since these are low-income families, the residents themselves cannot afford to pay for the service connections either (median household income of $9,454). In fact, the combined Household Cost Factor that residents pay for water and sewer service is 5.32%.

All housing in the proposed project area currently have indoor facilities. No dwelling rehabilitation will be necessary to allow the use of the proposed water improvements. The only rehabilitation of the individual dwellings that will be necessary to allow the use of the proposed wastewater facilities involves those residences that are presently using a septic tank or cesspool. Each of these dwellings will require a yard service line to connect to the dwelling's waste plumbing to the applicable section of the proposed sewer collection system connection. Consequently, the City of Roma defined the concept and the monetary requirements for implementation of the private service connections to residents that will be served by the proposed wastewater collection and treatment improvements.

B. Environmental Assessment

ALTERNATIVES

The alternative of taking no action was briefly considered but rejected due to problems associated with the existing water supply system and the substandard on-site wastewater systems.

Wastewater

Alternative wastewater treatment plant locations were not seriously considered as the City currently owns adequate land, roughly four acres, adjacent to the existing faciity and outside of the Rio Grande floodplain. Utilizing a separate plant site would entail operating two facilities at separate locations or abandoning one that has no significant problems other than a lack of capacity, the acquisition of a new plant site and increased costs. Six separate wastewater treatment processes were examined in addition to on-site systems, rock-reed filters and lagoons. The activated sludge process proposed was selected on the basis of cost.

Due to the terrain of the planning area – virtually everything drains toward the Rio Grande – a gravity collection system was chosen, although small diameter gravity sewers, vacuum systems and pressure systems were briefly evaluated. Because of the terrain, very little of the proposed collection system will be located outside of the existing road and street easements, minimizing impacts to previously undisturbed areas.

Water

Alternative water treatment locations were examined due to the small amount of land available at the existing facility and its location immediately adjacent to a Historic District in central Roma. However, the location does have access to the Rio Grande – the only source of raw water in the planning area – and the existing facilities were constructed or upgraded in 1985. Therefore, it was decided to retain the existing plant site.

The proposed elevated storage tank location is in a previously cleared pasture at an elevation above the area to be served. Given the potential for endangered species in areas of native vegetation, this location avoids many potential environmental impacts that would be present elsewhere. As the proposed water pipeline construction consists of replacement lines, no alternative routings were examined.

As required by the National Environmental Policy Act, 42 USC Section 4321, et seq., and as delegated by the Environmental Protection Agency (EPA) through the Colonia Wastewater Treatment Assistance Program (CWTAP) and 40 CFR Section 35.3140, the TWDB has performed an environmental review pursuant to the state environmental review process adopted by the TWDB in 31 TAC 375.35. The environmental review of the proposed project, which is documented by the Environmental Assessment prepared by the City of Roma, indicates that no significant adverse environmental impacts will result from the proposed project as stated in the TWDB's Finding of No Significant Impact (FONSI). The following is a summary of the potential impacts and mitigative measures as presented in the Roma Environmental Assessment.

Construction of the wastewater collection system and water supply lines in Roma and the colonias will result in traffic and pedestrian disruption and noise. For the most part, this is unavoidable, a consequence of installing new systems in a community. This will be mitigated as much as possible by providing for prompt backfilling of trenches and limiting the amount of trench open at any one time to that necessary for work and the use of measures such as barricades and warning lights during construction. Noise will be limited as much as possible by confining work to daylight hours and using equipment that meets Occupational Safety and Health Administration standards.

Odor problems may arise during construction, particularly, as the new wastewater treatment plant and portions of the collection system are placed in operation. These should be brief, however, and the net effects should be to lessen odor in the community as inadequate on-site systems are taken out of service.

Dust could become a problem in this arid environment, but will be controlled by periodic wetting of the construction areas and the prompt restoration of pavement or returning the ground to its original contour, depending upon the construction area. Temporary settling basins, dikes and berms will control erosion and sedimentation of area waterways. The requirements of the National Pollutant Discharge Elimination System General Permit for Industrial Activity, will apply throughout all construction activities related to proposed water and wastewater improvements. Short-term erosion may occur during the construction of the described facilities. Site clearing, trenching, and grading will be required during project construction. Best management practices stipulated by the U.S. EPA under the NPDES program will be implemented for erosion and sediment control in the vicinity of the project. The potential for erosion in the project area will be minimized by the replacement of vegetative cover along the water line route. All areas will be re-vegetated or resurfaced immediately after construction to prevent soil erosion and sediment deposition to area surface water bodies. NPDES best management practices will be implemented for erosion control, sediment control, and stormwater management during construction activities for water and sewer improvement installations.

The final NPDES General Permit for Construction Activity requires an Notice of Intent (NOI) since the construction area along the water line route and at WTP No. 1 would exceed five (5) acres. The requirements of an NOI include the preparation and implementation of a Stormwater Polution Prevention Plan (PPP). This PPP would include erosion and sediment controls, including interim and permanent stabilization practices, and structural practices to divert and store flows from exposed soils. Typical erosion control practices include the construction or installation of silt fences, drainage swales, and temporary and permanent vegetation or straw cover. The PPP would clearly identify the contractor(s) and/or subcontractor(s) that would implement control measures, and would include a certification statement by each, acknowledging the terms and conditions of the General Permit. Construction activity is covered under the General Permit two days after submission of an NOI. The NOI and PPP will be developed upon completion of facility designs and selection of construction contractors.

