

EXECUTIVE SUMMARY

The Lower Valley Water District (LVWD), created as a municipal utility district in 1986, is located in the southeastern portion of El Paso County, Texas in the United States of America. The City of Socorro and the community of San Elizario are located within the LVWD's authority. The present Socorro/San Elizario population is approximately 34,000. A population of 70,559 is projected for the Socorro San/Elizario area by the year 2015.

In 1987, an estimated one-third of the Socorro/San Elizario population was connected to a conventional water system owned and regulated by the LVWD. The remaining two-thirds of the population obtained their potable water from privately owned shallow wells or they bought it from water haulers. A conventional wastewater system did not exist in the area. A majority of the residents used individual septic systems. Many of the septic systems were improperly designed and constructed; consequently, they caused contamination of the water table and the spread of disease in the area.

For the past ten years, the LVWD has been applying to local, state, and federal agencies for funds to construct an adequate water and wastewater system for the Socorro/San Elizario area. In 1987, the LVWD applied for and received a research and planning grant from the Texas Water Development Board (TWDB) to prepare a Water and Wastewater Management Plan for El Paso County. This management plan was completed in May of 1988 and presented a method for providing water and wastewater service by the year 2010 to the residents of El Paso County who live outside the City of El Paso. The plan reviewed existing conditions including: water resources, population, water and wastewater needs, management agencies, and special conditions. It also set goals, criteria, and priorities and used these in evaluating various water and wastewater alternatives. Finally, the plan recommended feasible methods for providing water and wastewater services to these areas. In addition it described the facilities required; provided schedules for implementation of the facilities; provided estimates for implementation of the services; and offered methods for financing and managing the water and wastewater systems. The plan recommended that the EPWU and the areas east of the El Paso City limits, where the LVWD is located, have a joint water treatment plant. Furthermore, the EPWU would provide contract treatment for wastewater from these areas.

After completion and approval of the Water and Wastewater Management Plan, the LVWD applied for additional funds from the TWDB to design and construct a water and wastewater system for the City of Socorro following the recommendations in the management plan. The TWDB committed funds for the Socorro wastewater system from their State Water Pollution Control Revolving Fund (SRF) Program. Under the TWDB's permanent rules, 31 TAC 375.35, an environmental review consistent with the National Environmental Policy Act was required for the project. The LVWD proceeded with the preparation of a Facility Engineering Plan and an Environmental Information Document, which were completed and approved by the TWDB in 1989. The Facility Engineering Plan called for the construction of a conventional wastewater system including major interceptor lines, collector lines and eleven lift stations which would ultimately carry the wastewater flows from this area to the EPWU Socorro Treatment Plant. The

BECC STEP II APPLICATION

TWDB issued a Finding of No Significant Impact (FONSI) on June 11, 1990, as a result of the environmental review for this project.

During the same period, the United States Department of the Interior - Bureau of Reclamation assisted the LVWD in the preparation of an Environmental Assessment in relation to a water delivery plan for the LVWD area. The assessment concluded that the best alternative for the area was to deliver potable water from a water treatment plant which would treat up to forty million gallons per day of Rio Grande surface water. The plant would be built within the El Paso City limits near the Socorro city limits. The plant would be owned and operated by the EPWU. The United States Department of the Interior - Bureau of Reclamation, Upper Colorado region issued a FONSI on March 14, 1990 as a result of the environmental assessment performed for the Water Delivery Plan for the LVWD.

In 1992, the LVWD decided to add seven additional subdivisions to the wastewater project proposed in the 1989 Socorro Facilities Engineering Plan. The subdivisions included Hacienda Del Valle #1 and #2, Rancho Miravel, Santa Martina #2, El Gran Valle #1 and #2 and Bejar Estates. Due to the substantial additions to the previous project, the TWDB requested that the 1989 Socorro Facility Engineering Plan and EID be revised. In order to avoid confusion by preparing addenda to the previous reports, complete stand alone Facility Engineering Plans and EIDs were prepared for the City of Socorro and the Community of San Elizario. A separate Facility Engineering Plan and EID were prepared for the San Elizario area since it was in a separate sewer service area designated by the Water Quality Management Plan. The revised Socorro and San Elizario Facility Plans and EIDs were approved by the TWDB which issued a FONSI for the San Elizario area on December 8, 1993 and a FONSI for the Socorro area on December 10, 1993. The revised Facility Engineering Plans proposed the phasing of the full project into three parts. The first phase consisted of the construction of a water supply system for several colonias in the City of Socorro. Phase II consists of the construction of a wastewater collection system and a water supply for a portion of the City of Socorro. Phase III consists of the construction of a wastewater system for the remaining portion of the City of Socorro and a portion of San Elizario.

During the planning and design phase of the projects several changes were proposed. Installation of the interceptors and transmission mains was changed from roadways to agriculture drains because of the narrow width of the roadways as well as to reduce the amount of pavement replacement required. The wastewater system was redesigned to reduce the number of lift stations from eleven to eight. The design year was changed from 2010 to 2015 to allow for a 20-year design period. The pressure zone for this area was isolated to lessen high pressures in the system and to reduce energy costs associated with the supply of water to the pressure zone. Now the project will also accommodate flows from the Sparks Subdivision as requested by the TWDB. Wastewater flows will be directed to the Roberto Bustamante Wastewater Treatment Plant instead of the Socorro Treatment Plant. Amendments to the 1993 Facility Engineering Plans and EIDs were prepared in 1995 to address these changes. The TWDB reviewed and approved the amendments and issued an amendment to the December 10, 1993 San Elizario FONSI on January 12, 1996.

BECC STEP II APPLICATION

The 1995 Facility Plans call for the extension of distribution and transmission lines ranging in size from 8-inches to 24-inches as part of the Phase II Water System Project. The Phase II Wastewater System Project calls for the purchase of the existing water system from the EPWU, improvements to the Sparks Subdivision (financed outside of the TWDB), installation of collector and interceptor lines ranging in size from 8-inches to 42-inches and the installation of two lift stations in a tier formation which eventually discharge into the Roberto Bustamante Treatment Plant. The Phase III Water System Project calls for extension of distribution and transmission lines ranging in size from 8-inches to 36-inches. The water system also calls for the installation of a 15,250-gpm capacity booster station at the Jonathan Rogers Treatment Plant site and a 3-MG storage tank designed to create a separate pressure zone for the Socorro/San Elizario area. The Phase III Wastewater System Project calls for the installation of collector and interceptor lines ranging in size from 8-inches to 36-inches and the installation of six lift stations in a tier formation which will eventually discharge into the Roberto Bustamante Treatment Plant. The water and wastewater systems follow the recommendations provided in the 1988 Water and Wastewater Management Plan. The systems will serve 70,559 people or 15,000 connections by the year 2015.

The TWDB/Rural Development committed funds for the Phase II and III Projects from several of their programs as follows:

	<u>Phase II</u>	<u>Phase III</u>
Grants:		
EDAP	\$ 8,081,900	\$ 26,742,000
RD	2,938,300	967,000
CWTAP (EPA)	8,070,000	16,666,000
Loans:		
EDAP	1,275,400	4,539,000
SRF	1,347,000	2,270,000
RD	466,000	
WSA	0	
Other	<u>2,800,000</u>	<u>5,210,000</u>
Subtotal	\$24,978,600	\$56,394,000

The total funding commitment is \$81.4M. Since this commitment is substantial, the TWDB requested that the EPWU be the program manager for the Phase II and III Projects. The EPWU is the Water Regional Manager for the County of El Paso.

The Phase II Project was designed by Parkhill, Smith & Cooper, Inc. The Project was separated into four construction packages as shown.

Construction Packages	Description	Contractor	Cost	Timeframe
Phase II Water Extension Project	Close existing water system loops within Phase II area	Accent Landscaping & Sprinklers	\$196K	March 95 - December 95

BECC STEP II APPLICATION

West Interceptor Lift Station and Collectors	Install interceptors, collectors and lift station in Middle Drain and west of Middle Drain	Oscar Renda	\$7.3M	May 96 - May 97
East Interceptor and Lift Station	Install interceptors and lift station east of Middle Drain	KENKO	\$2.9M	August 96 - August 97
East Subdivision Collectors Project	Install collectors in subdivisions east of Middle Drain	Danny Sanders	\$3M	December 96 - December 97

Although the Phase II construction cost is expected to be within the funding amount committed by the TWDB for this project, payment for the loans is coming due and the LVWD is not generating sufficient revenue to pay the loans. Therefore the LVWD is requesting certification from the BECC and the NADBank for a \$3.6M in transition funds to relieve the rate increase to LVWD customers, which would be required to pay back the TWDB Phase II loans.

The Phase III Project is in the design process. The EPWU, together with the LVWD and the consulting engineers contracted to design the Phase III Project, have projected that the cost of constructing this project will exceed the current TWDB/RD’s commitment by an estimated \$16.5 million because of inflation; extra dewatering costs; differences in estimated unit and actual unit costs; and other unforeseen costs. The LVWD is requesting certification from the BECC and the NADBank and PDAP funding for \$16.5M to complete design, construction, and a hookup program.

COMPLIANCE WITH BECC CRITERIA

General

The project falls under the BECC’s water and wastewater priority areas and is located within 62 miles of the U.S./Mexican Border. No international treaties or agreements will be affected by this project. However, the International Boundary and Water Commission (IB&WC) did state that continued discharge of properly treated effluent from the Roberto Bustamante Wastewater Treatment Plant should contribute to the IB&WC wetland mitigation project associated with it’s Rio Grande American Canal Extension project.

Human Health and Environment

This project will improve the existing health problems in the area, which are caused by the contamination of shallow wells by improperly designed and constructed septic tanks and cesspools. Environmental assessments have been performed for these projects as required by the National Environmental Policy Act, 42 USC Sections 4321, et. Seq. and as delegated by the EPA through the CWTAP and 40 CFR Section 35.3140, and pursuant to the State environmental review process adopted by the TWDB in 31 TAC 375.35 pertaining to the State Water Pollution Control Revolving Fund (SRF). Several FONSI’s were issued in response to environmental assessments performed on these projects. Copies of the FONSI’s are provided as part of this Step II Form. A programmatic agreement regarding the potential effect of the water and wastewater

BECC STEP II APPLICATION

projects upon properties included in or eligible for inclusion in the National Register of Historic Places was prepared under ACHP procedures (36 CFR 800.13) in consultation with the LVWD, the TWDB, the Texas State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP). A copy of this agreement is provided as part of this Step II Form. Plans for the identification, evaluation, and treatment of historical and archeological properties; and for the preservation of architectural properties were prepared for these projects. Copies of these plans are provided as a part of this Step II Form.

