

Border Environment Cooperation Commission

Water Conservation Project for Hidalgo County Irrigation District No. 2 in San Juan, Texas

1. General

1.a Project Type

The project proposed by the Hidalgo Irrigation District (HCID) No. 2 includes improvements to the irrigation system by means of the installing a 2 mile concrete water conveyance pipeline.

The project belongs to *Water Conservation* Sector, a BECC priority sector.

The project sponsor is the Hidalgo County Irrigation District # 2.

1.b Project Category

The project belongs to the category of *Community Environmental Infrastructure Projects – Community-wide Impact*, and it will contribute to reduce water losses in the Irrigation District.

1.c Project Location and Community Profile

Project Location

The project is located within the boundaries of the Hidalgo County Irrigation District No. 2, Texas (HCID No. 2), which is located around the City of San Juan in the central part of Hidalgo County in the Lower Rio Grande Valley, Texas. The southwest corner of the District borders the Rio Grande River near the City of Hidalgo and the District extends from State Hwy. 281 north to the vicinity of Edinburg, Texas.

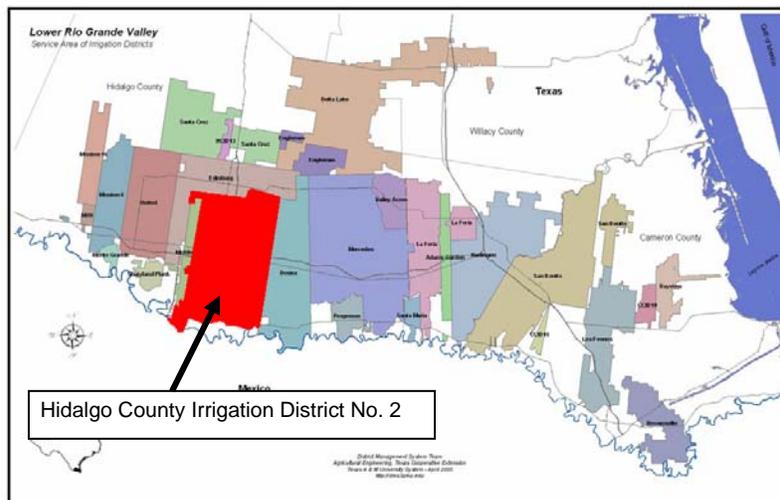


Figure 1. Location of the Hidalgo County Irrigation District No. 2 in San Juan, TX

District Profile

An Irrigation District is a limited-purpose district that delivers untreated water for irrigation. Although an irrigation district may provide drainage, it may not treat or deliver water for domestic use or operate sewage facilities. A district may also contract to deliver untreated water to political subdivisions and water supply corporations. Irrigation Districts are “created by petition and election, or by an act of the legislature,” have the “authority to issue bonds and levy taxes,” and “may tax all the property owners in the district to pay for part of the costs of the district” with the remaining costs being charged against other water users.

The District pumps water directly from the Rio Grande into a settling basin (reservoir) via a gravity canal, and then into a conveyance system of pipelines and canals. The District covers 64,828 acres and has 4,000 water accounts with 4,700 acres of irrigable farmland. The District irrigation water rights are 137,675 acre-feet (ac-ft) per year. In addition to their irrigation water rights, the District holds domestic, municipal and industrial water rights totaling 12,732 ac-ft per year. It also holds the municipal water rights for the following cities: McAllen (6140 ac-ft per year), Pharr (2946 ac-ft per year), San Juan (2030 ac-ft per year), and Alamo (1202 ac-ft per year). The District contracts to deliver raw water to five municipalities: Alamo, McAllen, Pharr, San Juan, and Edinburg; and to the North Alamo Water Supply Corporation (NAWSC).

Crops grown within the District include: sugar cane, cotton, grain sorghum, citrus hay crops, and vegetables. The most common method of irrigation is furrow irrigation, although drip irrigation is gaining popularity with citrus and vegetable growers.

1.d Legal Authority

The District operates under the provisions of Chapter 58, Title 4, of the Texas Water Code and under Article XVI, Section 59 of the Texas Constitution. The official representative of the District is Mr. Sonny Hinojosa, General Manager.