Prompt backfilling of trenches and protecting soil stockpiles will also serve to reduce any potential problems. Reseeding of these areas with native grasses is recommended. Any vegetative spoil will be disposed of in a landfill.

The U.S. Army Corps of Engineers has reviewed the project and noted in determination D-6550 that the proposed construction is authorized under Nationwide Permits 3 and 12. The International Boundary and Water Commission (IBWC) has no objection to the proposed construction of the raw water intake structures provided that the configuration of the river channel will not be altered and any damage to the bed and banks of the river caused by construction will be repaired. The IBWC also requested a set of "as-builts" plans upon completion of the project.

Starr County and the City of Roma are both participants in the National Flood Insurance Program, the latter only recently. Other than the intake structure at the water treatment plant, and, possibly, some wastewater lift stations, the only construction likely to occur within a floodplain will be subsurface pipelines as they cross a number of creeks and arroyos draining from the upland areas to the Rio Grande. All project elements in the 100-year floodplain will be protected from flood effects, designed so as not to release wastewater during floods and will not cause any increase in flood elevations. The proposed project is not expected to induce growth within the 100-year floodplain, as it is to serve existing development.

Because, as noted above, a portion of the planning area is within the 100-year floodplain, any subsequent financial assistance will be conditioned to require that not wastewater generated by the development located within the 100-year floodplains shall be treated or transported by the project facilities for the term of the State Revolving Fund (SRF) financing. This restriction does not apply to development which, by its nature, must be located on or adjacent to water, to development which existed at the time of the issuance of this Finding of No Significant Impact (as defined by the TWDB's Rules, 31 TAC 375.35(d) (3)), or to development which can be shown to be consistent with the Federal Emergency Management Agency's floodplain criteria for flood prone areas (40 CFR Part 60.3) and will have no significant impacts on the natural functions and values of the floodplains.

A number of endangered species are known to occur or could potentially occur in the Roma vicinity, including the ashy dogweed, Johnston's frankenia, star cactus, Walker's manioc, ocelot, and jaguarandi. The ashy dogweed and Johnston's frankenia are the species of greatest concern in the project area and the proposed project locations have been examined by both an independent biologist and representatives of the U.S. Fish and Wildlife Service (USFWS).

Although noting that the bulk of the proposed construction areas have been highly disturbed or developed to the extent that Federally-listed species are unlikely to be adversely impacted, the USFWS has recommended two changes in pipeline locations to avoid areas of native vegetation that could contain these species. They have also requested that they be informed if the location of any project element are altered during design to the extent that native vegetation assemblages will be affected or moved to areas that have not been evaluated. Subsequent grants and loans to the City of Roma for this project are conditioned to stipulate that these recommendations and requests, as outlined in the USFWS's letter of March 12, 1997 in regards to Consultation No. 2-11-97-I-111, will be implemented during design. The Texas Parks and Wildlife Department endorsed constructing as much of the pipeline in road easements as possible and agreed with the USFWS recommendations.

Notwithstanding the above, financial assistance will also be conditioned to require that should either threatened or endangered plant or animal species be encountered during construction, work shall be stopped immediately and the TWDB and EPA will be notified in order that they can take measures in accordance with the Endangered Species Act of 1973, as amended. Several archeological sites were found during a survey of the proposed project and recommendations regarding avoidance and/or further investigations to determine the potential eligibility to the National Register of Historic Places have been made and will be implemented in design. The Texas Historical Commission has concurred with these recommendations, and has also stipulated that any subsequent grants shall be conditioned to require that if any historic or prehistoric archeological sites are discovered during construction, work will cease immediately in that area, the site will be protected from further disturbance, and the City of Roma will notify the EPA, TWDB, and the State Historic Preservation Officer of the discovery. The EPA and the TWDB shall then proceed in accordance with the regulations of the Advisory Council on Historic Preservation (36 CFR Part 800) prior to taking any action which could affect the cultural resources.

The short-term uses of man's environment include only the adverse, localized construction impacts to developed urban areas or existing permitted facilities in the planning area. Implementation of the projects included in the Facilities Plan will result in improvement of the long-term environmental enhancement and productivity of the environment. Since the use of septic tanks in the colonias will no longer be necessary after construction of the proposed improvements, the long-term risks to the health and safety of the colonia residents and the existing environmental ongoing degradation will be reduced.

Construction of the elevated storage tank and expansion of the water treatment plant will eliminate the existing long-term risk to the health and safety of the residents in the colonias by providing adequate water quality, reducing the risk posed from THMs besides providing a reliable supply of treated water.

Cumulative Impact has been defined by the President's Council on Environmental Quality (CEQ) (40 CFR 1508.7) as 'the impact on the environment which results from the incremental impact of the action when added to past, present and reasonably forseeable future actions regardless of what agency (Federal of non-Federal) or persons undertake such actions".

Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. In assessing cumulative impact, the regulation (40 CFR 1508.27) instructs the consideration of 1) the degree to which the proposed action affects public health or safety, 2) unique characteristics of the geographic area, 3) the degree to which the effects on the quality of the human environment are likely to be highly controversial, 4) the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks, and 5) whether the action is related to other actions with individually insignificant but cumulatively significant impacts on the environment.

