CERTIFICATION PROPOSAL

ANTHONY LIFT STATION REPLACEMENT PROJECT
ANTHONY, NEW MEXICO

Submitted: March 3, 2016

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EXECUTIVE SUMMARY

ANTHONY LIFT STATION REPLACEMENT PROJECT
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Project: The proposed Project consists of the construction of a gravity line, a new lift station, and a force main to convey wastewater to the Anthony Wastewater Treatment Plant (the "Project").

Project Objective: The purpose of the Project is to eliminate exposure to untreated or inadequately treated wastewater, contributing to the reduction of water pollution and the risks of waterborne diseases.

Expected Project Outcome: The environmental and human health outcomes anticipated for the Project include:

- Eliminate the risks of sewage overflows in populated areas surrounding the existing lift station, which fails, on average, twice per year;
- Increase capacity of the lift station from an average flow of 0.4 MGD to 0.9 MGD.

Population Benefited 8,700 residents of Anthony, New Mexico.[1]

Project Sponsor: Anthony Water and Sanitation District.

Project Cost: US 2,811,400.

BEIF Grant: US 2,811,400.

Uses & Sources of Funds:
(US$)

Uses	Amount	%
Construction, contingencies, supervision, and taxes	2,811,400	100
TOTAL	**$2,811,400**	**100**
Sources	**Amount**	**%**
NADB-BEIF (grant)	2,811,400	100
TOTAL	**$2,811,400**	**100**

[1] Based on 2,529 improved residential wastewater connections as reported by the utility on November 6, 2015 and an average household of 3.44 as reported in http://quickfacts.census.gov/qfd/index.html accessed on November 12, 2015.

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1. ELIGIBILITY

Project Type

The Project falls within the eligible sector of wastewater collection and treatment.

Project Location

The Project is located in the Town of Anthony, Doña Ana County, New Mexico, approximately 16 miles (26 Kilometers) from the U.S.-Mexico border. The Project is in the border region, which in the U.S. is defined as 100 kilometers (62.5 miles) from the U.S.-Mexico International border.

Project Sponsor and Local Authority

The Anthony Water and Sanitation District (AWSD), the Project sponsor, is a public sector utility that provides services to the Town of Anthony, and some nearby unincorporated areas. The AWSD has the right to provide water and wastewater services as granted by New Mexico Codes, Chapter 3 – Article 23 Public Utilities, 3-23-1 through 3-23-10.