The project falls within the scope of agreements targeted at improving the environment and the quality of life of border residents, which have been signed by Mexico and the United States. The United States and Mexico have signed six major bilateral agreements related to air, water, land protection and pollution control issues. These include:

- 1889 International Boundary Convention
- 1944 Water Treaty
- 1983 La Paz Agreement, or Border Environment Agreement
- 1990 Integrated Border Environmental Plan (IBEP)
- 1994 North American Free Trade Agreement (NAFTA)
- Border 2012 Program

The project complies with the spirit of all these agreements and all of them have been considered since the onset of the project.

1.e Project Summary

Project Description

The project proposed by the Hidalgo County Irrigation District (HCID) No. 2 includes improvements to the irrigation system. The project consists of the reconstruction of pipeline I-18. The District has identified a mortar joint pipe for which replacement is essential (Figure 2). This project consists of construction of a new concrete pipeline adjacent to the existing mortar-jointed

concrete pipeline with rubber gasketed reinforced concrete pipe placed within the existing 30 foot easement. The existing pipeline would remain in service until the new construction is complete. The existing pipeline delivers water to both farm turnouts and other laterals. Replacement of existing gates and/or pipelines at connections to this may be required.

Lateral I-18

Lateral I-18 currently serves an area of 2,829 acres and is located between Dove and Alberta Roads from 2nd Street, McAllen to U.S. Expressway 83. The Lateral I-18 is estimated to be 2.0 miles in length of 48-inch diameter, which will be replaced entirely. A quarter mile of the east end of this unit had been replaced previously. The current pipeline consists of 2.0 miles of 48-inch pipeline. The existing flow capacity of Lateral I-18 in theory is 35 cubic feet per second (cfs). However, due to its deteriorated condition, the District restricts the flow to 18 cfs. The flow capacity of the rehabilitated unit will be 35 cfs. It is expected that the water demand for this area will be approximately 34 cfs.

The District's primary goals for rehabilitation of the distribution system are as follows:

- Improve the conveyance efficiency of the distribution system by eliminating seepage losses.
- Reduce the cost and resources required to operate and maintain the distribution system.

The estimated project cost totals \$1,881,500.

Project Map

Location of Lateral I-18 is located between Dove and Alberta Roads from 2nd Street, McAllen to U.S. Expressway 83 in San Juan, Texas.