The construction of the proposed improvements will result in a cumulative increase in the health and safety of the residents within the planning area. The elimination of inadequate septic tanks and resultant contamination and health risks, and the elimination of inadequate wastewater and water treatment capacity will significantly reduce the health and safety risks that are present today. There are no adverse impacts to the environment expected from the proposed improvements that require mitigation. Only localized, short-term impacts due to construction activities are identified. Consequently, the cumulative impact of the proposed project is considered positive with no short-term or long-term adverse impacts (primary or secondary) to the environment.

A public hearing on the proposed project was held on June 16, 1997 following more than 30 days advertisement in the Roma Starr. No comments were made. Based upon the TWDB's review of the Environmental Assessment, the Facility Engineering Plan and other documentation, the proposed project was considered to be environmentally sound. Therefore, a Finding of No Significant Impact was issued.

1. Environmental Impact Statement

The environmental review of the proposed project, which is documented by the Environmental Information Document prepared by the City of Roma, indicates that no significant adverse environmental impacts will result from the proposed project as stated in the TWDB's Finding of No Significant Impact (FONSI). Therefore, the Executive Director of the TWDB made a decision not to require the preparation of an Environmental Impact Statement.

C. Transboundary Environmental Assessment

The transboundary impacts will be positive given that the wastewater from the City of Roma will be treated pursuant to quality standards of the EPA and the State of Texas, the potential for contaminated runoff is eliminated due to the elimination of inadequate septic tanks, and will benefit water resources on the Mexico and U.S. side of the border, since the Rio Grande (*Rio Bravo*) is a source of water supply for both sides of the border.

D. Compliance with applicable Environmental and Cultural Resource Laws and Regulations

The following agencies either received the Environmental Information Document or received notice of public hearing and availability of the Environmental Information Document.

Texas Historical Commission

Federal Emergency Management Agency

Texas Natural Resource Conservation Commission

Texas Parks & Wildlife Department

National Marine Fisheries Service

International Boundary and Water Commission

U.S. Forest Service

National Park Service

Department of Housing

Bureau of Mines

Natural Resources Conservation Service

Bureau of Reclamation

Bureau of Land Management

U.S. Geological Survey

In addition to the requirements of state laws and rules, and the National Environmental policy Act (NEPA), the Project must comply with the following federal laws and authorities respecting the human environment.

The Archeological and Historic Preservation Act of 1974, PL 93-191;

The Historic Sites Act;

The Clean Air Act, 42 U.S.C. 3501 et seq.;

The Coastal Barrier Resources Act, 16 U.S.C. 3501 et seq.;

The Coastal Zones Management Act of 1972, PL 92-583, as amended;

The Endangered Species Act, 16 U.S.C. 1531 et seq.;

Executive Order 11953, Protection and Enhancement of the Cultural Environment;

Executive Order 11988, Floodplain Management;

The Flood Disaster Protection Act of 1973, PL 93-234;

Executive Order 11990, Protection of Wetlands;

The Farmland Protection Policy Act, 7 U.S.C. 4201 et seq.;

The Fish and Wildlife Coordination Act, PL 85-624, as amended;

The National Historic Preservation Act of 1966, PL 89-665, as amended;

The Safe Drinking Water Act, section 1424(e), PL 92-523, as amended; and,

The Wild and Scenic Rivers Act, PL 90-542, as amended.

SECTION 4. TECHNICAL FEASIBILITY

A. Appropriate Technology

1. Water Treatment Plant

All design improvements are in accordance with 30 TAC § 290. The City operates an existing water treatment plant on a city-owned site in downtown Roma, adjacent to the Rio Grande River. This site has an "old" water treatment plant and a water treatment completed in 1985 in operation that provides a total treatment capacity of 1.50 MGD. The 1985 plant layout was intended to provide more capacity than originally constructed. The design of the plant provided for adding three more clarifiers and at least four more filters in the future.

The existing 1985 treatment plant is to be expanded by 3.65 MGD to provide a total treatment capacity of 5.15 MGD. The features of the new plant and proposed modifications are listed below.

- Construction of three vertical turbine pumps served by a reinforced concrete sump. Capacity 2 pumps @ 3,576 gpm (5.15 MGD), 1 pump @ 2,083 GPM (3.0 MGD).
- Expansion of existing chlorine feed capacity to 1,000 #/day.
- Construction of Sodium chloride bulk storage, mixing and metering system; chlorine dioxide generator; building renovations to house the system.
- Construction of liquid alum bulk storage/chemical feed system.
- Construction of polymer feed system as a coagulant aid; building renovations to house the system.
- Add adjustable weirs to rapid mix basin to allow split flow between four clarifiers. Replace mixer with variable speed turbine mixer. Add mud valves to splitter chamber.
- Construction of three upflow solids contact units and convert existing basin to upflow solids contact unit.
- Construct two filter cells with dual media and replace existing filter sand with dual media; install surface wash to supplement backwash cycle; modify gallery of piping to provide rate of flow control/indication; install loss of head indicators.
- Replace transfer pumps with two 3,576 gpm vertical turbine pumps.
- Replace existing high service pumps with two 2,000 gpm pumps.
- Construct additional earthen sludge ponds to accommodate plant production.