Technical Feasibility

The Phase II and Phase III Projects call for conventional water and wastewater systems, which were compared with the alternatives and were found to be the best systems for the area. An Operations and Maintenance Report was prepared for the Phase II Project. The report provides recommendations on staffing, equipment, budget, and cooperative arrangements. Much of the information in this report is applicable to the Phase III Project. A copy of this report is provided as part of the Step II Form. The Phase II and III Projects comply with TNRCC and EPWU design standards applicable to the projects and which regulate the area.

Financial Feasibility and Project Management

The Lower Valley Water District (LVWD) is seeking funding for transition, design, construction, and hookup program for Phases II and III. To date, the project has been funded primarily through the TWDB EDAP program and is divided into three phases. Phase II includes the area west of Socorro and phase III includes the remaining area in Socorro and the community of San Elizario. Phase II construction is complete and within the funding amount committed by the TWDB for this project but, payment for the loans is coming due and the LVWD is not generating sufficient revenue to pay the loans. Phase III is in the design process. The Phase III total project cost of \$72.9M will exceed the current TWDB's/Rural Development commitment of \$56.4M by an estimated \$16.5M.

There has been close coordination with NADBank. They are in the process of completing the financial structure, which will be complete before certification on June 24, 1998. The analysis to date estimates that the total financial package will include grant assistance of \$13M to \$16.5M and a loan of \$2M

Community Participation

The LVWD launched an extensive campaign to inform the Socorro and San Elizario communities of the Phase II and Phase III Projects and how they would be funded. A steering Committee, named the "Water for our Children Committee", was formed to lead the campaign. The committee hired an advertising agency to assist in informing the community of the projects and of the upcoming tax pledge election which had to pass in order for the TWDB to commit to low interest loans and grants for the projects. Several bilingual public meetings were held throughout the City of Socorro and the Community of San Elizario. The public was also reached through newspaper and billboards advertisements, and TV and radio spots. Advertisements informed the public that although a tax pledge was required by the TWDB, experts estimated that the loan portion of the funding package could be paid through revenues without imposing a tax. The tax pledge election was held on June 8, 1996 and was passed by the Socorro and San Elizario communities.

BECC STEP II APPLICATION

After the project entered the BECC certification process in 1996, a meeting was held on September 30, 1996 to inform the residents regarding the technical aspects of the project. The BECC second public meeting was held on August 18, 1997 to inform the public on the project costs and rate impacts.

A report documenting this campaign is provided as a part of this Step II Form has been provided.

BECC STEP II APPLICATION

**BECC
BORDER ENVIRONMENT COOPERATION
COMMISSION**

STEP II

FORM FOR DETAILED PRESENTATION OF PROJECTS FOR CERTIFICATION

Date of Submittal to the BECC _____ Date of Receipt by the BECC _____

NAME AND TYPE OF PROJECT

A. NAME OF PROJECT: Lower Valley Water District Economically Distressed Areas Program (EDAP) Phase II & III Water and Wastewater Projects

PRIMARY APPLICANT INFORMATION

C. NAME OF ORGANIZATION: Lower Valley Water District (LVWD)

Contact Person: Manuel Macias
Position: General Manager
Address: 10005 Alameda, Suite P
City: El Paso State: Texas Zip Code: 79927
Phone No.: (915) 858-4440 E-mail Address: mmaciash2o@aol.com
Fax No.: (915) 858-1116

CO-APPLICANT INFORMATION (IF APPLICABLE)

D. NAME OF ORGANIZATION: Not applicable

BECC STEP II APPLICATION

CONTRACTOR INFORMATION (IF APPLICABLE)

E. NAME OF FIRM:	Moreno-Cardenas Engineers, Inc. (MCI)	Parkhill, Smith & Cooper, Inc. (PSCI)
Contact Person:	Joe Cardenas, P.E. (MCI)	Dan Knorr, P.E. (PSCI)
Position:	Principal-in-Charge	President
Address:	1207 N. Oregon Street El Paso, Texas 79902	810 E. Yandell Drive El Paso, Texas 79901
Phone No.:	(915) 532-2091	(915) 533-6811
Fax No.:	(915) 542-0307	(915) 544-2059
E-mail Address:		

(Provide evidence of financial responsibility and performance history of company.)

MCI is an El Paso, Texas based civil engineering firm providing consulting services to the El Paso area for the past eight years. Mr. Joe Cardenas, P.E., principal-in-charge of MCI, has over 18 years experience in the consulting civil engineering field. He has been involved in the planning, design, and construction phases of some of the largest public works projects in the City of El Paso. MCI is presently under contract with the El Paso Water Utilities (EPWU) to perform design services for the LVWD - EDAP Phase III, Areas A, B, and D Project.

PSCI has continuously been engaged in the engineering practice in Texas for 50 years. Originally established as an engineering firm in Lubbock, Texas in 1945, the corporate headquarters office remains there today. The firm has branch offices in El Paso, Midland, and Amarillo, Texas. The El Paso branch office was established in 1958 and has provided professional design services to El Paso area clients for the past 38 years. PSCI completed the design of the EDAP Phase II Project under contract with the EPWU. The project consisted of the design and preparation of specifications for the construction of water and wastewater infrastructure for the northern portion of the City of Socorro. PSCI is presently performing construction phase services for the EDAP Phase II Project. PSCI is also under contract with the EPWU to perform design services for the EDAP Water and Wastewater Project - Phase III, Area C for the eligible and ineligible subdivisions.

As required by the EPWU for EDAP - Phase III Projects, both MCI and PSCI have submitted proof of insurance coverage with the following limits:

- Commercial Liability - Bodily injury and property damage coverage - \$1,000,000.00.
- Automobile Liability - Bodily injury and property damage coverage - \$1,000,000.00.
- Professional Liability - \$1,000,000.00

BECC STEP II APPLICATION

I. GENERAL

A. Project Type

Describe how the project falls under one or more of the BECC priority areas: water supply, wastewater treatment, municipal solid waste, or related matters.

- Water Supply 3. _____ Solid Waste Management
 Wastewater Treatment 4. _____ Other Related Projects

The Lower Valley Water District (LVWD) EDAP Phase II and III Projects consist of the design and construction of a water and wastewater system for the City of Socorro and the community of San Elizario. The water system will be an extension of the EPWUs' system and will include the design and construction of a booster station, a 3-MG storage reservoir and the related transmission and distribution lines to create a separate pressure zone within this area. The water supply will be provided from a combination of surface water and ground water sources. Surface water from the Rio Grande will be provided during the irrigation season and treated at the EPWU Jonathan Rogers Treatment Plant. Ground water will be supplied from various El Paso Water Utilities wells. The wastewater system will include the design and construction of interceptor lines, collector lines and a series of lift stations. Wastewater flows from this area will eventually discharge into the existing Roberto Bustamante Treatment Plant owned and operated by the EPWU. The EPWU's WTP and WWTP has the capacity to meet the needs of the LVWD. Additionally, the EPWU has include the LVWD's requirements in its Master Plan.

B. Project Location

Describe the geographical location of the project and provide a site location map as well as a regional map showing the proposed site. Use appropriate scales for the maps similar to those required by the corresponding regulatory agency. Also, describe the area of project impact as specifically as possible.

The LVWD is located in the southeastern portion of El Paso County, Texas in the United States. The LVWD is bounded on the northwest by the El Paso city limits; on the northeast by Hudspeth County; and on the west by the Rio Grande. The LVWD is applying to the BECC for certification of two projects, called the EDAP Phase II and Phase III Projects, which will provide water and wastewater infrastructure for the City of Socorro and the San Elizario community within the LVWD's authority. The project area is located within 62 miles of the U.S./Mexican border. The project will not remedy a transboundary human health or environmental problem.

C. Project Description and Work Tasks

BECC STEP II APPLICATION

1. **Project Description.** Provide a description of the project which includes the human health and environmental issue to be resolved, the proposed technology, the scope of the project (i.e. closure, rehabilitation, expansion, new facility, or combination of these activities):

History

Development of the Socorro and San Elizario areas began as missions in the 1650's. Growth within these areas concentrated around these historical missions. The Socorro/San Elizario area consisted of fertile irrigated lands and was considered a rural agricultural area. The development of these areas changed considerably in the 1900's with the proximity of the railroad, the construction of Elephant Butte Dam, and the construction of new roads from El Paso to the Lower Valley. The Lower Valley population expanded greatly during this time. Prior to the City of Socorro's reincorporation in 1986, development in the area had little or no restrictions. With the absence of zoning and a comprehensive development plan, the Socorro/San Elizario area experienced the development of numerous substandard residential subdivisions or "colonias", which were not provided with adequate water supply or wastewater disposal facilities. Many of the people in the colonias dug their own shallow wells to have a potable water supply. These people also constructed unconventional wastewater systems including septic tanks and cesspools. Many of the systems were inadequately designed and constructed causing contamination of the ground water and the spread of water borne diseases in the area.

Conventional wastewater collection and centralized wastewater treatment systems utilizing gravity flow lines, lift stations, and wastewater treatment plants are effectively being used in the City of El Paso, Texas and throughout the world. This type of system was compared to non-conventional treatment and disposal technologies and found to be the most appropriate for the Socorro/San Elizario area.

The scope of work for this project will include the expansion of the existing water and wastewater systems. The water system will require the construction of a booster station, a 3-MG storage reservoir and the related transmission and distribution lines to create a separate pressure zone within this area. The wastewater system will include the design and construction of major interceptor lines, collector lines and a series of lift stations.

- a) **Water Supply Projects.** Include information on: intake works, pipelines, treatment facilities, regulation, storage, distribution systems, pumping station, among others.