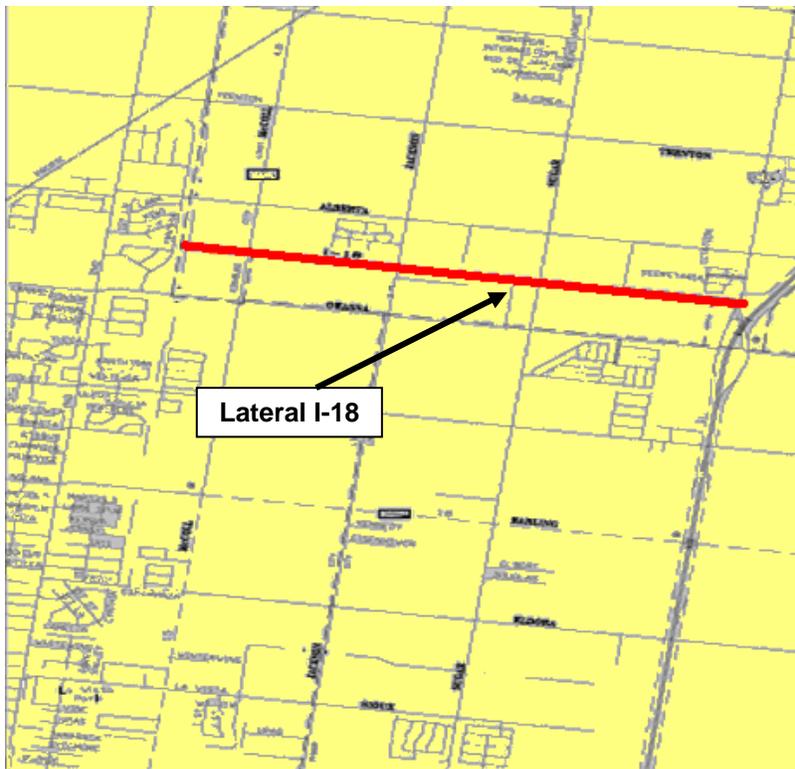


Figure 2. Location of Lateral I-18

Project Justification

The Rio Grande Valley has experienced several years of extended drought, and the population in the region is expected to more than double in the next 50 years. The surface water rights are fully appropriated and during drought periods water demands cannot be met. Groundwater is too saline for drinking water purposes and other prospects are expensive. The cities in the region will need to locate additional water supplies or purchase agricultural rights. Water availability for agriculture purposes is highly battled due to the fact that drinking water is the first objective for water distribution and additional services are in second position.

The proposed improvements will allow the District to conserve 238 ac-ft of water annually. Assuming an annual irrigation requirement of 2.0 ac-ft of water applied per acre. This will be enough water to allow 119 acres to remain in agricultural production.

Agriculture has been the primary component of the region's economy. Based on Texas Cooperative Extension data presented in *alternative Approaches to Estimate the Impact of Irrigation water Shortages on the Rio Grande Valley Agriculture*, the estimated economic benefit of an acre-foot of irrigation water is \$652 in business activity and 0.02 jobs. Based on this information, the water conserved from this project would allow the region to realize \$155,176 in business activities and 4.76 jobs. Based on Texas Water Development Board data presented in *1995 Per Capita Water Use for Texas Cities*, the per capita water use in Brownsville is 184 gallons per day, or 0.206 ac-ft per year. Assuming this is representative of the region, the annual water conservation realized through implementation of this project would provide sufficient water to sustain a population of 1,155.

Water conservation has economic, environmental, and social impacts; therefore, water management must be emphasized in the community's development. The necessity of the implementation of this project is imperative. Many cities in the Valley rely on irrigation districts to bring water from the Rio Grande to their treatment and distribution systems. McAllen for instance, would be forced to provide its own infrastructure from the river to the city, were it not for its relationship with the United Irrigation District and the Hidalgo County Irrigation Districts One, Two and Three. In addition, farmers contribute much to the economy in the Valley. If the crops fail, jobs are lost. Without the farming sector, city budgets will be affected. According to a commonly cited scenario, a 10 percent reduction in water used for irrigation equals the total amount used by municipalities in the Valley right now.

Important issues for Certification:

The Project falls within the BECC's priority sectors and complies with the General Criteria.

Pending issues:

None.

2. Human Health and Environment

2.a Compliance with Applicable Environmental Laws and Regulations

In accordance with the National Environmental Policy Act (NEPA) and other statutes, and based on the type of project, U.S Bureau of Reclamation (USBOR) has evaluated the impacts on the affected environment of the proposed rehabilitation of portions of the HCID No. 2 pipeline. Based on the minor impacts generated by of the project, the USBOR determined that the Texas Historical Commission was the only agency that needed to be consulted. The USBOR Environmental Categorical Exclusion for the proposed project was obtained in April 16, 2007. The impacts of the proposed project would include the installation of approximately 2.0 miles of new pipeline for lateral I-18 in urban and residential areas and areas of cultivated farmland.

2.b Human Health and Environmental Impacts

Human Health Impacts

The proposed project addresses one of the most pressing problems facing the Lower Rio Grande Valley of Texas, i.e., water shortages due to drought over the past several years and an increasing demand due to population growth. The District does not use groundwater for its operations since the groundwater is inadequate because its high total dissolved solids in excess of 1500 mg/l in dissolved salts and does not meet the Primary Drinking Water Standards. This water shortage has created an economic hardship in the region through reduction of crops and subsequent reduced revenue. The future health, social and economic well being of the population in the Rio Grande Valley will depend on conservation and maximizing beneficial use of available water to meet domestic, industrial and agricultural needs. The project addresses the critical water shortages by reducing water losses and providing for more efficient delivery of water, thus enhancing availability of water both domestic and agriculture use. The annual water conservation realized through implementation of this project would provide sufficient water to sustain a population of 1,155.