2. CERTIFICATION CRITERIA

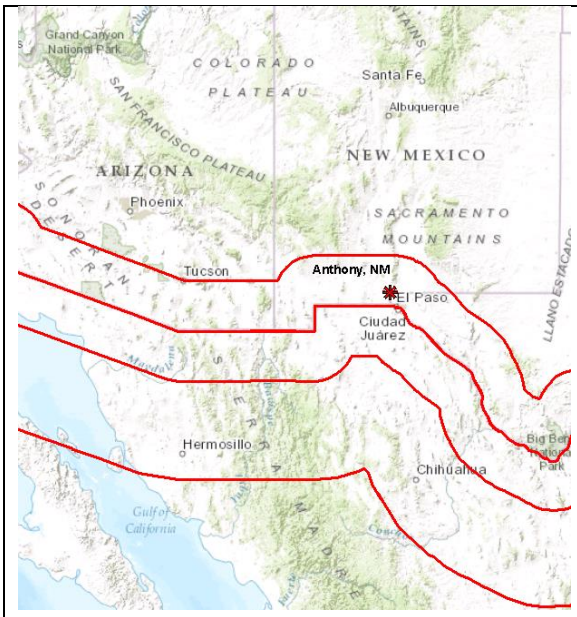
2.1. TECHNICAL CRITERIA

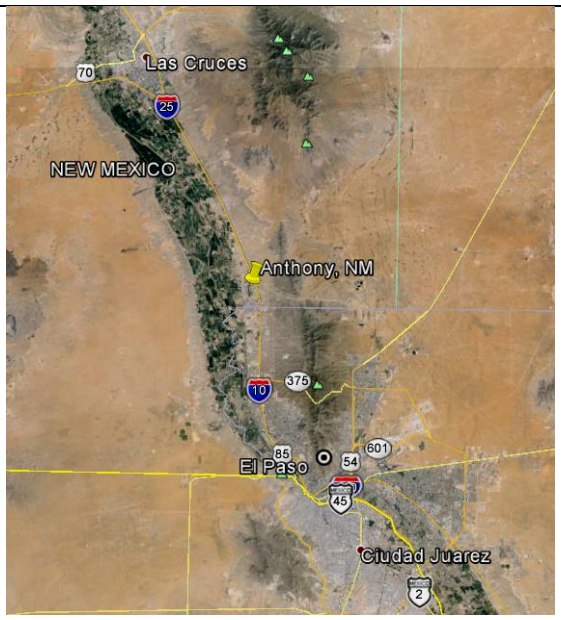
2.1.1. Project Description

Geographic Location

The Town of Anthony is located on the New Mexico-Texas state line approximately halfway between the Cities of Las Cruces (NM) and El Paso (TX). The lift Station will be located at coordinates 32°0'54"N and 106°36'41"W. All new conveyance infrastructure associated with this Project is within a 2 mile radius of the new lift station. The Project vicinity map is illustrated in Figure 1.

Figure 1
PROJECT VICINITY MAP





General Community Profile

According to the 2014 US census estimate the population of Anthony, New Mexico was 9,318. In general, AWSD's boundaries include all of the City of Anthony, with the exception of some sparsely populated areas within the city, as well as providing services to adjacent unincorporated areas. Residents in unserved areas of the city use private wells for their water supply and onsite systems to manage their wastewater. The median household income (MHI) for Anthony is 20,379, and 45.2% of the city's population lives below the poverty line. In comparison, New Mexico's statewide MHI is 44,927, and 20.4% of the state's population lives in poverty.[2] The community's economic base includes retail businesses, agricultural production, and serving as commuter community to El Paso and Las Cruces.

The status of public services in the AWSD is described in Table 1 below.

[2] http://quickfacts.census.gov/qfd/states/35/3503820.html --accessed Oct. 21, 2015.

Table 1
BASIC PUBLIC SERVICES AND INFRASTRUCTURE*

Water System			
Coverage	95% within the city limits		
Supply source	AWSD has six wells in the Mesilla Basin Aquifer, four are currently active. The utility operates a reverse osmosis treatment plant with a capacity of 1,200 gallon/minute for arsenic removal.		
Number of hookups	2,766 residential hookups		
Wastewater Collection			
Coverage	90% within the city limits		
Number of connections	2,529 residential connections		
Wastewater Treatment			
Coverage**	100%		
Treatment facilities	**Plant**	**Type**	**Capacity**
	Anthony Water and Sewer District Wastewater Treatment Plant (WWTP)	Activated sludge	0.9 mgd
Solid Waste			
Collection coverage	100%		
Final disposal	Corralitos Landfill		
Street Paving			
Coverage	~70%		

* Coverage estimates provided by AWSD 11/06/2015
** Service coverage for wastewater treatment equals the percentage of discharges collected through the centralized collection system treated by a centralized wastewater treatment facility.
mgd = Million gallons per day.

Local Water and Wastewater Systems

AWSD currently provides water to approximately 2,766 residential hookups and wastewater services to nearly 2,529 residential connections. The AWSD WWTP treats an average of 0.54 MGD and an average of 0.4 MGD pass through the Sonic Lift Station. The utility reports providing water to approximately 95% of the district's residents and wastewater services to 90% of its residents. Water and wastewater access is lacking primarily in areas too sparsely developed to make providing services economically feasible.

Replacing the existing "Sonic" Lift Station is a priority for the utility, because wastewater from the lift station has backed-up into nearby homes and businesses during past failures. The utility has estimated that pumps in the existing lift station fail approximately every six months, and each failure averages 50,000 in repair costs. Replacing the lift station will improve the utility's operations and provide significant operation and maintenance (O&M) savings. The existing force main is also operating near capacity and has had leakage issues requiring its replacement as part of this Project.