The LVWD buys wholesale water from the EPWU. The water is transferred to the LVWD at five metered points located at the

BECC STEP II APPLICATION

intersection of the city limits and at Socorro Road, Alameda Avenue, the Middle Drain, North Loop Drive, and Gateway East. The EPWU's water distribution system consists of 16 main pressure zones. The zone that supplies the LVWD is the Valley Pressure Zone. The EPWU receives its raw water from both surface water and groundwater sources. The Rio Grande provides the surface water source with its water being treated at the Robertson-Umbenhauer and the Jonathan Rogers Water Treatment Plants prior to being pumped into the City of El Paso's Valley Zone and in turn to the LVWD's system. Both the Robertson-Umbenhauer and the Jonathon Rogers Water Treatment Plants use physical and chemical processes to treat the surface water. The physical processes used in the Robertson-Umbenhauer plant include screening, sand removal, aeration, sedimentation, and filtration. The chemical processes used at this plant include the addition of chlorine dioxide, ferricsulfate, lime-powdered activated carbon, and chlorine. The physical processes used at the Jonathon Rogers Treatment Plant include screening, sedimentation and granular activated carbon filtration. The chemical processes used at this plant include ozonation, lime softening, chemical clarification, recarbonation, and final chlorine disinfection.

Surface water is available only during the irrigation season from March through September. During these months the total demand is supplied by a combination of surface water and groundwater. During the months of October through February, the EPWU's system depends solely on groundwater supplied by 138 groundwater wells. Groundwater quality is sufficient to allow for direct system pumping without physical or chemical treatment, except for chlorination.

In addition to treatment at the water plants, the EPWU has additional chlorination points throughout their system. The LVWD has plans to install three chlorination stations within their system before the end of the year. The EPWU takes 240 samples per month from their water supply at different locations within the distribution system. These samples are tested for conformance to EPA and TNRCC requirements regarding bacteria. The EPWU also performs a complete chemical analysis of their water supply at least once a year to assure conformance with EPA and TNRCC requirements. The LVWD takes daily samples from their water supply at locations at the ends of their system including: Cuadrilla Road, Petuna Road, the Sparks addition and the south end of San Elizario. Twenty-five samples per month are submitted to TNRCC to meet their requirements.

BECC STEP II APPLICATION

The LVWD - EDAP Phase II water project consists of the purchase of the existing water system from the EPWU, improvements to the Sparks Subdivision (financed outside of the TWDB), installation of water transmission and distribution lines ranging in size from 6-inches to 24-inches.

The Phase III Project calls for the construction of a 28-mgd booster station at the EPWU's Rogers WTP, transmission and distribution lines ranging in size from 6 inches to 36 inches, and a 3-mg storage tank. These facilities would create a separate pressure zone for the LVWD.

- b) **Wastewater Treatment Projects.** Include information on collection system, lift station, wastewater treatment plant, outfalls and reuse systems.

The wastewater system proposed for the Socorro and San Elizario areas is a gravity flow system. Due to the flat terrain and the long distances from the subdivisions to the wastewater treatment plant, a tier of lift stations will be required to carry the flow to the treatment plant. The collector lines within the subdivisions will be designed to carry ultimate flows from the subdivisions. The interceptors and lift stations, which will service the Socorro and San Elizario area, will be sized to serve a 20-year growth period up to the year 2015. The system will be constructed of watertight plastic pipe to avoid infiltration and inflow. Wastewater from these subdivisions will ultimately flow into the EPWU's Bustamante WWTP. The LVWD has a contract with the EPWU to discharge flows from the LVWD into the Bustamante WWTP.

The LVWD - EDAP Phase II Wastewater System will consist of improvements to the Sparks Addition (financed outside of TWDB) and a three tiered service areas with lift stations in the first two service areas. The last service area in the tier will discharge its flow into the Roberto Bustamante Wastewater Treatment Plant. The system will also include the installation of interceptor and collector lines ranging in size from 8-inches to 42-inches.

The LVWD - EDAP Phase III Wastewater System will consist of eight tiered service areas with lift stations in each of the service areas. The system also includes the installation of interceptor and collector lines ranging in size from 8-inches to 42-inches.

- c) **Municipal Solid Waste Projects.**

BECC STEP II APPLICATION

Not applicable to this project.

d) Other Related Projects.

Not applicable to this project.

- 2. Program of Project Work Tasks.** Provide a diagram indicating project work tasks. Each task should include a brief description, anticipated cost, time frame, task executor, and percentage of completion.

Design and construction of the water and wastewater systems in Socorro and San Elizario were separated into Phases II and III. Phase II encompasses the northern portion of Socorro. Phase III encompasses the remaining portion of Socorro and all of San Elizario. Parkhill Smith and Cooper Inc. of El Paso, Texas designed the water and wastewater infrastructure under Phase II. Construction of this project is almost complete. The Phase II Project was bid out and constructed under four different packages. The following table provides information on the packages.

Construction Packages	Description	Contractor	Cost	Timeframe
Phase II Water Extension Project	Close existing water system loops within Phase II area	Accent Landscaping & Sprinklers	\$196K	March 95 - December 95
West Interceptor Lift Station and Collectors	Install interceptors, collectors and lift station in Middle Drain and west of Middle Drain	Oscar Renda	\$7.3M	May 96 - May 97
East Interceptor and Lift Station	Install interceptors and lift station east of Middle Drain	KENKO	\$2.9M	August 96 - August 97
East Subdivision Collectors Project	Install collectors in subdivisions east of Middle Drain	Danny Sanders	\$3M	December 96 - December 97

The Phase III Project was divided into four major areas according to construction sequencing. The LVWD contracted Moreno-Cardenas, Inc.

BECC STEP II APPLICATION

to design the water and wastewater systems in Phase III - Areas A, B, and D and Parkhill, Smith and Cooper, Inc. to design the water and wastewater systems in Phase III Area C. These areas were further divided into north, south, east and west sub-phases. The following information was extracted from “Technical Memorandum No. 2, Comprehensive Planning Document, Socorro EDAP Facilities for El Paso County Lower Valley Water District Authority, July 1995” and provides general information on the tasks involved in this project:

Proposed Phase III Construction Sequencing

The sequence by which construction can occur is dependent upon the tiered nature of the wastewater system. Downstream lift stations must be in place before lift stations discharging to them can be operating. Major water transmission mains located within the general boundaries of phasing dictated by the wastewater system are to be designed and constructed concurrently. These phases include:

a) *Phase A Construction:*

- ◆ *Phase A - W: This designation refers to western facilities to be constructed in Phase A. Facilities are restricted to common water transmission mains which are located in the Socorro Phase II area.*
- ◆ *Phase A - N: Refers to northern facilities of Phase A. This area is located in the service areas of Lift Stations 1 and 2 being constructed in Phase II. Construction of facilities in this area can therefore be pursued independently of other Phase III work. Facilities include wastewater collectors and a portion of the major water transmission mains.*
- ◆ *Phase A - S: Refers to southern facilities of Phase A. It includes common wastewater facilities and collectors in the service area to Lift Station 5. It also includes common water transmission mains. Common wastewater facilities in this area must be completed before the Phase B lift station can become operational.*

b) *Phase B Construction:*

Phase B: Facilities in this area include common wastewater and water facilities as well as collectors in the service area to Lift Station 6. Common wastewater facilities in this area must be completed before Phase C lift stations can become operational.

c) *Phase C Construction:*

- ◆ *Phase C - N: Refers to northern facilities of Phase C. It includes common wastewater facilities as well as collectors in the service*

BECC STEP II APPLICATION

area to Lift Station 4. Some internal subdivision water lines are also included. Major elements of the common water system are to be constructed in this phase. These include the 3 mg storage reservoir, the booster pump station at Rogers WTP, and various elements of the common transmission mains. It should be noted that there are several components of the common transmission mains located in the San Elizario area that have been indicated as existing. They have been given an "existing" designation due to the fact that such facilities are currently being designed and will be constructed with other funding independent of this project. Some of these common transmission mains must be in place before the new pressure zone supplied by the new booster station can become operational. Lift Station 4 must be operational before Lift Station 8 can become operational.

- ◆ Phase C - E: Refers to eastern facilities of Phase C. It includes common wastewater and water facilities as well as internal collectors and water systems. Lift Station 9 in this area needs to be operational before Lift Stations 10 and 11 can discharge to it.

d) Phase D Construction:

- ◆ Phase D - N: Refers to northern facilities of Phase D. The only common facility is a lift station and associated force main. None of the area is eligible for EDAP funding.
- ◆ Phase D - E: Refers to eastern facilities of Phase D. It includes common wastewater and water facilities as well as internal collectors and water systems. The area is generally the same as the service area for Lift Station 11.
- ◆ Phase D - S: Refers to southern facilities of Phase D. It includes common wastewater and water facilities as well as internal collectors and water systems. Lift Station 7 in this phase and its associated force main are common facilities which are not eligible for EDAP funding. The other lift station, interceptors, and force main are part of Service Area 10.

In September of 1995 the LVWD, the EPWU and the consulting firms hired to design the Phase III projects prepared a Joint Memorandum which included a tentative schedule for the design and construction of the Phase III projects.

3. Description of the Community

BECC STEP II APPLICATION

- a) **Demographic Information.** Provide information on the current population anticipated to be affected by the proposed project, as well as population projections for the useful lifetime of the project, based on the most recent census, population growth rate, and demographic information.

Initially, the EPWU took population projections for the Socorro/San Elizario area from a study titled “El Paso Water Resource Management Plan”, which was prepared for them in May 1990. This plan reviewed a number of population forecasting models which had been applied to the El Paso area. The EPWU selected the TWDB’s population forecasting model based on a review of the basic methodologies and a comparison of the forecast results produced by each of the models. The projections used in this study were developed prior to publication of the 1990 Census data. The 1990 Census data indicates that the 1990 population in the Facility Planning Area was as follows.

Socorro Town	22,995
San Elizario CDP	<u>4,385</u>
	27,380

Therefore, the initial projections concerning future population were modified to reflect adjustment for the actual 1990 population. The adjusted population projections are as follows.