Environmental Impacts

Construction of the proposed water conservation project will have a direct positive impact through conservation of water, thus making more water available for irrigation and municipal use. The implementation of the project will allow an estimated water savings of 238 acre-feet/year, on an average annual basis. The expected water savings from the project over its expected productive live of 49 years are 5,116 acre-feet, using the 4% annual discount rate. The energy savings estimated by the Texas Water Resources Institute with the implementation of the project are 25,842 KWH, on an average annual basis. The expected energy savings from the project over its expected productive live of 49 years are 555,153 KWH, using the 4% annual discount rate.

The project will not pose any environmental hardships or have any long-term negative effects on the project area. There would be a temporary decrease in air and noise quality due to construction activities associated with trenching the new pipeline alignment. There would be no adverse effect to any endangered or threatened species, any migratory bird, or any historic or cultural property.

In addition, the following environmental commitments will be made part of the proposed projects:

- Landscaping would be limited to seeding and replanting with native species where possible. A mixture of grasses and forbs appropriate to address potential erosion problems and long-term cover would be planted. Native trees, shrubs, and herbaceous species which are more drought tolerant, adaptable and use less water would be used for landscaping in the project areas.
- Existing trees and woody vegetation would remain undisturbed if possible. If not avoidable stands of native brush and woods would be surveyed for nesting migratory birds during the (nesting) period of March through August, and then not be disturbed if any were found.
- All residents within 100 feet of the proposed construction areas would be notified a reasonable amount of time before the project begins.
- All State and Federal permit conditions necessary for the construction and/or operation of the proposed project would be acquired and complied with.

Transboundary Impacts

Negative transboundary impacts are not anticipated by the implementation of the water conservation projects.

Formal Environmental Clearance

In accordance with the Council of Environmental Quality (CEQ) Regulations (Section 1508.4) under the National Environmental Policy Act (NEPA) the U.S. Bureau of Reclamation (USBOR) has adopted the procedure in compliance with CEQ (1507.3 [b]) to issue an Environmental Categorical Exclusion based on the evaluation of the possible environmental impacts that would occur with the implementation of the proposed project.

USBOR evaluated the impacts on the affected environment of the proposed rehabilitation project and determined that the Texas Historical Commission was the only agency that needed to be consulted based on the minor impacts of the project. The Texas Historical Commission, through Official Communication No. 200706/52 determined no objection to the development of these projects, inasmuch as there is no evidence of archeological or historical settlements in the area. Based on the above, no impacts to cultural resources are anticipated as a result of the projects' implementation.

Including the above, the required USBOR Environmental Categorical Exclusion Checklist was completed and signed on April 16, 2007, whereby the USBOR determined that the proposed actions do not individually or cumulatively have a significant effect on the human environment and for which, therefore, neither an environmental assessment (EA) nor an environmental Impact Statement (EIS) is required.

Important issues for Certification:

The project contributes to mitigate the environmental problem related to scarce of water resources and complies with all current environmental regulations.

Pending issues:

None.

3. Technical Feasibility

3.a Technical Aspects

Project Development Requirements

The proposed water conservation improvements have been described in the Project Plan prepared by the design consultant for the District and submitted to BECC. The Project’s Final Design is currently in the final phase and will be completed on September 21, 2007 in accordance to the “Design Criteria and Basic Controls Rehabilitation of Irrigation Facilities” developed by the Bureau of Reclamation. The Project Report was prepared based on the “Guidelines for Preparing and Reviewing Proposals for Water Conservation and Improvement Projects under Public Law 106-576” issued by the U.S. Department of the Interior, Bureau of Reclamation, June 2001. The USBOR has reviewed and approved the Project Plan as well as the “Economic and Financial Costs of Saving Water and Energy: Preliminary Analysis for Hidalgo County Irrigation District No. 2 (San Juan) – Replacement of Pipeline Units I-7A, I-18, and I-22 Report” prepared by Texas Water Resources Institute, Texas A&M University. All technology used in the proposed improvements is appropriate and manageable by local expertise and based on the USBOR technology for irrigation projects with similar operations and infrastructure.