The Technical Memorandum (TM) developed during the planning stages of the Project included a comprehensive review of all of the system's lift stations. This Project is one element of the recommended improvements to the wastewater collection system (WWCS). Currently, AWSD operates a total of nine lift stations. The new lift station will be located, north, away from the existing residential and commercial development to a location with less direct impact and that will allow six other lift stations to be abandoned in the future. Abandoning the other lift stations will require the construction of interceptor lines that are not part of the scope of this Project; however, those actions are currently in development and 15-inch stub-out line is included in the lift station's design for the future flows. The new consolidated lift station will convey nearly 90% of AWSD's wastewater to its treatment plant. The systematic approach recommended in the TM to eliminate multiple lift stations will lead to reduced O&M costs and significant energy savings for utility.

AWSD has previously received funds from the BEIF program for recently completed improvements to the water supply system (December 2013). The improvements included transmission lines, a new well, and a filtration system to remove arsenic and excess dissolved mineral content from the system's water supply. Since the completion of the Arsenic treatment facility the utility's water quality has greatly improved and is now in full compliance with the Clean Water Act.

The purpose of this Project is to increase access to adequate wastewater service, improve service reliability and eliminate the risks associated with exposure to untreated wastewater. The existing lift station's history of failures, have resulted in the Project's ranking as Category One priority under the U.S. Mexico Border Water Infrastructure Program.

Project Scope

The Anthony Lift Station Replacement Project will consist of the following elements:

- 3,500 linear feet (LF) of 21" gravity line with 14- four foot diameter manholes rerouting wastewater from the existing lift station to the new lift station.
- A replacement lift-station with, a double wet-well for duplicity, three 105 horsepower Variable Frequency Drive (VFD) pumps, electronic controls, a backup generator, an electrical control building, and a biofilter for odor control.
- 7,100 LF of 12" force main connecting the new lift station to the AWSD wastewater treatment plant.

The utility will be responsible for decommissioning the existing "Sonic" lift station. The decommissioning process includes removing and salvaging mechanical equipment such as pumps, and cranes, and removing site electronics. The wet wells will be drained and filled with sand. The existing force main will be abandoned in place.