2. Water Distribution System

A hydraulic analysis was completed for the east and west distribution systems outside the city limits using the model Cybernet. The demands for the model have been based on the TNRCC's requirements including 1.5 gpm per connection for direct service connections and 0.6 gpm per connection for storage supply for those indirectly connected to the system. The analyses showed that severe low pressures occur when the system is forced to supply demands based on the TNRCC's requirements. The TNRCC requires distribution systems to maintain a minimum of 35 psi throughout the system. The existing east and west systems cannot supply TNRCC required demands nor can the systems maintain the required 35 psi at service connections.

The proposed system will replace deficient water lines, booster stations, and storage facilities. The proposed water distribution improvements consists of 7,000 linear feet of 6-inch water line, 26,800 linear feet of 8-inch water line, 3,500 linear feet of 10-inch water line, 15,300 linear feet of 12-inch water line, a 200,000 gallon elevated storage tank, and improvements to a booster pump station.

The design of the proposed system is based on minimum requirements established by the TNRCC. Pipe sizes are based on providing TNRCC required flows at a minimum 35 psi.

3. Wastewater Treatment Plant

A 2.0 MGD new treatment plant is proposed. Design of the proposed improvements is in accordance with 30 Texas Annotated Codes (TAC) § 317. Combined with the existing treatment capacity of 0.360 MGD, the City of Roma's wastewater treatment capacity will increase to 2.36 MGD. The proposed 2.0 MGD facility will be constructed immediately adjacent to the existing treatment plant on city-owned property. Incoming raw sewage from lift stations will enter the headworks, with flow splitting between the existing treatment plant and new treatment units. Construction of the wastewater treatment plant expansion will be completed in two phases consisting of 1.0 MGD each.

Unit processes for the treatment plant expansion are listed below.

- Construction of Headworks, including mixing chamber, bar screen, parshall flume, grit/grease removal system, and flow splitter box.
- Construction of aeration basins (extended air/activated sludge, 2 each).
- Construction of four secondary clarifiers.
- Construction of disinfection facilities, including gas chlorination, chlorine contact basin, and dechlorination facilities.
- Construction of sludge handling facilities.

Design parameters for the 2.0 MGD facility include:

1. DESIGN PARAMETERS

Design Flow (Avg. 24 hr) 2.0 MGD

1,389 gpm

Maximum Daily Flow 4.0 MGD

2,778 gpm

Ratio (Maximum/Daily) 2.0

2. DESIGN LOADINGS

BOD_5 200 mg/l

lb BOD_5/day = MGD x mg/l x 8.34 lbs/gal 3,336 lbs/day

Suspended Solids 200 mg/l

lb SS/day = MGD x mg/l x 8.34 lbs/day 3,336 lbs/day

Ammonia (NH_3-N) 25 mg/l

lb NH_3-N/day = MGD x mg/l x 8.34 lbs/day 417 lbs/day

3. EFFLUENT CRITERIA

BOD_5 20.0 mg/l

SS 20.0 mg/l

Ammonia (NH_3-N) N/A mg/l

4. Wastewater Collection System

Significant expansion of the existing wastewater collection system is proposed for areas within and around the city limits of Roma that are not presently served by the system. Currently, only 5,876 persons of the 20,299 population have access to a centralized wastewater collection and treatment system. In other words, almost 75% of the planning area population, or 14,423 persons, do not have access to a centralized wastewater collection system. The planned improvements will nearly quadruple the present number of dwellings served by Roma's wastewater collection system by the design year 2015.

The proposed wastewater collection system improvements consist of 240,660 linear feet of 6-inch sewer line, 99,800 linear feet of 8-inch sewer line, 8,610 linear feet of 10-inch sewer line, 5,650 linear feet of 12-inch sewer line, 4,130 linear feet of 15-inch sewer line, 700 linear feet of 18-inch sewer line, 22 lift stations, and 96,900 linear feet of 3-inch to 20-inch sewer force main.

The sewer force mains were all designed to function with a minimum line velocity of two (2) feet per second, yet not exhibit excessive velocity. Preliminary design of the gravity collection lines meets or exceeds the minimum slopes mandated by the TNRCC Wastewater System Design Criteria for the applicable line size. Collection system slope and depth calculations are also attached.

5. Wastewater Connections

All housing in the proposed project area currently have indoor facilities. No dwelling rehabilitation will be necessary to allow the use of the proposed water improvements. The only rehabilitation of the individual dwellings that will be necessary to allow the use of the proposed wastewater facilities involves those residences that are presently using a septic tank or cesspool. Each of these dwellings will require a yard service line to connect from the dwelling's waste plumbing to the applicable section of the proposed sewer collection system connection.

A total of 3,688 occupied lots (service connections) have been identified that currently do not have access to a centralized wastewater collection and treatment system. The proposed construction includes installation of the yard service lines from the sewer lateral to the household connection, the pump-out the septic tanks or cesspools, removal of tanks, and backfill for 2,746 occupied lots. Installation of the sewer service connections will be in accordance with the International Plumbing Code, adopted by the City of Roma in Ordinance # 1998-06.

B. Operations and Maintenance Plan

The City of Roma has adopted a resolution for the TNRCC and TWDB regarding the commitment to personnel training for the operation and maintenance of the water and wastewater treatment plants. In addition, the Design Engineer is required to develop Operation and Maintenance Manuals for each of the proposed improvements as well as providing 24 hours of O&M training to City personnel for the new Water treatment Plant and Wastewater Treatment Plant. The Contractor is also required to develop a catalog of equipment installed and furnish replacement parts that are critical to the continued operation of the proposed facilities.