According to the Economic and Conservation Evaluation of Capital Renovation Projects for the Hidalgo Irrigation District No. 2, prepared by the Texas Water Resources Institute of the Texas A&M University, the implementation of the project will allow an estimated water savings of 238 acre-feet/year, on an average annual basis. The expected water savings from the project over its expected productive live of 49 years are 5,116 acre-feet, using the 4% annual discount rate. The expected water savings per linear foot of pipeline are as follows:

- As per seepage test results performed by the Irrigation Technology Center, Texas A & M University System, the actual seepage in Lateral I-18 is estimated 229.5 acre-feet/year
- Since reinforced concrete pipeline with flexible joints is not 100% water tight, the District expects water losses not to exceed 50 gal/mile/day.

Using this exfiltration rate as guideline on a 48” diameter pipe, the estimated water losses per year are 5.37 acre-foot/year. This yields net water savings of 0.021 acre-foot/year per foot of pipeline.

The energy savings estimated by the Texas Water Resources Institute with the implementation of the project are 25,842 KWH, on an average annual basis. The expected energy savings from the project over its expected productive live of 49 years are 555,153 KWH, using the 4% annual discount rate. The following table represents data in further detail.

Table 1. Annual Water and Energy Savings

Project	Description	Annual Water Savings (Acre-feet)	Annual Energy Savings (KWH)

Unit I-18	Replacement of approximately 2.0 miles of 48-inch pipeline	238	25,842
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Appropriate Technology

The final design of the proposed project will be developed pursuant to technical specifications contained in the “Design Criteria and Basic Controls Rehabilitation of Irrigation Facilities” developed by the USBOR.

For the purpose of determining the most efficient design, several options were considered for the rehabilitation of the Unit I-18. The project alternatives reviewed consisted of the following scenarios:

- No action – Continued use of the existing mortar joint pipelines
- Slip lining the existing mortar joint pipe
- Replacement with rubber gasket concrete pipe

No Action Alternative. This alternative is not an option due to large amounts of water loss occurring in these water pipelines. The seepage has created areas of standing water and which are a detriment to the area. Several breaks per year occur in the pipelines and require draining of the entire pipeline in order to facilitate the repair. As these pipelines reach the end of their useful life, the cost of repairs and maintenance will continue to escalate.

Slip-lining Process Alternative. This is a process where a winch cable is inserted through the existing line and then attached to the front of the new liner. The new liner pipe is then pulled into the existing pipe and the new liner pipe reconnected to the system. Although this system allows for fast construction and causes little ground disturbance, several disadvantages exist. The pipeline may fail if the existing pipe integrity is poor, and all connections still must be excavated and connected. However, the primary reason the District eliminated this method was due to the constraint that the existing pipeline would have to be taken out of service.

Replacement with Rubber Gasket Concrete Pipe (recommended alternative). The recommended alternative is to replace the existing mortar joint pipe with reinforced concrete gasketed pipe. The concrete pipe will be placed within the existing 30 foot easement adjacent to the existing pipeline. The existing pipeline would remain in service until the new construction is complete. In some areas where pipe crossings, streets and other obstacles exist small areas may be slipped lined to eliminate the need for trenching.

Gasketed concrete pipes have performed well in the area and have been replacing open canals and mortar joint pipe. Tests have shown that seepage loss from flexible joint concrete pipe is virtually non-existing. The gasketed concrete pipe installed adjacent to the existing mortar joint pipe will allow the existing pipeline to remain in service until the service tie-ins occur. The existing pipelines are in service approximately 364 days per year.

The typical turnout arrangement consists of a concrete pipe tee outlet and vertical pipe vent gate with turnout slide gate and concrete piping that tie into the existing field piping. The concrete pipe tee outlet will have an encasement of cast-in-place reinforced concrete that is 7 feet square. A 36-inch diameter vertical pipe vent gate well is set into the concrete encasement. Turnout piping is extended through the wall of the gate well and mortared into position. A slide gate is attached to the piping on the inside of the well. Steps are attached to the outside of the well for

access to the gate stem wheel extending out the top. A series of 3 or 4 cast-in-place reinforced concrete mitered pipe collars are constructed along the piping for tie-in connection to the existing concrete field piping. Similar existing gate wells on this project have an alfalfa valve installed in the concrete pipe tee outlet into the gate well. This feature provides the ability to assess the slide gates for repair without draining the pipeline. The estimated project cost totals \$1,881,500.