<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>
33,729	40,079	49,079	58,078	70,559

An assumed geometrical growth rate of 3.7865% was used to determine the population up to the design year.

- b) **Local Environmental Services.** Provide information on the current availability and supply of environmental services (i.e. water, wastewater, and solid waste) in the community. Provide the percentage of population receiving each service and the number of hours per day the service is provided.

Existing Infrastructure

The majority of the existing water system in the Socorro/San Elizario area was installed by the EPWU before 1980. In 1980, the EPWU created a moratorium preventing the extension of water service to any new resident outside the city limits of El Paso. Water tap connections to existing distribution lines fronting residential homes were also prohibited. The LVWD was established in 1985 and this district was

BECC STEP II APPLICATION

approved by general election of the El Paso voters in April of 1986. The LVWD encompassed the Socorro and San Elizario areas. In 1988, the LVWD bought the Socorro/San Elizario water systems from the El Paso Water District (EPWD) and began buying wholesale water from the EPWU. The water system has been added to since then, but no major distribution/transmission system was planned or constructed until 1995. Additional water mains have been extended within the City of Socorro as part of the LVWD, EDAP Phase I and II projects. The LVWD estimates that at present they serve 80% of the population within their district with water service. Water service is provided 24 hours a day.

There is no wastewater collection system or centralized wastewater treatment facility for the Socorro/San Elizario area. Most of the residents in this area use individual septic systems. The El Paso City-County Health District presently regulates the construction of septic tanks in the area. Prior to 1986, there was little or no regulation of septic systems. As a result of this lack of regulation, individual septic systems were inadequately designed. Many of the septic systems have failed because of high ground water, poor soil conditions, and inadequately designed tanks and drain fields.

The LVWD has a contract with El Paso Disposal for solid waste collection and disposal services. All LVWD water customers are required to receive solid waste collection and disposal services. Water customers are supplied with special containers by El Paso Disposal. El Paso Disposal performs collections once a week. Customers are charged \$11.00 plus associated taxes per month. Solid waste is delivered to the Clint Landfill located at the 12000 block of Darington Road in Clint, Texas.

- 4. Project Alternatives.** Describe the alternatives considered to address the human health and environmental issues, including the no project alternative. The description should include a general analysis of site suitability, environmental, technical, financial, social, and sustainable development aspects.

The following information was extracted from "Texas Water Development Board EDAP - Phase I Facilities Engineering Plan, City of Socorro, Texas, Water & Wastewater Plan, Prepared for the El Paso County Lower Valley Water District Authority, December 1992, by Moreno-Cardenas, Inc.":

In 1988, the Water and Wastewater Management Plan for El Paso County evaluated numerous wastewater collection, treatment and disposal

BECC STEP II APPLICATION

alternatives for the Lower Valley area of El Paso County. The study produced separate evaluations for each system identified. Each alternative was evaluated in terms of its ability to serve the area, the time necessary for its implementation, its reliability after implementation, its relative cost, the institutional issues to be considered, its effect on the environment, and its ease of implementation. Nine methods for serving the Lower Valley area were identified. Some of the alternatives were independent of any other existing wastewater systems, while some were dependent upon full or partial use of facilities operated and maintained by the El Paso Water Utilities or other existing wastewater management agencies in El Paso County. The nine conventional alternative wastewater systems considered are as follows:

- a) The El Paso Water Utilities expands to serve the area.*
- b) The El Paso Water Utilities treats the wastewater by contract.*
- c) The El Paso Water Utilities becomes the wastewater management agency for the area.*
- d) The Lower Valley Water District constructs a wastewater treatment plant.*
- e) El Paso County constructs a regional wastewater treatment plant in Socorro to serve Socorro, East El Paso and the Hueco area.*
- f) Primary treatment by the City of Socorro/Hueco Infiltration.*
- g) A wastewater treatment plant is constructed in Socorro and discharges into the river.*
- h) El Paso County constructs a wastewater treatment plant in Socorro to serve the Lower Valley and the East El Paso area.*
- i) El Paso County constructs a pair of regional wastewater treatment plants in the Socorro and Fabens area to serve the Lower Valley area.*

The four highest rated alternatives were evaluated in more detail. The results indicated that contracting the treatment of wastewater with the EPWU was the most feasible alternative. The advantages of this alternative are cited below.

- a) Adequate capacity to serve area*
- b) Socorro and San Elizario are becoming a suburban area with rapid infill development occurring*
- c) A collection system could be readily expanded*
- d) Existing sewer interceptors, owned by the EPWU, could be used*
- e) EPWU experience in wastewater treatment and disposal*
- f) Possibility of early service to area from the EPWU before enlarging treatment plants*
- g) Good public acceptance, except for costs*
- h) Good public health benefits*

BECC STEP II APPLICATION

- i) No Need to acquire treatment plant sites*
- j) Contamination of groundwater would be reduced*

Non-conventional wastewater alternative treatment and disposal technologies for the Lower Valley area were also considered. The alternatives evaluated were:

- ◆ *Homeowners to provide private on-site septic tank system meeting the Texas Department of Health regulation standards.*
- ◆ *Small Alternative Wastewater Systems (SAWS) utilizing evapotranspiration beds with impervious liners suitable for areas in Socorro with high groundwater tables.*
- ◆ *SAWS utilizing intermittent sand filters (ISF) suitable where discharges to a ditch or stream is acceptable.*
- ◆ *Small diameter sewer systems used in conjunction with cluster collection systems applicable in remote or fringe areas of Socorro where planning area does not produce enough flow to warrant a conventional collector system.*

The above alternatives were not considered suitable systems for the Lower Valley area for the following reasons:

On-site septic systems require half acre lots if the lots are connected to a water system. Three fourths of the developed lots in the Socorro/San Elizario area do not meet this requirement. A majority of the existing on-site septic systems were inadequately designed and constructed and are experiencing failures. The present trend is to develop residential subdivisions with lots averaging one-fifth acre in size. On-site septic systems require a groundwater depth of at least 8 feet. The groundwater table in a majority of the area is at 8 feet or less. A majority of the area did not meet the required percolation rate for on-site septic systems. Costs associated with septic tank/drainfield renovation are higher than centralized collection and treatment.

SAWS utilizing evapotranspiration beds with impervious liners would be suitable for areas with high ground water tables. A majority of the existing lots do not have sufficient area to accommodate this type of system.

SAWS utilizing ISF would be suitable where discharges to a ditch or stream are possible. The distance from most colonia areas to nearby drains is long and round about. Long discharge lines would be required. ISF units do not destroy pathogens in the effluent; therefore, some form of disinfection would be required. In addition, odors are a problem with septic effluent being spread over filters. Discharge into a stream or

BECC STEP II APPLICATION

arroyo would also require the LVWD to obtain and maintain a discharge permit from the Texas Water Commission. The cost associated with monitoring effluent quality, providing for disinfection and odor control, and maintaining the discharge permits is beyond what most individual or small cluster of users would pay for comparable treatment using a central collection and treatment system.

Small diameter sewer systems used in conjunction with cluster collection systems can be applicable in remote or fringe areas of Socorro where the planning area does not produce enough flow to warrant a conventional collector. The major constraint to using small diameter sewers is the lack of slope availability. The lack of sufficient grade precludes the use of variable grade sewers. The location of numerous small-scale non-conventional treatment facilities within the City of Socorro would hinder the economic and residential development of the city. There remain numerous large tracts of undeveloped land between the colonias in Socorro. The land use conversion from agricultural to sewage treatment facilities, especially in the inner core of Socorro, would be a deterrent to Socorro's economic development. Conversion of undeveloped tracts between colonias to residential developments is most probable.

This information was copied from the "Water and Wastewater Management Plan for El Paso County, Texas, Volume One, Prepared for El Paso County, El Paso City-County Health District, Prepared by Parkhill, Smith & Cooper, Inc. in association with CH2M Hill, Inc., May 1988"

- 5. Project Justification.** Describe why the project is necessary, including the urgency of the project and the consequences of not implementing the project. Discuss human health and environmental hazards, as well as the needs of the community. Explain why the proposed project is the best alternative to solve the problem. Describe transboundary aspects and the net environmental benefit to be achieved by the project both on-site and overall. If available, provide relevant health statistics, environmental monitoring results, or other materials documenting the justification.

The following list of studies extracted from the "El Paso County Lower Valley Water District Authority, City of Socorro, Texas Environmental Information Document Update, Moreno-Cardenas, Inc. and Hicks & Company Archeologists, August 1993", highlight the human health and environmental issue to be resolved by this project:

Inadequately designed and constructed on-site treatment systems have led to the contamination of shallow water wells in the Socorro/San Elizario area, causing numerous health problems. According to Laurence N. Nickey, M.D., Director of the El Paso City/County Health and Environmental District, El

BECC STEP II APPLICATION

Paso County has five times the rate (defined as cases per 100,000 persons) of Hepatitis A as the rest of the United States, while the rate of shigella dysentery is three times the U.S. rate. This rate is believed to be under reported because of the number of people who seek medical care in Mexico (Nickey, 1992).

A study conducted in the community of San Elizario by the University of Texas Health Sciences Center at San Antonio (UTHSC-SA) found that approximately 90 percent of the San Elizario sample had been infected with Hepatitis A before reaching the age of 35; 75 percent before the age of 15; and 35 percent before the age of 10. The study concluded that "...the spread of Hepatitis A in the community is the result of polluted well water" (UTHSC-SA, 1988).

A study by Dr. Howard Applegate (1988) of the University of Texas at El Paso found that 100 percent of the water samples taken from 66 wells in the San Elizario area were bacteriologically contaminated with fecal coli, an indicator of the fecal-oral contact responsible for the spread of Hepatitis A and many gastrointestinal disorders.

A study by Jane Koehler (1992) of the Center for Disease Control, which was intended to assess the potential for the spread of cholera along the border, found that over 50 percent of household wells in San Elizario were bacteriologically contaminated, with 98 percent of households surveyed relying on hauled-in potable water. The study highlighted the difficulty in stopping the spread of cholera (which has been identified in Juarez, Mexico) into shallow groundwater should it occur in areas without adequate wastewater treatment in the El Paso Lower Valley.