The proposed plan of disinfection for the water and wastewater treatment expansion will not require a Risk Management Assessment Program according to EPA and OSHA guidelines. Under the 1990 Clean Air Act Amendment, Congress mandated the USEPA and Ocupational Safe and Health Administration (OSHA) to establish Risk Management Programs (RMP) to protect the public and workers, respectively, from accidental releases of hazardous and flammable chemicals. A major goal of the RMP is for facilities to review their practices and procedures, equipment, and maintenance plans, and to develop improved ways of operating to reduce or eliminate risks to the public as well as employees.

Accordingly, The City of Roma plans to modify operations at both the water and wastewater treatment plant expansions to eliminate the need to prepare a RMP. For example, the wastewater treatment plant expansion will use ultra-violet disinfection thus eliminating the use of chlorine gas. The water treatment plant expansion will replace lime with caustic soda for settling and replace chlorine gas with liquid chlorine and chloroamines to both reduce the risk of excessive TTHMs formation and the risk posed by the use of chlorine gas.

1. Start up Operations Program

With regard to the wastewater and water treatment plants, the training program may be classified in two fundamental aspects:

- Knowledge of new plant

In order to operate and maintain the plant, complete knowledge of its design is required, as well as the treatment process of the plant. That is why, in addition to the training provided by the Design Engineer at the end of construction, the plant personnel are involved in the design reviews before construction. As discussed, the Design Engineer, equipment vendors and metering system suppliers, will provide training.

- Knowledge of operation techniques

  During initial operations, a list of processes to be followed along with a schedule will be established. Also included will be the characteristics of equipment requiring maintenance and actions to be taken in case of a contingency.

2. Contingency Plan

The wastewater treatment process based on a oxidation ditch type system requires little operation and maintenance. The same is true for the upflow solid reactor mixing basins and clarifiers included in the water treatment plant process. All essential equipment for continuous operations will have replacement and support parts in stock. In the case of an emergency, system operations will not be interrupted.

3. Safety Plan and Contamination Prevention

The personnel will also receive accident prevention and security training by the Design Engineer in order to reduce any work hazards. The security system will include fire extinguishers in areas where equipment is located; a telephone and two-way radio will also be available for communications in case of an emergency. All remote equipment will have auto-alarms with automatic dialing capability to contact personnel on duty.

C. Conformance with Applicable Design Norms and Regulations

The project will comply with applicable design norms from the beginning of construction and will be regulated by the TNRCC and the guidelines established by the State of Texas and the Federal government. It should be noted that all designs for proposed improvements will be reviewed and approved by the TWDB Engineering staff and construction will be inspected on a monthly basis by TWDB field personnel. In addition, the TWDB will review and approve the O&M manuals and acceptance of each project as completed.

SECTION 5. FINANCIAL FEASIBILITY AND PROJECT MANAGEMENT

A. Financial Feasibility

1. Background

The City of Roma received approval from the Texas Water Development Board in August 1997 for funding of $28,977,700 for proposed water and wastewater improvements under the Economically Distressed Areas Program. All proposed improvements are within the corporate city limits and extra-territorial-jurisdiction (ETJ) and within the boundaries of Roma's existing Certificate of Convenience and Necessity (CCN). The project area includes sixty-eight (68) separate colonia/subdivision areas, some of which are in the City of Roma, while others are spread out to the east and west of the City.

Presently, all of the project area is served by the Roma Public Water Supply System. The water system, however, lacks the capacity necessary to properly serve the population and fails to meet a number of Texas Natural Resource Conservation Commission (TNRCC) minimum design criteria (*Appendix A*). Substandard areas include raw water pumping, water treatment, elevated storage and distribution system capacity.

Only a small portion of the project area is served by Roma's Wastewater System. The collection system serves a few of the areas within the city limits, which represents about one-third of the possible service connections in the area. The remainder of the households utilize sub-standard septic tanks/cesspools to dispose of their wastewater. These facilities pose a significant health threat to the community, since most are placed on inadequately sized lots or soil conditions that are unsuitable for septic systems. The existing Wastewater Treatment Plant (WWTP) has been operating at or near its capacity in recent years and has recently been cited by the TNRCC for being unable to meet the minimum design standard for treatment capacity (*Appendix B*).

The proposed project improvements will provide service to 5,190 existing households. This number is expected to increase to approximately 5,960 by the design year 2015. The Project will provide new wastewater service to 2,746 connections. While the TWDB funding will provide wastewater collection lines in the colonia areas and provide expansion of the City's WWTP, there is not funding available from the TWDB to provide private service connections from the property line to the household.

Obtaining a source of funding for the service connections is critical to the City of Roma so that the community can benefit from the new wastewater collection system thus ending the continuing health risk posed by the present use of inadequate septic tanks or cesspools. Adding new connections to the utility system will also provide additional revenues to meet the debt service obligations incurred by the TWDB-EDAP Project (approximately $9.7 million loan to City of Roma).

Just as critical is the need for transitional funding assistance and funding for SCADA systems. These two additional items will provide an affordable, efficient and effective project for years to come. These assistance items will also enhance the management and operations of the City of Roma's utility system.