Land Acquisition and Right-of-Way Requirements

The pipeline will be installed adjacent to the existing mortar joint pipeline. The proposed project is located within the HCID No. 2 boundaries, consequently no land or right-of-way acquisition is required. Documents validating land acquisition and ownership were provided to BECC.

Work Tasks and Schedule

Table 2. Construction Schedule

Task Name	Duration (days)	Start Date
Final Design	200	3/1/07
Bidding	30	9/1/07
Notice to Proceed/mobilization	30	10/1/07
I-18		
Clear ROW	10	11/1/07
Dewater	8	11/1/07
Installation of Pipe	210	6/1/08
Turnouts and structures	12	6/13/08
Cleanup	5	6/18/08
Water up	1	6/19/08

3.b Management and Operations

Project Management

The administration of the project will be responsibility of Hidalgo County Irrigation District No. 2. The average experience of District personnel is 11 years.

Operation and Maintenance

a. Organization

The organization of the Hidalgo County Irrigation District No. 2 is shown in the following chart.

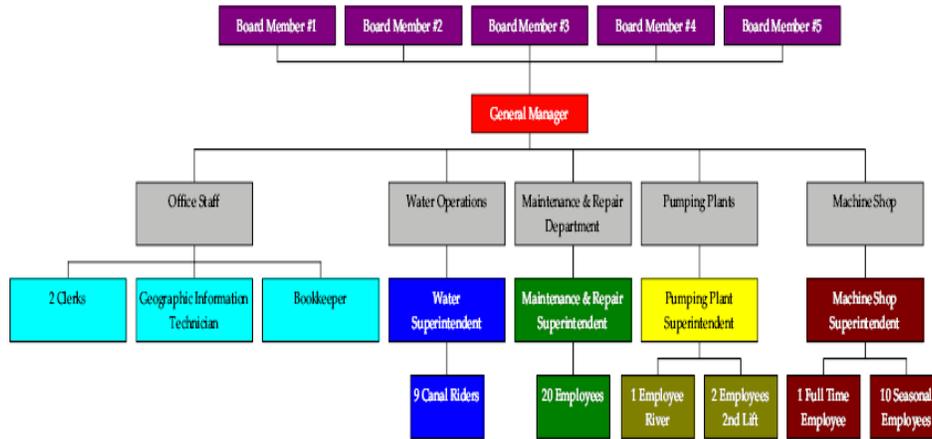


Figure 3. Organization Chart

b. Operations and Maintenance

The operation and maintenance requirements for the improvements to the facilities are basically the same as already performed on the existing pipelines of the system. The existing staff is considered sufficiently capable and experienced to undertake required maintenance of the improved pipelines. During the first year of operation, the construction company will be responsible for any repairs to the improvements, after which the District will be completely responsible for the system.

c. Permits, licenses, and other regulatory requirements

The District operates under the provisions of Chapter 58, Title 4, of the Texas Water Code and under Article XVI, Section 59 of the Texas Constitution.

The design and construction requirements adhere to USBR requirements under the “Guidelines for Preparing and Reviewing Proposals for Water Conservation and Improvement Projects under Public Law 106-576”. USBR design standards and criteria were applied and USBR quality control procedures will be applied during construction.

Important issues for Certification:

Final Design will be reviewed by the BECC and NADB.

Pending issues:

Complete Final Design.

4. Financial Feasibility

4.a Demonstrating Financial Feasibility

Financial Conditions

The North American Development Bank (NADB) reviewed the financial information presented by the Project Sponsor and determined that the proposed financial structure in the Project Report is adequate. Project information was obtained from the Project Report prepared by the U.S. Department of the Interior, Bureau of Reclamation, for the District.