The implementation of a conventional wastewater collection and centralized treatment system is necessary for the Socorro/San Elizario area to prevent the public health problems which have been caused by the present use of non-conventional sewage disposal methods including cesspools, pit-privies and ineffective septic tank/drainfield systems. If the proposed project is not constructed, some of the impacts that may occur include:

- ◆ The degradation of surface and groundwater quality will continue due to ongoing contamination from untreated sewage. State health standards will continue to be violated, and public health problems associated with contaminated water will continue to flourish;
- ◆ Without the proposed project, economic growth would continue to operate well below the area's potential due to the lack of necessary infrastructure. Health problems would continue, perpetuating the high

BECC STEP II APPLICATION

incidence of disease, school absenteeism, medical expenses, and lost productivity;

- ◆ Unplanned developments will continue to be built with inadequate infrastructure and insufficient attention to regulations.

The environmental benefit achieved by constructing this project is improving the quality of life and health to the existing population. The proposed improvements will provide a basic urban infrastructure for growth within the existing platted subdivisions with the capacity for expansion into peripheral vacant or agricultural areas.

D. Conformance with International Treaties and Agreements

I, Manuel Macias, of the Lower Valley Water District, certify that the Lower Valley Water District Economically Distressed Areas Program, Phase II and III Projects will conform with rights and obligations under applicable international treaties and agreements in force, to which either the United States, Mexico, or both are parties.

Signature: ___(original has been signed by Manny Macias) Date: 10/15/97

The International Boundary Water Commission has been consulted and has no problems with these projects.

II. HUMAN HEALTH AND ENVIRONMENT

A. Human Health and Environmental Need

1. Describe in detail the human health and environmental issues to be addressed by the project. Discuss how the project will provide a high level of environmental protection in the affected area.

Section I.C.5. Project Justification describes the human health issue to be addressed by this project.

The LVWD prepared EID's for the Socorro and San Elizario areas before commencing design of these projects. During preparation of the EID's all the local, state, and Federal environmental agencies were contacted for their comments on this project. In addition, the LVWD has met or has committed to meeting all of the applicable environmental agencies' requirements. Some of the environmental benefits that this project will produce include: reduction of groundwater contamination; reduction in the amount of offensive odors in the area caused by on site septic systems; reduction of surface water contamination by discharging wastewater flows

BECC STEP II APPLICATION

expected from this project into the Roberto Bustamante Treatment Plant which will produce an effluent which meets TNRCC requirements.

2. Provide any health statistics, baseline data, or information compiled on critical human health or environmental issues at the local, state, or federal level for the affected population.

Health statistics on the human health and environmental issues in this area were covered in Section I.C.5. Project Justification of this form.

B. Environmental Assessment

The TWDB programs providing funds for the LVWD - Phase II and III Projects require that an Environmental Information Document (EID) be prepared for the projects before funds are approved. EIDs were prepared for the Socorro and San Elizario areas. Copies of the EIDs are submitted as part of this application. As required by the TWDB, the following local, regional, state and federal agencies were contacted for their comments on the projects:

- ◆ City of Socorro
- ◆ El Paso County Health Office
- ◆ El Paso County Water Improvement District No. 1
- ◆ United States Department of the Interior, Geological Survey
- ◆ Rio Grande Council of Governments
- ◆ Texas Water Development Board
- ◆ Texas Water Commission
- ◆ Texas Parks and Wildlife Department, Habitat Assessment Branch & Resource Protection Branch
- ◆ Texas Historical Commission
- ◆ Albuquerque Corps of Engineers
- ◆ International Boundary and Water Commission
- ◆ United States Department of the Interior Fish and Wildlife Service
- ◆ Federal Emergency Management Agency
- ◆ U.S. Bureau of Reclamation
- ◆ U.S. Geological Survey
- ◆ U.S. Forest Service
- ◆ Soil Conservation Service
- ◆ Office of Environmental Coordination
- ◆ Department of Housing and Urban Development
- ◆ Rural Development Agency
- ◆ Bureau of Mines
- ◆ Bureau of Land Management

Copies of correspondence to these agencies and their responses can be found at the back of the City of Socorro and Community of San Elizario EIDs dated

BECC STEP II APPLICATION

August of 1993. Additional copies are found in the Amendments to the EIDs for the City of Socorro and the Community of San Elizario dated July 1995.

Some of the beneficial, short term impacts caused when these projects are implemented include: The reduction of odor sources in the Socorro area brought on by malfunctioning on-site systems and cesspools. Properly functioning wastewater facilities will improve the overall air quality in the project area; Enhancement of the land values of the subdivisions receiving service within the project.

Some of the long term negative impacts caused when these projects are implemented include: Running shallow wells dry because of dewatering; higher operation costs; higher monthly water and sewer bills.

Section V of the City of Socorro and the Community of San Elizario EID's dated August of 1993 submitted as part of this application provide additional information on the primary and secondary, short term and long term environmental impacts of the proposed projects, and the actions which will be taken to meet the requirements of the agencies listed above.

C. Compliance with Applicable Environmental and Cultural Resource Laws and Regulations

1. List each authorization (i.e. environmental and cultural resource permits, assessments, licenses, certificates, etc.) required for the project by local, state, and Federal regulatory agencies. Briefly describe the potential impact to environmental and cultural resources; briefly describe the required authorization; provide the name of the regulatory agency, contact person, address, phone and fax numbers; date authorizations approved, and proof of authorization. If the authorization has not been approved, briefly describe the status of authorization, steps needed to obtain the authorization, how those steps will be taken, and the anticipated date of authorization. Such information should include the environmental standards to be met.

After reviewing and approving the EIDs prepared for the Phase I, II and III Projects, the TWDB released a Finding Of No Significant Impact (FONSI) statement.

Agricultural Drains

Water transmission mains and sanitary sewer interceptors called for in the Phase II and III Projects will be routed within agricultural drains instead of dedicated roadways to lessen construction costs and to decrease interference with traffic during construction. The drains that will be utilized for the project include the Mesa, Middle, Franklin and River

BECC STEP II APPLICATION

Drains. The U. S. Bureau of Reclamation regulates the placement of water or wastewater facilities across or along the drains.

The groundwater table in the Socorro and San Elizario areas on the average can be found at a depth of 8 feet. Therefore, construction of the project will require considerable dewatering. Groundwater pumped from the construction area will be discharged into agricultural drains. The El Paso County Water Improvement District (EPCWID) regulates discharges into agricultural drains. The LVWD has agreements with the EPCWID for the Phase II and III Projects.

The contact people for the respective agencies are as follows:

<u>Regulatory Agency</u>	<u>Contact Person</u>	<u>Phone</u>
Bureau of Reclamation	David Allen	(915) 534-6317
EPCWID #1	Edd Fifer	(915) 859-4186

Archaeological Research, Inc. and Hicks & Company Archeologists are currently in the process of identifying significant historic and prehistoric cultural resources in the project area in consultation with the TWDB and the Texas Historical Commission (THC). This cultural resource work is proceeding according to the terms of two Programmatic Agreements (PA's). The first is a 1990 agreement related to the water supply project and includes the Bureau of Reclamation (BuREC), the Advisory Council on Historic Preservation (ACHP), the State Historic Preservation Officer (SHPO) and the El Paso County LVWD. The second PA refers to wastewater improvements in Socorro and was agreed to in 1991 by the TWDB (and EPA), ACHP, SHPO, and the El Paso County LVWD.

Archeological Research, Inc. and Hicks & Company Archeologists used aerial photographs and historic plat maps in conjunction with a field survey to compile a database of prehistoric and historic sites within the project area. Only those sites and buildings which could have been built before 1990 are included in this report; sites and buildings definitely built between 1900 and 1945 (the cutoff date for National Register eligibility) are considered too recent in most cases to yield significant archaeological data. Following are findings in the Socorro and San Elizario area:

Socorro

A total of 13 cultural resource sites was recorded as part of the intensive survey. All 13 are historical sites which were first identified from 1936 U.S. Soil Conservation Service aerial photography and then inspected during pedestrian survey. All sites were recorded and evaluated for eligibility for nomination to the National Register of Historic Places. Nine of the thirteen sites are not thought to be eligible for the National Register

BECC STEP II APPLICATION

and no further work is recommended there. While none of the standing structures present in the survey is considered architecturally significant, four standing structures may have associated archaeological deposits of interest. These four sites are recommended for further evaluation to determine their potential to contribute data to historical contexts developed for the Lower Valley area and thus, their eligibility for the National Register. The four sites recommended for further cultural resource evaluation are: (1) the Jose P. Chasco House, located at 560 Joya Del Valle on Lot 7, Block 4, Valle Real Subdivision; (2) the Punjab Drive House, located at 698 Punjab Drive, Block 1, Lot 2, San Agustin Subdivision; (3) the Juan A. Rubio Ruin, located at 11400 Valle Grande, Block 3, Lot 11, El Gran Valle Subdivision; and (4) the Socorro Holguin House, located at 11511 Valle Verde Street on Block 4, Lots 2 and 3, El Gran Valle Subdivision. Further archival and historical investigations should be undertaken at each of these sites. If such investigations indicate that one or more of the sites have the potential to contribute to Lower Valley historic contexts, some on-site studies may be necessary, if landowner permission can be secured. Besides the recommendations for the specific sites already mentioned, additional subsurface prospecting is recommended for the following three subdivisions that are in or near the Colonial Core Area and have not already been impacted by construction: (1) Valle Real, (2) El Campestre, and (3) El Gran Valle. Ground-penetrating radar and, if necessary, backhoe trenching, should be utilized to search for potentially buried historic and prehistoric sites. Finally, limited monitoring is recommended for construction trenches at Rio Rancho, Belen Plaza, and Bauman Estates to aid in the establishment of radar signatures for future subsurface prospecting.

San Elizario

The survey within the San Elizario area resulted in the description of 280 archeological sites. Thirty-nine of these sites are considered potentially eligible for nomination to the National Register of Historic Places and are recommended for testing. These sites include one prehistoric/Spanish Colonial site, twenty-seven Spanish Colonial period sites, four mid-nineteenth century sites, and seven sites with potentially eligible archaeological deposits indicated as radar anomalies.