2. Project Costs

Next tables presents the project costs. The total cost of the project is $33,977,640 dollars.

ITEM	USD
Design & construction	
Design	1,373,300
Surveys & geotechnical investigations	280,700
Land acquisition	313,200
Construction	19,825,800
Contingency	2,948,130
Subtotal	***24,741,130***
Permits and other fees	
Permits	32,500
Inspection & other	594,900
Water rights	2,882,320
Legal & fiscal fees	405,800
Subtotal	***3,915,520***
Administration	
Administration	198,400
Financial costs (loan & bond fee)	114,690
Subtotal	***313,090***
Sewer hook ups & SCADA	
Sewer component, hook ups	4,407,900
SCADA system	600,000
Subtotal	***5,007,900***
TOTAL	33,977,640

Estimated Cost of the Project

The financial structure for the construction of this project presents subsidies for 70% of the total estimated cost. There is also a credit component for the remaining 30% that is distributed with the participation of the Clean Water Revolving fund in the amount of $4.185 million dollars, from the Drinking Water State Revolving Fund in the amount of $3.89 million dollars, and $1.6 million dollars from the Water Supply Account.

REQUESTED NADBANK FUNDING - ESTIMATED COSTSSEWER SERVICE CONNECTIONS	**$3,407,900**
TRANSITIONAL FUNDING ASSISTANCE	TBD*
WATER/SEWER SCADA SYSTEMS	$600,000

TOTAL ESTIMATED COST	**$4,007,900**

* To Be Determined

3. Financial Structure of the Project

The following table shows the financial structure. NADB's participation with BEIF funds for construction assistance in the amount of $4 million dollars approximately. These BEIF funds are subject to authorization from EPA at the recommendation of NADB.

Financial Structure of the Project

Source	Amount USD	%
Grants		
TWDB - EDAP Sewer	7,373,660	21.7
Colonias WTAP	7,373,660	21.7
NADB - Sewer component	4,007,900	11.8
TWDB - EDAP Water	4,490,380	13.2
USDARD & TDHCA	995,040	2.9
Subtotal	***24,240,640***	***71.3***
Credit		
Clean Water SRF	4,185,000	12.3
DW - SRF	3,896,000	11.5
Water Supply Account (WSA)	1,656,000	4.9
Subtotal	***9,737,000***	***28.7***
Capital		
Other	0	0.0
Subtotal	***0***	***0.0***
TOTAL	33,977,640	100.0

The financial analysis of this project considered the following funding sources that were approved by the TWDB and the City of Roma in August 1997. These included:

- $4,185,000 Clean Water State Revolving Fund Loan (SRF Loan) for Wastewater Improvements
- $7,373,660 TWDB-EDAP Sewer Grant (EDAP Sewer Grant) for Wastewater Improvements
- $7,373,660 Colonias Wastewater Treatment Assistance Program Grant (CWTAP Grant) for Wastewater Improvements
- $3,896,000 Drinking Water State Revolving Fund Loan (DWSRF Loan) for Water Improvements
- $1,656,000 Water Supply Account Loan (WSA Loan) for Water Improvements
- $4,490,380 TWDB-EDAP Water Grant (EDAP Water Grant) for Water Improvements

With regards to operation and maintenance costs for the infrastructure created, these are detailed in the financial analysis, and the rate study completed by NADB.

Transition Assistance and Rate Model

The current rate structure for the city of Roma is adequate based on what is indicated in the rate study. NADB BEIF transition assistance is in the process of being determined.

BEIF transition assistance funds may be provided based on NADB's analysis. The sustainability pro forma provided by NADB showed potentially $2,699,185 dollars of transition assistance to be provided in a period of seven years. At any rate, this definition will be recommended by the NADB and submitted to US EPA for autorization.

According to the Rate Study, the sewer rates are expected to change to a flow-based fee. The sewer bill will consist of a base rate for administration and debt service plus a flow fee. The base rate is projected to be $9.73 $/month the first year, and the flow fee is projected to be $1.36 per month for each thousand gallons. This structure offers a fair basis where everyone would pay for what they use.

Project Management. A document has been developed and submitted that contains the organizational chart proposed

SECTION 6. 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 City of Roma with important contributions by the steering committee submitted a Plan on April 28, 1999. The Plan comprises the following activities: 1) develop a steering committee to lead the implementation of the plan; 2) identify and meet with local groups and organizations; 3) hold two public meetings, and: 4) develop and final report documenting public support for the project. The activities carried out in fulfillment of this Plan are described below.

Steering Committee: The steering committee was formed on April 15, 1999 and is composed of Jose A. Ramos, Business Director, Chairman of the Committee; Eric C. Gonzalez, Water Plant Operator; Joel Montalvo, Insurance Salesman and Roberto. L. Naranjo, retired Educator; and Maria del Carmen Palacios, church secretary, all of them lifetime residents of Roma. They are joined by Dr. Raymond P. Musset, Secretary of the Committee a 20-year resident; Jose Maria Piceno, Business Owner a 30-year resident; and Israel Rodriguez, U.S. Customs Supervisor a 25-year resident of the city.