Project Costs, Funding Structure and Other Capital Investment Plan (CIP)

The project will be funded by the NADB Water Conservation Infrastructure Fund (WCIF) and District cash funds. The total construction cost of the project is estimated at \$1.881,500 million dollars. The District has decided no to fund two other components to concentrate their funds on this project.

Item	Amount (Dollars)
Construction	1,567,917
Construction Contingency (20%)	313,583
TOTAL	1,881,500

The District proposes a financial structure that will allow the implementation of the project, as further indicated:

Financial Source	Amount (Dollars)	%
Hidalgo County Irrigation District No.2	967,796	51
NADB WCIF Construction Assistance	913,704	49
TOTAL	1,881,500	100

Dedicated Revenue Source

The District will not need to modify the current rate model to pay for this project. The District intends to cover their obligations from reserve funds.

4.b Legal Considerations

The District operates under the provisions of Chapter 58, Title 4, of the Texas Water Code and under Article XVI, Section 59 of the Texas Constitution. The official representative of the District is Mr. Sonny Hinojosa, General Manager.

Important issues for Certification:

The project financial structure was reviewed by NADB and determined project financial feasibility.

Pending issues:

None.

5. Public Participation

5.a Community Environmental Infrastructure Community-wide Impact Local Steering Committee

The Public Participation Plan developed by the Local Steering Committee was approved by the BECC on April 3, 2007. The Local Steering Committee set to the task of preparing an outreach program, including the benefits resulting from the project, as well as the associated costs and economic impacts for the District and its members.

The Local Steering Committee was formally installed on March 14, 2007, at a meeting held at the Hidalgo County Irrigation District No. 2 Office in San Juan, Texas. The meeting was attended, District Manager, Board Directors, Consultant Engineer, TA&M Economist, and District Secretary. The steering committee is comprised of the following individuals:

Mr. Allen Arnold, Committee Chairman, Board Member and Landowner; Mr. Karl Obst, Committee Vice-Chairman, Board Member and Landowner; Mr. Pal Obst, Landowner and Producer; Mr. John Salazar, Landowner and Producer; Mr. Tommy Jendrusch, Landowner and Producer and Mr. Joe Lucio, Landowner and Producer. A technical work group was formed to advise the committee and its members were Sonny Hinojosa, General Manager and Alfonso Gonzalez, consultant

Public Access to Information

Public Notice

The 30-day public meeting notice was published in the McAllen Monitor on June 2, 2007 for the 1st public meeting. Project information such as the Project Plan and Project Report were made available at the District offices for public review.

Additional Outreach Activities

Information meetings were held with several local organizations to inform them of the project and request their support. The local organizations contacted were Lower Rio Grande Water District Managers' Association, Lower Rio Grande Authority, and Rio Grande Regional Water Planning Group. A support letter was received from all organizations except the Rio Grande Regional Water Planning Group, which will be considered at their September 21, 2007, meeting.

Public Meetings

Both public meetings were held at the District offices. The First Public Meeting was held on July 5, 2007, while the second public meeting was held on August 2, 2007. A total of 25 people attended the meetings and 20 exit surveys were completed demonstrating 100% support for the project.

Final Public Participation Report

The sponsor delivered a Final Public Participation Report per BECC requirements.

Important issues for Certification:

The project is supported by the community.

Pending issues:

None.

6. Sustainable Development

6.a Institutional and Human Capacity Building

Actions within the scope of the project that contribute to institutional and human capacity building at the Hidalgo County Irrigation District No. 2 include the following:

- Improve the necessary irrigation infrastructure (pipeline)
- Reduction in water and energy losses
- Modernization of the irrigation facilities
- Impact on agricultural production with a possible increase of income
- Improved quality of life for the end users
- Additional availability of water for domestic use

The Texas A&M University Texas Water Resources Institute completed an economic and conservation assessment of the projects with funds provided through the “Rio Grande Basin Initiative,” administered by the Cooperative State Research, Education, and Extension Service of the U.S. Department of Agriculture. The USBOR approved the methodology for the economic and conservation analyses.

The NADB Water Conservation Infrastructure Fund (WCIF) will complement, with grant funds, the capital investments required by the District for construction of the projects. The use of WCIF grant funds allows the District to fully finance and improve its infrastructure in order to reduce water conveyance losses.