2. Provide the BECC copies of all documents submitted to the regulatory agencies and all additional documentation as available.

All documents submitted to regulatory agencies have been referred to in previous sections in this document.

3. Conditions of approval established by appropriate authorities must be included in project design and implementation.

BECC STEP II APPLICATION

Specifications regarding areas that have been identified as archaeologically sensitive will be included in the construction documents. Similar specifications will be included in the Phase III construction documents.

III. TECHNICAL FEASIBILITY

A. Appropriate Technology

1. **Project Specifications.** Provide conceptual and preliminary engineering designs. While it is not necessary to have the final design of the project completed by the time that **Step II** is submitted the project should be completed at least through preliminary design. Include all technical aspects which justify the project and proposed system, including at a minimum a study of sensitivity analysis and a justification of the following factors, depending upon the type of project:

Phase II construction drawings and specifications are final and copies can be obtained from the LVWD if required. Design for sub-phases C -E Common Water; C - N Contract "A" Pipeline; and C - N Contract "B" B. S. & Tank under Phase III are complete. Copies may also be obtained from the LVWD if required.

- a) **Water Supply.** Growth analysis, both mid and long range for the proposed planning time frame; average and peak daily consumption rate; characteristics of the production source; water quality analysis; water conservation program; pollution prevention program designed to protect water quality at the source as well as in the supply system; energy efficiency; description of the well-head protection program (for groundwater system, if any); transportation and distribution infrastructure; and type and capacity of the treatment plant.

Growth Analysis

Initially, the EPWU took population projections for the Socorro/San Elizario area from a study titled "El Paso Water Resource Management Plan", which was prepared for them in May 1990. This plan reviewed a number of population forecasting models which had been applied to the El Paso area. The EPWU selected the TWDB's population forecasting model based on a review of the basic methodologies and a comparison of the forecast results produced by each of the models. The projections used in this study were developed prior to publication of the 1990 Census data. The 1990 Census data indicates that the 1990 population in the Facility Planning Area was as follows.

BECC STEP II APPLICATION

Socorro Town	22,995
San Elizario CDP	<u>4,385</u>
	27,380

Therefore, the initial projections concerning future population were modified to reflect adjustment for the actual 1990 population. The adjusted population projections are as follows.

<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>
33,729	40,079	49,079	58,078	70,559

Consumption Rates

The “Water Facilities Master Plan” recently derived per capita water demands for the EPWU. Demand rates used in the master plan were derived from actual usage in the City of El Paso and showed a wide variance based on neighborhood characteristics. Demand rates used for the Socorro/San Elizario area were selected from areas within the Master Plan’s Lower Valley region of the City due to similar characteristics of areas within the study area. Demand rates selected are as follows:

	<u>Residential</u>	<u>Commercial</u>
Average Daily Demand	110 g/c/d	2,500 g/ac/d
Peak Day Demand	231 g/c/d	4,250 g/ac/d
Peak Hour Demand	347 g/c/d	4,888 g/ac/d

Characteristics of the Production Source

The LVWD buys wholesale water from the EPWU. The EPWU’s water distribution system consists of 16 main pressure zones; the zone that supplies the LVWD is the Valley Pressure Zone. The EPWU receives its raw water from both surface water and groundwater sources. The Rio Grande provides the surface water source with its water being treated at the Robertson-Umbenhauer and the Jonathan Rogers Water Treatment Plants prior to being pumped into the City of El Paso’s Valley Zone. Surface water is available only during the irrigation season from March through September. During these months the total demand is supplied by a combination of surface water and groundwater. During the months of October through February, the EPWU’s system depends solely on groundwater supplied by 138 groundwater wells. The total available water sources are as follows:

	<u>Winter</u>	<u>Summer</u>
Surface Water	0.0 mgd	40.0 mgd

BECC STEP II APPLICATION

Groundwater	<u>183.6 mgd</u>	<u>201.0 mgd</u>
	183.6 mgd	241.0 mgd

The EPWU's pumping facilities provide a source of water for the Valley Pressure Zone by directly lifting water into the zone from groundwater wells. Groundwater quality is sufficient to allow for direct system pumping without physical or chemical treatment, except for chlorination. Following is the quality of groundwater and of the water treatment plant production.

	Groundwater (PPM)	Treatment Plant Production (PPM)
TDS 808	746	
Hardness	178	195
Chlorides	233	117
Sulfates	147	276
Sodium	195	160

Water Quality Analysis

The EPWU takes 240 samples per month from their water supply at different locations within the distribution system. These samples are tested for conformance to EPA and TNRCC requirements regarding bacteria. The EPWU also performs a complete chemical analysis of their water supply at least once a year to assure conformance with EPA and TNRCC requirements.

Water Conservation Program

The LVWD's water conservation programs have been provided.

Pollution Prevention

The LVWD requires the installation of backflow preventors on all services to prevent contamination of the water system.

Well-head Protection Program

All of the EPWU's ground water wells are fenced in and locked within a 100 by 100-foot area. Most of the wells are also enclosed in a building. EPWU personnel check the wells daily for proper operation and for any contamination. In addition, signs which notify the public of the existence of a ground water well and that provide a telephone number which citizens can call if they suspect malfunctioning or contamination of the well are placed around the wells within ¼ mile.

Transportation and Distribution Infrastructure

BECC STEP II APPLICATION

The EPWU's Valley Pressure Zone presently serves the LVWD. The LVWD - EDAP Phase III Project calls for the construction of a 28 mgd booster station at the EPWU's Rogers WTP, 150,000 l.f. of 8 inch to 36 inch transmission line and a 3 mg storage tank. These facilities would create a separate pressure zone for the LVWD. The project also calls for approximately 113,000 l.f. of 6 and 8 inch water distribution mains.

Type and Capacity of the Treatment Plant

The pamphlet already provided, provides information on the Robertson-Umbenhauer and the Jonathan Rogers Treatment Plants' capacity and efficiency.

- b) **Wastewater Treatment:** Quantity and quality of wastewater to be treated; industrial wastewater reduction and pretreatment program; projection of the wastewater volume for the proposed life of the project; design of collection system including pumping; design of treated wastewater discharge or reuse systems; energy efficiency; analysis of treated wastewater quality; sludge treatment system, analysis of treated sludge and final disposal system; and reduction of the inflow and infiltration of groundwater or rainwater that may be generated, if applicable.

Wastewater Quantity

The peak expected flows from the Socorro and San Elizario area are estimated at 7.6 mgd.

Wastewater Quality

The Texas Water Development Board EDAP - Phase I Facilities Engineering plans for the City of Socorro and the community of San Elizario, dated December of 1992, characterized wastewater from these areas as follows: BOD5 - 255 mg/l, TSS - 200 mg/l, pH - 6.0 - 9.0. These characteristics were based on previous studies, which identified and characterized wastewater streams, as well as wastewater influent from the City of El Paso.

Pre-treatment Program

Presently only an estimated 1.42 percent of the land use in the Socorro and San Elizario area is zoned Industrial. Although this percent is not expected to increase greatly as development increases, the LVWD has agreed to adopt the EPWU's pre-treatment program as a requirement in their discharge agreement. The LVWD has hired a superintendent to oversee operations and maintenance. The superintendent is presently working on setting up a pre-treatment program so that it is in place once the LVWD

BECC STEP II APPLICATION

begins discharging into the EPWU's Roberto R. Bustamante Wastewater Treatment Plant (Bustamante WWTP). The LVWD will use the EPWU's pre-treatment program as a model for setting up their program.

As part of their pre-treatment program, the EPWU performs a site visit of all businesses that have applied for sewer service. After their visit, they determine whether the business will require an Industrial Wastewater Discharge Permit. A copy of the EPWU Rules and Regulations regarding wastewater discharge, Industrial Discharge Permits, and enforcement have been provided

Design of the Collection System

The wastewater system proposed for the Socorro and San Elizario areas is a gravity flow system. Because of the flat terrain and the long distances from the subdivisions to the wastewater treatment plant, a tier of lift stations will be required to carry the flow to the treatment plant. The collector lines within the subdivisions will be designed to carry ultimate flows from the subdivisions. The interceptors and lift stations which will service the EDAP eligible and ineligible subdivisions within Socorro and San Elizario will be sized to serve a 20-year growth period up to the year 2015. The system will be constructed of watertight plastic pipe to avoid infiltration and inflow. Wastewater from these subdivisions will ultimately flow into the EPWU's Bustamante WWTP. The LVWD has a contract with the EPWU to discharge flows from the LVWD into the Bustamante WWTP. The LVWD provides their new wastewater customers with a drawing showing how their sewer service line should be constructed. In addition the LVWD requires that these customers empty their septic tanks and fill them with sand or a suitable material as required by TNRCC. A copy of the drawing provided to new customers has been provided

Reuse Program

Presently there is no reuse program setup for the Bustamante WWTP effluent. The EPWU has designed a system to distribute 6 mgd of the Bustamante WWTP effluent to industries and parks in the Lower Valley area for reuse. The EPWU applied to the Economic Development Administration for construction funds and was approved. Construction of the project will take approximately one year. The EPWU expects that the reuse program will be in service by the beginning of 1998.

Wastewater Quality

BECC STEP II APPLICATION

The Bustamante WWTP has been in service since 1991. It has the capacity to treat 39.0 mgd. The plant utilizes a biological treatment process. Treated effluent is discharged into a canal regulated by the Lower Valley Water Improvement District # 1. The Treatment Plant has effluent permits with the TNRCC and the EPA. Effluent analyses are performed within the plant periodically to assure that the effluent meets permit requirements. Twenty-four hour and forty-eight hour biomonitoring tests are also conducted and results of the twenty-four hour tests are submitted to TNRCC quarterly while results of the forty-eight hour tests are submitted to the EPA semiannually. The Bustamante WWTP discharge meets TNRCC requirements which allow 20 mg/l BOD5 and 20 mg/l TSS. Following are the Bustamante WWTP's permitted and actual parameters.