The committee was responsible for coordinating the public participation process which included scheduling the public and colonia meetings, developing outreach activities and soliciting support for the project within Roma and surrounding colonias. Committee members met from April 15 to August 12, for a total of seven (7) meetings to follow-up on the public information campaign, colonia meetings and to coordinate related activities.

The steering committee had a technical work group on which they could rely on for advice and technical information of the project. This technical work group also assisted in the public meetings and presentations and was composed of Keith Kindle, EDAP Program Specialist, Crisanto Salinas, City of Roma Planning Director, and Fernando Peña, Roma City Manager. This steering committee will continue meeting during the post-certification period to keep the local citizenry and businesses informed of the status of the project.

Local Organizations: The project proponents met with business and civic representatives to present the project and request support for the project. City officials provided presentations to the *Roma Business Alliance* on February 9, 1999 followed by a presentation to the *Roma Knights of Columbus* on April 7, 1999. Letters of support were provided by these organizations. Given the small size of the City of Roma (pop. 20,000), active local organizations are limited. The City chose to meet with these two groups because they meet regularly throughout the year. It should be noted that the non-governmental organization Project Del Rio, based in nearby Rio Grande City, was contacted to provide support in the outreach effort. Project Del Rio is an organization that works with students to perform surveys and environmental education activities. However, since the public participation process was carried out during the summer, students were not available. The City of Roma is considering using Project Del Rio during the post-certification period to assist in the outreach effort.

Public Information: Prior to the BECC project, information on the related Texas Water Development Board-Economically Distressed Areas Program (TWDB-EDAP) was disseminated through the local Public Access Television Station Channel 26 in which specific elements of the project were presented and discussed. Monthly presentations on the status of the wastewater project have been given since March 1998.

During the BECC process, project information was provided to the public at public and colonia meetings. Information about the financial costs of the project was provided to the residents during the colonia meetings and final public meeting. The City of Roma made available to the public at City Hall the BECC Step II proposal (in the form of the Facility Engineering Plan, the Environmental Information Document and Step II Application) 30 days before the public meetings.

Public hearings on the project were broadcast on the local Public Access Channel 26 television station. The channel provided live broadcast of steering committee meetings and City Council meetings where a project status report was given. City personnel distributed approximately 4,000 flyers to individual houses in the colonia areas that do not currently have wastewater service, to notify residents of the proposed meetings in each colonia area.

In addition, church services were used to announce the location, time and place of each of the four meetings. The announcement dates were on the Sunday before the meeting of that week. These announcements were given at Sacred Heart Church in the Escobares area on July 25; Lamb of God Church in the Fronton area on August 1; and Santa Rosa de Lima Church in La Rosita area on August 1, 1999. On February 11, 1999, the Roma Starr, which covered the City of Roma, reported on the wastewater hook-up project.

Public Meetings: *Public meetings on the hook-ups project have been held since June 1997. On January 4, 1999 another meeting was held and the first BECC public meeting was held on May 3 with its properly advertised 30 days notice. The meeting covered the technical aspects of the project and was televised in the local TV station. The second public meeting was held on August 12 and was also televised to the community. A notice for the public meetings was sent out in the monthly water bill. In addition to these meetings, four other meetings were held on July 27 and 29, and August 3 and 5. More than 110 people participated in these meetings where no opposition to the project was expressed by the public in attendance.*

The colonia and public meetings included all 68 colonias within Roma and outlying areas and where most houses do not have access to wastewater service. The financial information presented at these meetings included the project cost and a worst case scenario that the rates would increase by approximately $1.00 dollar for wastewater per year for 7 years from a flat fee rate to a flow-based rate where users will pay for their actual consumption. The public was informed that the amount of projected rate increases would be known after certification. The Rate Study *only provided recommendations and is subject to change. In addition, the public was also informed that this any rate change would be voted by the City Council later in the year.*

SECTION 7. SUSTAINABLE DEVELOPMENT

Sustainable development is defined as "Conservation oriented social and economic development that emphasizes the protection and sustainable use of resources, while addressing both current and future needs, and present and future impacts of human actions" as defined in the Border XXI environmental program developed by U.S. and Mexican authorities. The definition is based on the internationally accepted sustainable development definition from the Rio Declaration on Environment and Development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Projects must adhere to the definition and the principles of sustainable development below:

Principle 1. Human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

The proposed project meets the above principle of sustainable development by addressing existing health and safety risks that are posed by the inadequate water and wastewater facilities.

Principle 2. The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

The proposed project meets the above principle of sustainable development by providing adequate water and wastewater treatment capacity, adequate water distribution and wastewater collection facilities, and adequate water supply for the development from the present generation and development from future generations within the planning area. The project addresses the health, safety and environmental needs of both present and future generations.

Principle 3. In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

As illustrated by the discussion and planning contained within the environmental assessment and Finding of No Significant Impact, the project meets the above stated principle of sustainable development.

Principle 4. The stakeholders, i.e., the groups and individuals impacted by, and having an impact on development projects, must be part of any related activity. Specifically, this means that:

1. Border residents experiencing the environmental problems first hand must be given the opportunity to participate in the decision making process on ways to protect, manage and employ environmental resources in their communities; and
2. The efforts and expertise of the different institutions involved in environmental, social, and economic endeavors within all sectors of the society must be brought together for better balanced development planning and better use of scarce resources.