Figure 2
ANTHONY LIFT STATION IMPROVEMENTS

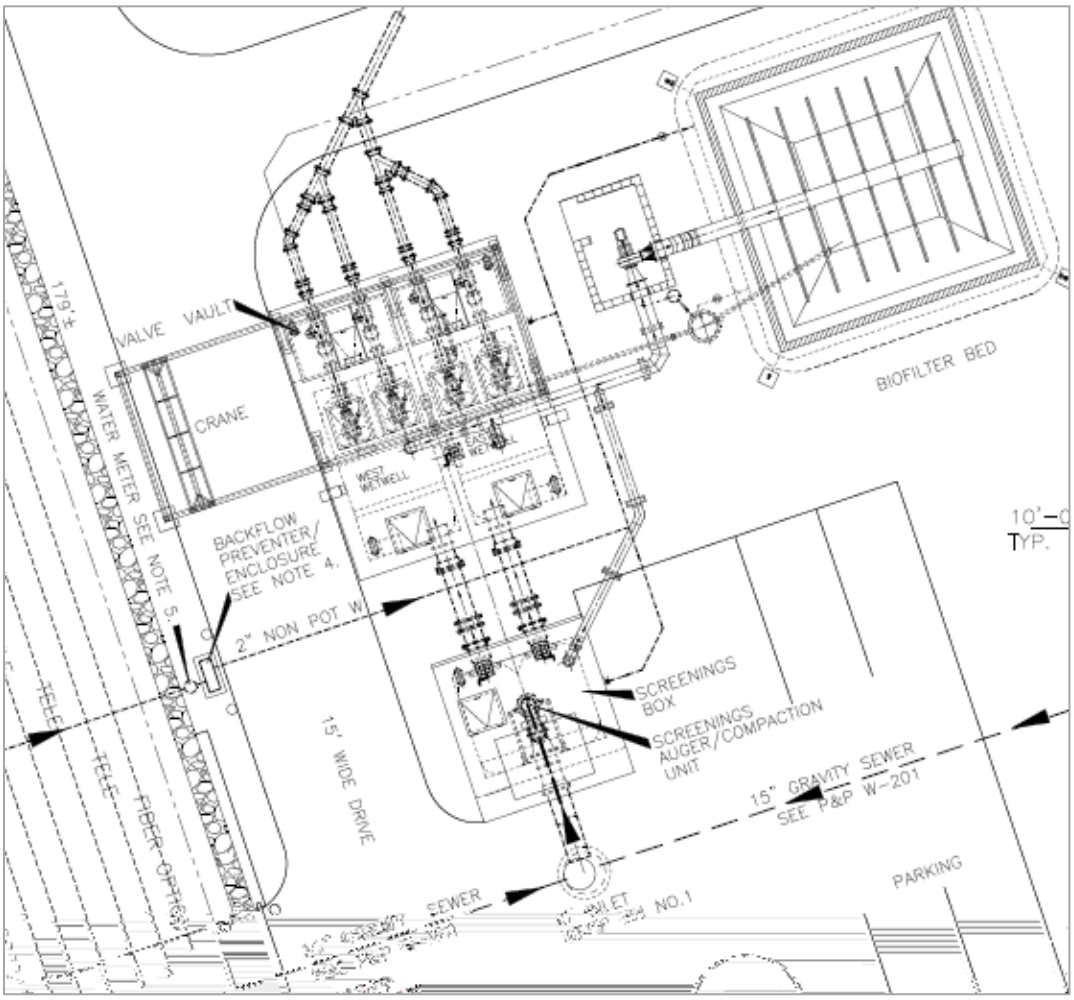


Figure 3
SCHEMATIC VIEW OF PROPOSED PROJECT

Table 2 shows the proposed schedule for Project implementation milestones.

Table 2
PROJECT MILESTONES

Key Milestones	Status
Procurement	Initiate: 2nd quarter 2016
Installation Period	Complete within one year of notice to proceed.

2.1.2. Technical Feasibility

Design Criteria

The Project design conforms to recommended standards for wastewater systems as described by the New Mexico Environment Department, Construction Programs Bureau.[3] In general the New Mexico Standards reference the 10-state standards.[4]

Selected Technology

Alternatives considered in the development phase of the Project included: no action, three alternatives near the existing lift station, and locating the lift station approximately 3500 LF north of the existing lift station to land owned by AWSD off of NM Highway 478. Relocating the lift station to the AWSD property was selected because it would move the lift station away from existing development, new property acquisition was not required, the new site will allow the consolidation of several lift stations into one facility resulting in O&M savings, and the construction of the conveyance lines will be simplified since it will be along a secondary route and through open fields. These advantages were unique to the selected alternative.

The following considerations were taken into account for the design of the Project components:

- _____. The sanitary lines must meet regulatory requirements, as set by NMED and AWWA. These standards regulate criteria for pressure, pipe materials, joints, gate valve spacing, pipe sizing etc.

- _____. The new lift station and sanitary lines will serve the majority of the AWSD, capacity has been built into the system allow for natural growth (at or about 30%) in the community and to allow interceptors from other lift stations to discharge to this Project. Pump sizes have been balanced between existing and future demands.

- _____. The new lift station is a critical component of the utility's WWCS. Once constructed it will convey approximately 73% of the system's wastewater to the WWTP. Future Projects will construct interceptors to consolidate six other lift stations to the new lift station. Ultimately 97% of the utility's wastewater will pass through the new lift station. The Dual wet well system will provide duplicity throughout the system, and minimize risks of the Lift Station's failure, and will enable the utility to perform maintenance while the system remains functional.

- _____. The proposed system improvements were carefully selected to balance current and future demands while also minimizing energy requirements.

- _____. The proposed Project will have a positive impact on AWSD's operational efficiency and costs. The existing lift station operates

[3] Recommended Standards for Wastewater Facilities, 2003, New Mexico Environment Department.
[4] Recommended Standards for Water Works, 1997, Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers.

near capacity and has reached its expected operational life, leading to significant expenses associated with breakdowns and repairs. The new system will require normal maintenance, but it eliminate many of the repairs and liabilities associated with the existing lift station. The new location of the lift station was selected, in part, because it will allow several other lift stations to be eliminated in the future. Those future eliminations will provide additional O&M savings.

2.1.3. Land Acquisition and Right-of-Way Requirements

No land will be acquired for this Project. The new lift station will be constructed on a site that is already owned by the utility. The gravity and the force main lines will be constructed along existing rights-of-way (ROW) and in private easements, all of which have been secured.

2.1.4 Management and Operations

The operations and management of the proposed Project will be the responsibility of the AWSD. The utility will ensure that sufficient resources, training, and staff are available for the proper operation and maintenance of the new wastewater lift station. The Project sponsor has successfully completed and operated other projects funded through BECC and NADB.