<u>Permitted</u>	<u>Actual</u>	
Biochemical Oxygen Demand:	20 mg/l	5 mg/l
Total Suspended Solids:	20 mg/l	7 mg/l
Chlorine Residual		
After 20 minutes detention:	1 mg/l	1 mg/l
Dissolved Oxygen minimum:	4 mg/l	5 mg/l
Flow:	39-mgd max. monthly avg.	28-mgd daily avg.

Treated Sludge

A portion of the sludge produced at the Bustamante WWTP is returned to the aeration basins to treat more wastewater. The excess sludge is treated with the use of anaerobic digesters and dewatered with filter belt presses then transferred to a monofill owned by the EPWU. The monofill is permitted by TNRCC and meets their requirements.

Reduction of Inflow and Infiltration

The LVWD will prevent storm water pollution by constructing the wastewater collection system of watertight plastic pipe to prevent infiltration and inflow. The LVWD will also isolate manholes and clean out openings from surface water by plugging holes in manhole covers and conducting smoke tests to identify sources of surface water flow and addressing them.

- 2. Technical Process.** Use of appropriate technologies known to be effective is encouraged. Criteria for selection and justification of the chosen technology should be included with emphasis on appropriateness to the

BECC STEP II APPLICATION

community and efficiency and ease of operation, including the availability of replacement parts.

The use of a conventional wastewater collection and centralized wastewater treatment system utilizing gravity flow lines, lift stations, and wastewater treatment plants is effectively being used in the City of El Paso, Texas and throughout the world. This type of system was compared to non-conventional treatment and disposal technologies and the results have already been stated in Section I.C.4. *PROJECT ALTERNATIVES* of this application.

B. Operation and Maintenance Plan

Describe the system's long-term operation and maintenance plan for the proposed infrastructure, including training and certification of operators, training of maintenance personnel, and preparation of operation and maintenance instruction material. Also, the plan should ensure adequate support for replacement of equipment. The operation and maintenance plan must include the following subprograms:

- 1. Start-up Operation Plan.** Detail the sequence in which operation of the infrastructure will be initiated, as well as how any foreseen problems or defects in equipment or workmanship will be identified and corrected, both during the start-up phase as well as during day to day operations.

A construction and operation sequence has already been established and can be found in *Section I.C.2. PROGRAM OF PROJECT WORK TASKS*.

The construction specifications for the EDAP Phase II and III Projects will include requirements on equipment inspections, testing, warranties and training. A copy of the Phase II construction specifications regarding pumps is provided as an example has been provided.

- 2. Contingency Plan.** Describe actions and corrective measures to be taken should a contingency or emergency occur during start-up and operational phases of the project.

The Operations and Maintenance Manual prepared for the Phase II and III Projects suggests cooperative arrangements with the EPWU because of their experience with similar facilities. The LVWD will consider this type of arrangement as a contingency program.

- 3. Safety Plan.** An operational safety program should be an integral part of the operation and maintenance plan.

BECC STEP II APPLICATION

A copy of the safety program provided in the Operations and Maintenance Manual has been provided.

- 4. Quality Assurance Plan.** Describe actions to be taken which would guarantee that the quality of the project's output meets pre-determined standards.

A Construction Procedures Manual and an Operations and Maintenance Data Manual were prepared for the LVWD - EDAP Phase II Project. These manuals will also be used for the Phase III Project. The Construction Procedures Manual includes a quality control plan. A copy of this plan has been provided. The Operations and Maintenance Data Manual provides safety and training programs and program implementation concepts. Copies of these programs have been provided.

- 5. Pollution Prevention Plan.** Projects having a potential for release of pollutants must submit a pollution prevention plan identifying pollutants generated during operation, and actions that will be taken to prevent or reduce their release.

No release of pollutants is expected from this project.

- 6. Closure Plan and Post Closure Plan.** Submit a closure and post-closure plan which describes how waste resulting from the closure of the facility will be treated and disposed, and how the site will be monitored after closure):

Not applicable to this project.

C. Compliance with Applicable Design Regulations and Standards

Project applicants must coordinate with appropriate local, state, and federal agencies as early in the project planning process as possible, to determine the necessary process in order to complete the local, state, and federal project design requirements. The BECC is not a regulatory agency and will not require any additional permits or other regulatory authorizations. However, applicants must identify for the BECC all authorizations required for completion of the project and demonstrate that the project has met, or is capable of meeting, the laws and regulations of the country where the project will be located or executed. The following information must be provided:

- 1.** List each authorization (i.e. permits, assessments, licenses, certificates, etc.) required for the project by local, state, and federal regulatory agencies. Briefly describe the required authorization; provide the name of the regulatory agency, contact person, address, phone number and fax; date authorizations approved; and proof of authorization. If the authorization

BECC STEP II APPLICATION

has not been approved, briefly describe the status of authorization, steps needed to obtain the authorization, how those steps will be taken, and the anticipated date of authorization. Such information should include the environmental standards to be met.

The EPWU is the water and wastewater regional manager for the El Paso County area. The EPWU is following the recommendations of the Water and Wastewater Management Plan prepared for El Paso County in May of 1988. This plan presents a method for providing water and wastewater services by the year 2010 to the residents of El Paso County who live outside the City of El Paso.

The EPWU was contracted by the TWDB to program manage the LVWD-EDAP Phase II and III Projects. As part of their program management duties, the EPWU's reviews all phases of design so that they meet TNRCC and LVWD standards; reviews and approves pay requests submitted by the design engineers and by the contractor; reviews and approves change orders and generally oversees the project up to closure. The contract person with the EPWU is:

Ramzi Shaff, P.E.
1154 Hawkins Boulevard
El Paso, Texas 79925
Ph: 915-594-5529

The TWDB is the major funding agency for the LVWD Phase II and III Projects as the funding agency they will review and approve final design and specifications for the Phase II and III Projects and assure that they meet TNRCC and EPA requirements. The TWDB works closely with TNRCC so those plans reviewed and approved by the TWDB need not be reviewed by TNRCC. Contract people with TWDB are:

Water & Wastewater Design	Archeological
Francia Harutunian	Danny Fox
P. O. Box 13231	P. O. Box 13231
Austin, Texas 78711-3231	Austin, Texas 78711-3231
Ph: 512-563-8271	Ph: 512-463-8516

2. Provide the BECC copies of all documents submitted to the regulatory agencies and all additional documentation as available.

Copies of correspondence between the EPWU and the TWDB regarding approval of design for projects under Phase II and III are provided as examples.

BECC STEP II APPLICATION

3. Conditions of approval made by appropriate authorities must be included in project design and implementation.

Both the EPWU and the TWBD will monitor construction of the Phase II and Phase III projects so that conditions of approval are implemented.

IV. FINANCIAL FEASIBILITY AND PROJECT MANAGEMENT

a. Financial Feasibility

The historical financial statements for the last five years have been submitted in accordance with accounting principles. The ProForma financial statements with income statement projections have also been submitted.

The Lower Valley Water District (LVWD) is seeking funding for transition, design, construction, and hookup program for Phases II and III. To date, the project has been funded primarily through the TWDB EDAP program and is divided into three phases. Phase II includes the area west of Socorro and phase III includes the remaining area in Socorro and the community of San Elizario. The project cost is included in the following table:

BECC STEP II APPLICATION

ITEM	USD
Phase II - Water & Wastewater	\$24,978,600
Water portion	\$4,559,600
Existing system purchase	\$2,800,000
Construction	\$1,674,100
Engineering / Management	\$72,600
Land acquisition	\$0
Other	\$12,900
Contingency	\$0
Wastewater portion	\$20,419,000
Existing system purchase	\$0
Construction	\$15,477,000
Engineering / Management	\$2,618,000
Land acquisition	\$268,000
Other	\$2,056,000
Contingency	\$0
Phase III - Water & Wastewater	\$72,874,000
Water portion	\$20,326,000
Existing system purchase	\$0
Construction	\$14,880,000
Engineering / Management	\$2,725,000
Land acquisition	\$263,000
Other	\$1,433,000
Contingency	\$1,025,000
Wastewater portion	\$52,548,000
Existing system purchase	\$0
Construction	\$39,311,000
Engineering / Management	\$4,434,000
Land acquisition	\$712,000
Other	\$3,912,000
Contingency	\$4,179,000
TOTAL	\$97,852,600

Phase II construction is complete and within the funding amount committed by the TWDB for this project but, payment for the loans is coming due and the LVWD is not generating sufficient revenue to pay the loans. Phase III is in the design process. The Phase III total project cost of \$72.9M will exceed the current TWDB's/Rural Development commitment of \$56.4M by an estimated \$16.5M. This difference occurred because the original project cost submitted to the TWDB in 1995 for Phase III was based on planning level costs. Since then several projects have been built and more accurate unit costs have been established. Additionally, the design process in progress has better defined the quantities of pipe installation and pavement replacement needed. The following tables illustrate the project funding required by LVWD.

BECC STEP II APPLICATION

Source	Phase II USD	Phase III USD	TOTAL USD	%
Grants				
EDAP	\$8,081,900	\$26,742,000	\$34,823,900	35.6%
Rural Development	\$2,938,300	\$967,000	\$3,905,300	4.0%
CWTAP (EPA)	\$8,070,000	\$16,666,000	\$24,736,000	25.3%
BECC (PDAP - final design)	\$0	\$498,000	\$498,000	0.5%
Subtotal	\$19,090,200	\$44,873,000	\$63,963,200	65.4%
Credit				
EDAP	\$1,275,400	\$4,539,000	\$5,814,400	5.9%
State Revolving Fund	\$1,347,000	\$2,270,000	\$3,617,000	3.7%
Rural Development	\$466,000	\$0	\$466,000	0.5%
WSA	\$2,800,000	\$5,210,000	\$8,010,000	8.2%
Subtotal	\$5,888,400	\$12,019,000	\$17,907,400	18.3%
Other				
NADBank Financial Plan		\$15,982,000	\$15,982,000	16.3%
Subtotal		\$15,982,000	\$15,982,000	16.3%
TOTAL	\$24,978,600	\$72,874,000	\$97,852,600	100.0%

Estimated Funding Needs	Dollars
Construction/ hookup Program	15,982,000
Transition Funds	3,600,000
PDAP - Design	498,000
TOTAL	20,080,000

There has been close coordination with NADBank. They are in the process of completing the financial structure, which will be complete before certification on June 24, 1998. The analysis to date estimates that the financial package will include the following:

- Grant Assistance Range - \$13M to \$16.5M to be used for construction, hookup program, and/or transition
- Loan - \$2M to be used for construction
- Total Financial Package Range - \$15M to \$18.5M

The residential water and wastewater hook up program is for the benefit of low to middle-income residents seeking to connect their households to local water and wastewater facilities. Approximately \$2M of the grant assistance will be available to LVWD residents. The conditions include meeting specified income-level targets, scheduling and completing connections within a specified time period, and receiving qualifying water and/or wastewater services.

b. Fee Rate Model.