As shown by the Comprehensive Community Participation Plan contained herein, the public coordination to date discussed above, and the involvement of numerous federal and state agencies regarding the planning and development of the proposed project, the project meets the above stated principle of sustainable development.

BORDER XXI INDICATORS

INDICATOR	1998	LIFE OF PROJECT?
Percentage of population being served drinking water	100% but with lack of capacity and numerous substandard areas (TNRCC), including water quality violations	100%
Percentage of population provided sewage service	33% possible service connections	100%

A. Institutional and Human Capacity Building

The installation of almost $30 million in improvements to the City of Roma's water and wastewater infrastructure will have a profound effect on local institutions, local government, local economy and residents within each colonia area. The additional treatment capacity for both water and wastewater will allow the City to actively recruit businesses to locate to the Roma area since they now have the capacity to absorb the resultant increase in water and wastewater treatment demands. The construction of these improvements will boost the local economy through increases in labor employment, increases in sales by local material suppliers and vendors.

The City of Roma has submitted an application to the BECC and the NADBank for funding of a Project Management Study to identify institutional changes and equipment needs that may be required to manage, operate and maintain the City's utility system. As discussed earlier, the NADBank is currently funding a Rate Study and Project Management Study for the City of Roma. The intent of the Project Management Study is to provide recommendations to increase and improve the management capacity of its water and wastewater utility operations in order to effectively and efficiently operate and maintain the proposed infrastructure system, as well as provide a superior level of service to end users.

The construction of the wastewater collection system and treatment plant are all beneficial to the City, however, the environmental and socioeconomic impacts of these improvements will be greatly reduced unless the City can obtain funding for the sewer service connections. The residents of the colonia areas cannot afford the cost to connect to the proposed wastewater improvements, therefore, grant funds need to be available to these residents to fund construction of a service line and to pump out and remove the existing septic tanks or cesspools.

The successful completion of providing sewer service connections to colonia residents will eliminate the current health and safety threat posed by the use of inadequate on-site septic system, and provides a source of new revenues to the City to operate and maintain the system. More importantly, providing access for colonia residents to a centralized wastewater collection and treatment system will eliminate the threat of gastrointestinal diseases that are commonly observed in these areas. The injection of funds for construction of service connections using local labor will also boost the area economy on a short-term basis.

B. Conformance with Applicable Local and Regional Conservation and Development Plans

The TWDB and the TNRCC have approved the City of Roma Colonias Water and Wastewater Improvements Project as being consistent with the State's regional planning guidelines for providing regional water and wastewater services. In addition, the City of Roma intends to purchase their water rights from an irrigation district in the Lower Rio Grande Valley that will use the money for improvements to their irrigation district system. The concept behind this sale of water rights is that the irrigation district will save as much water as sold because of the improved efficiency of the irrigation distribution system. This concept is one that has been promoted as part of the Senate Bill 1 Regional Water Planning. Although this concept is not new, the City of Roma would be responsible for funding the largest irrigation district conservation program for the largest single transfer of water rights in the Lower Rio Grande Valley.

The expansion of the City's wastewater treatment plant and water treatment plant will satisfy the TNRCC regulations that require a minimum treatment capacity for public water supply entities. Currently, because of rapid growth in colonia areas, the City of Roma's plants do not meet the minimum capacity requirements. The construction of sewer service connections will also eliminate the inadequate septic systems that currently pose a threat to the health and safety of the public, as noted in the TNRCC's Nuisance Finding for the City of Roma.

C. Natural Resource Conservation

The construction of the proposed water plant and the improvements in the pumping and distribution system will allow the City to be more efficient in the treatment of water thus conserving this important resource. In addition, the wastewater treatment plant would have the treatment capacity to enable the City to produce a quality of effluent that can be used to produce reclaimed water as well as a reliable quality of effluent discharging into the Rio Grande.

The elimination of the use of inadequate on-site septic systems by providing access to a centralized wastewater collection and treatment system will lessen the loading of pollutants contained in the runoff from these areas. This will significantly reduce the adverse water quality impacts from non-point Source pollution to the Rio Grande in the Roma area.

Currently, a discharge permit application was submitted to the TNRCC in October 1998 for the wastewater treatment plant expansion. The permit application has been declared administratively and technically complete by the TNRCC review staff.

The City of Roma expects issuance of the TPDES Permit on or before September 1999 for the construction of the wastewater treatment plant expansion.

D. Community Development

The construction of approximately $30 million in infrastructure will provide the foundation for future community growth. Without adequate infrastructure, the City cannot accommodate new businesses or sustain its present growth in population. The positive impacts associated with the project are both short-term and long-term.

The approval of transitional funding assistance will greatly increase the affordability of the Project for end users as well as decreasing the burden on the City of Roma's management of water and wastewater utility operations. Similarly, the approval of grant funds for design and construction of SCADA systems for the TWDB-EDAP water and wastewater improvements will significantly enhance the effectiveness and efficiency of utility operations. In summary, the funds requested for BECC Certification will allow the project to be complete and ensure that the management and operations of the City of Roma's water and wastewater utility systems provide a superior level of service to the citizens of Roma.

The short-term positive impacts for community development include the stimulation of the local economy during the construction of improvements. Another is the short-term increase in local labor utilization. The long-term growth of future community development is made possible by having adequate infrastructure in-place to accommodate population growth, addition of new businesses or industries, and the expansion of existing businesses in the area.