6.b Conformance with Applicable Local, State, and Regional Laws and Regulations and Conservation and Development Plans

The proposed project complies with all local and regional conservation and development plans. In particular, the project complies with the Rio Grande Regional Water Plan, which recommends water conservation in agricultural activities and water use efficiency, in order to reduce irrigation shortages. In this case, the project particularly addresses agricultural water conservation by means of *off-farm* water use efficiency. In addition, the project complies with the Hidalgo Water Conservation and Drought Contingency Plan, and Water Allocation Policy, of August 2005.

Design and construction requirements will be developed in accordance to the “Design Criteria and Basic Controls Rehabilitation of Irrigation Facilities” developed by the Bureau of Reclamation. The Project Report has been prepared in accordance with the “Guidelines For Preparing and Reviewing Proposals for Water Conservation and Improvement Projects Under Public Law 106-576 issued by the U.S. Department of the Interior, Bureau of Reclamation, June 2001.

The project is in conformance with local conservation efforts already developed by the District and served communities. Conservation of water is stressed and penalties are assessed for the overuse of water. The municipalities served by the District have their own water conservation plans. A water allocation plan (Drought Contingency Plan), goes into effect for irrigation when the irrigation water account storage balance amounts to a maximum of three irrigations per acre. This program remains in effect until water is restored to the Districts irrigation account.

The project adheres to the U.S.-Mexico Border 2012 Environmental Program by meeting Goal 1 (Reducing water contamination) and Objective 4 (promoting improve water utility efficiency). One of the program's guiding principles is reducing major risks to public health and conserving and restoring the natural environment.

6.c Natural Resource Conservation

The proposed project was developed with the intent of conserving water. The District irrigation water right is 137,675 ac-ft per year; however, this water right is “as-available” and the actual water available to the District may vary from year to year.

According to the Economic and Conservation Evaluation of Capital Renovation Projects for the HCID No. 2, prepared by the Texas Water Resources Institute of the Texas A&M University, the implementation of the project will allow an estimated water savings of 238 acre-feet/year, and an energy savings of 25,842 KWH/year, on an average annual basis.

The construction of the proposed project will satisfy existing needs of the District while providing water to its district producers, city users, as well as other small rural communities which depend on the Rio Grande for their water supply.

6.d Community Development

The benefit obtained by the modernization of the irrigation facilities may directly impact agricultural production and may result in an increased income and an improved quality of life for the end users. With this, economic activity may be enhanced by making members active participants in development of their district. An improved quality of life for the residents may also have a favorable impact on the development of health, and education of the area.

<p>Important issues for Certification:</p>

<p>The project complies with all sustainable development principles.</p>
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<p>Pending issues:</p>

<p>None.</p>

List of Available Documents

- *Design Criteria and Basic Controls, Rehabilitation of Irrigation Facilities.* U.S. Bureau of Reclamation.
- *Engineering Cost Estimate.* Sigler, Winston, Greenwood & Associates, Inc. June 4, 2007.
- *Final Public Participation Report.* Hidalgo County Irrigation District No. 2. September 4, 2007.
- *Hidalgo County Irrigation District No. 2 Categorical Exclusion.* U.S. Bureau of Reclamation. April 16, 2007.
- Hidalgo County Irrigation District No. 2 Deeds Covering I-18 Pipeline: 1-2, 1-6, 1-17, 1-37. Hidalgo County Irrigation District No. 2.
- Hidalgo County Irrigation District No. 2 Water Allocation Rules and Regulations. August 18, 2005.
- *Irrigation Water Conservation and Drought Contingency Plan.* Hidalgo County Irrigation District No. 2. August 18, 2005.
- *Preliminary Project Report: Hidalgo County Irrigation District No. 2 Pipeline Improvement Project, Project Units 1-22, 1-7A and I-18.* U.S. Bureau of Reclamation. June 5, 2007.
- *Project Plan: Hidalgo County Irrigation District No. 2 Pipeline Improvement Project, Project Units 1-22, 1-7A and I-18.* U.S. Bureau of Reclamation. April 2, 2007.