The LVWD has established a rate schedule for potable water, which was approved in April 1992 and has not been modified since that date. A sewer charge was introduced in October 1997. The current average combined water and sewer bill is \$55.00/month based on a consumption of 9,000 gallons per month. The state of Texas average consumption is 7,000 gallons per month. LVWD evaluated four scenarios where a combination of grants and loans fund the remaining portion of the project. Under the best scenario, with only additional grant funding, the average rate remains under \$57/month and under

BECC STEP II APPLICATION

the worst scenario the average bill per household will not exceed \$76/month if the LVWD debt finances all projects that exceed already committed resources.

c. **Project Management.**

A document containing the proposed organizational chart has been developed and submitted. The Lower Valley Water District requires institutional capacity building for appropriate project management as well as adequacy of scheduled operations. NADBank, through its program for Institutional Development Cooperation Program (IDP), will evaluate the utility in order to propose a human and institutional capacity building program. The evaluation will begin in May 1998.

V. **COMMUNITY PARTICIPATION**

A. **Comprehensive Community Participation Plan**

Each Comprehensive Community Participation Plan will vary with the specifics of each project and will be designed to meet the particular needs of the community where the project will be located. In each case, the applicant must demonstrate how the public will be meaningfully engaged in project development and implementation.

1. **Local Steering Committee.** The applicant must develop a local steering committee or utilize an existing committee. This steering committee must be made up of representatives from diverse organizations (i.e. business, civic, non-profit, academic, governmental, educational, environmental, elected officials) in the affected community to assist with implementation of the Participation Plan. The steering committee must invite representation from both countries if the proposed project is located in and/or impacts both the United States and Mexico.

The LVWD formed a steering committee to inform the public about the water and wastewater infrastructure which would be provided with the EDAP Phase II and III Projects; how these projects would be funded; why a tax pledge election was required as part of the project; and how passing of the election would affect them. The steering committee named "Water For Our Children Committee" which included the following members:

Trinidad Lopez - Chairman - City of Socorro resident and business owner
Donald Davisson - Treasurer - City of Socorro resident and business owner
Maria Del Socorro Ramirez - Secretary - City of Socorro resident and business owner
Fernando Andrade - Member - City of Socorro resident and business owner
Cecilia Rodriguez - Member - City of Socorro resident and business owner

BECC STEP II APPLICATION

This steering committee assisted in formulating a plan to conduct public meetings, and use newspaper, radio, billboard, and TV advertisements to inform the public about the proposed projects and the Tax Pledge Election. The committee also assisted in soliciting donations to fund the advertisement program. The LVWD hired the advertising agency of Roy Ortega-Larry Trejo & Associates to prepare advertisements and to assist with the public information plan. As a result of the public information plan, the tax bond election held on June 8, 1996 was passed.

The LVWD held a public meeting on September 30, 1996 to inform residents of the Socorro and San Elizario area and the general public of the LVWD's intent to apply to the BECC for certification of the EDAP Phase II and Phase III projects and the technical aspects of the project. The second BECC public meeting was held on August 18, 1997, public notice of the meeting was thirty days earlier. More than 150 people attended the meeting and stayed more than two hours to ask questions about the project timetable, hook-up scheduled, and costs to hookup. The LVWD informed them that the LVWD was seeking the certification from the BECC in order to apply for funds from the NADBank for up to \$19M needed to complete the project. The four scenarios where a combination of grant and loans funded the \$19M (described in the financial section) were presented to the public. Under the best scenario, with only additional grant funding, the average rate remains under \$57/month and under the worst scenario the average bill per household will not exceed \$76/month if the LVWD debt finances all projects that exceed already committed resources.

- 2. Meetings with Local Organizations.** The applicant must meet individually with local organizations (i.e. business, civic, community, and neighborhood, academic, environmental) affected by the project to provide information on and develop support for the project.

As part of their public awareness program for these projects, the LVWD met with the following organizations:

Socorro City Council	May 2, 1996
Socorro Community Meeting (Residence of Trinidad Lopez)	May 3, 1996
El Paso County Commissioners	May 6, 1996
Sparks Community Meeting	May 7, 1996
Socorro Independent School District	May 7, 1996
San Elizario Independent School District	May 8, 1996
Socorro Community Meeting (Socorro High School)	May 20, 1996
San Elizario Community Meeting	May 29, 1996

BECC STEP II APPLICATION

In addition, the LVWD met with the El Paso Interreligious Sponsoring Organization (EPISO) who assisted the LVWD in informing the public about these projects.

3. **Public Access to Project Information.** The applicant's project proposal must be made available to the public at least 30 days before the applicant's first public meeting. This information must be available in a publicly accessible location during and after work hours. As required for public meetings, the applicant must disclose the availability of the project information in the public meeting notices.

The LVWD held public meetings as mentioned in Section 2 above. At least 30 days before the meetings, the LVWD informed the public about the meetings and made plans for the Phase II and III Projects available to them at the LVWD's offices and at the office for the Water For Our Children Committee.

4. **Public Meeting.** Each applicant must hold at least two public meetings in the community affect by the project. If the project affects more than one community, the public meetings must be noticed to citizens in all affected communities. Notification must at least consist of notifying public officials in affected communities.

Public meetings were held in both the Socorro and San Elizario communities as mentioned in Section 2 above.

B. Report Documenting Public Support

The applicant must provide a written report to the BECC documenting the successful implementation of the Comprehensive Community Participation Plan. The report must include supporting documentation including a list of local steering committee members and their activities related to the project, a list of the local meetings conducted, copies of public meeting notices, the minutes from the public meetings, and other such documentation demonstrating the scope and success of the Public Participation Plan. The report should convey 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.

A report including a list of the meetings held, copies of the advertisements and results of the Tax Bond Election have been provided. Additionally, a public participation plan was presented to BECC on June 30, 1996.

VI. SUSTAINABLE DEVELOPMENT

A. Definition and Principles

BECC STEP II APPLICATION

Establish a comprehensive approach as to how the project is related to the principles of sustainability. Describe how the project improves the quality of life in the community and how it will meet the needs of present and future generations.

The LVWD has been working with the TWDB for the past six years to assure the sustainability of these projects. The LVWD's efforts in assuring sustainability include preparation and approval of the following documents for the area:

- ◆ Facilities Engineering Plans
- ◆ Environmental Information Documents
- ◆ Various Archeological , Architectural, and Cultural Studies
- ◆ Water and Wastewater Technical Memorandums
- ◆ Design Standards Manual
- ◆ Construction Procedures Manual
- ◆ Operations and Maintenance Manual
- ◆ Preventative Maintenance Plan

A list of these documents is found at the end of this document.

Section I.C.5. Project Justification explains how this project improves the quality of life in the community and how it will meet the needs of the present and future generations.

B. Institutional and Human Capacity Building

The applicant should provide information on how the project demonstrates and strengthens the capacity of local institutions, including government, to operate and support the project. For example, the project could strengthen local capacity in the collection of user fees in order to guarantee the local self-sufficiency for the service (identifying the users, developing an equitable payment structure, monitoring the collection of fees, etc.). Also, provide information on training and capacity building for administration, operating, and maintenance personnel associated with the project.

The LVWD has continuously prepared Proformas related to the Phase II and III Projects to anticipate future costs to the District and to Lower Valley residents. Proformas prepared early in the development of the Projects predicted that the \$14 million low interest loans provided by the TWDB for the projects could be paid back from revenues without imposing a tax on Lower Valley residents. The LVWD now anticipates that the \$72 million in grants and loans provided by the TWDB will not be sufficient to complete the Phase III Project. Recent estimates predicted that the LVWD will be \$19,510,765 short of the amount required. Recent Proformas have been prepared to predict cash flows for different scenarios including receiving additional funds from the TWDB; completing only a portion of the Phase III Projects; receiving funds from Rural Development; and receiving no additional funds. A copy of the report to the Texas Water Development Board on

BECC STEP II APPLICATION

the Status of Phase III EDAP Funded Program for the Lower Valley Water District where these Proformas can be found is provided at the back of this document. The LVWD's goal is to burden Lower Valley residents and their customers as little as possible. Grants provided by the BECC and NADBank would assist the LVWD in reaching their goal.

The TWDB is presently working with the LVWD to perform a management study and make recommendations to improve the LVWD's management structure. Information regarding the operations and maintenance program is provided in *Section III. B. Operation and Maintenance Plan*.

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

List applicable local and regional plans and regulations that affect the project. Briefly describe the plans or regulations, and explain how the project conforms or will conform to the plans and regulations. Provide the name of the agency with authority, contact person, address, phone number and fax, date the project was determined to conform with the plans, and proof of conformance.

Section III. A.1. Water Supply provides information on the LVWD's conservation plan. *Section III.C.* provides information on development plans.

D. Natural Resource Conservation

Describe how the project achieves natural resource conservation. For water projects, describe how the project will conserve, utilize more efficiently, and/or reuse water resources. For solid waste projects, describe the ways the project will incorporate waste reduction, reuse, and/or recycling.

Section III provides information on Water conservation plans, efficiency, and reuse.

E. Community Development

Describe how the project fosters community development. Indicate how the project provides or encourages new educational, recreations, or other community services. Furthermore, provide analyses of positive and negative social impacts, including economic effects, of the proposed project on the community. Include a discussion of long term effects on socioeconomic development strategies and the quality of life.

Section II Human Health and Environment provides information on community development issues.