AWSD provides both water and wastewater services, and has established procedures for operations and maintenance of both services. The maintenance and operations of the lift station requires an operator with Level 2 Wastewater training. AWSD has eight operators, and four of their operators meet or exceed the requirements to operate lift stations. AWSD is fully staffed, supports training on an annual basis, and appreciates a good record for retaining its operations staff.

As part of the development process an energy audit for the utility was performed, energy conservation considerations, such as VFD pumps, were incorporated in the Project's development. Once the implementation of this Project is completed, O&M costs are expected to immediately decrease due to the elimination of the over-burdened existing lift station. Future improvements leading to the decommissioning of 6 additional lift stations will result in further O&M and energy savings.

2.2. ENVIRONMENTAL CRITERIA

2.2.1. Compliance with Applicable Environmental Laws and Regulations

Applicable Laws and Regulations

The Project is subject to the National Environmental Policy Act (NEPA) environmental clearance process (42 USC §§4321-4370f). To be eligible for funding from the US-Mexico Border Water Infrastructure Program, all Projects must obtain a Finding of No Significant Impact (FONSI). EPA Region 6 completed the environmental review and clearance process for this project, in

accordance with the NEPA Council on Environmental Quality (CEQ) regulations found at Title 40 CFR §§1500.1-1508.28, and EPA NEPA regulations at 40 C.F.R. Part 6.

The Clean Water Act (CWA) is the primary law regulating public wastewater systems. In accord with the CWA, all discharges are regulated through the EPA's National Pollutant Discharge Elimination System (NPDES). The New Mexico Environment Department monitors and inspects all point discharges to verify compliance with requirements set by the utility's permit requirements.[5]

This Project will not result in any new discharges, nor will it affect the WWTP's permit requirements. The utility is in full compliance with its permit requirements.

Environmental Studies and Compliance Actions

Since the Project will be receiving federal funds it is subject to regulations under NEPA. An Environmental Information Document (EID) was developed by Epsilon Systems Solutions Inc. and the final draft was complete in May 2013.

The EID evaluates the potential environmental impacts that would result from the implementation of alternatives considered including the proposed action. To obtain a FNSI the proposed Project is evaluated to identify potential environmental consequences and methods for mitigating the effects are made. If the Project's environmental impacts are determined to be immaterial then a FONSI is issued. The EID addresses each of the following environmental areas:

- Air quality, odors, and greenhouse gas emissions
- Noise impacts
- Water quality, hydrology and floodplain impacts
- Biological resources and wetland impacts
- Cultural and historic resource impacts
- Geology and soils impacts
- Municipal and public service impacts
- Public health, hazards and waste management
- Socioeconomic conditions
- Land use and planning
- Transportation and circulation
- Utilities and service systems, and
- Environmental justice

Based on the findings and conclusions of the EID, EPA Region 6 prepared an Environmental Assessment (EA) and a FONSI, which was issued on January 8, 2014.

[5] http://www.nmenv.state.nm.us/water.html

Pending Environmental Tasks and Clearances

There are no pending environmental tasks or authorizations.

Compliance Document

An EPA Finding of No Significant Impact (FONSI) was issued January 8, 2014.

2.2.2. Environmental Effects / Impacts

Existing Conditions and Project Impact – Environmental

The utility's existing lift station was built in the 1980's and is located adjacent to residential and commercial units. The existing lift station has reached the end of its expected life, and has issues with pump failures. Due the lift station's proximity to homes and businesses the consequences of failures have been especially severe, wastewater backs up into neighboring buildings. The force main associated with the lift station has also reached it operational capacity, it has also had failures, and portions of the line have been replaced. The old force main will be abandoned in place, and a new force main will be constructed as part of this Project.

Elements included in the new lift station's design and site selection will have positive environmental impacts. The new lift station will be moved to a site less than a mile from the existing lift station along NM 498. The new site was chosen in-part because it will be isolated from residential and commercial areas, thereby reducing risks of human contact with wastewater in the event of a system failure. The new site will allow the consolidation of several lift stations into one new lift station. Ultimately, 6 smaller lift stations will be eliminated by constructing interceptors that divert flows to the new lift station. The construction of the interceptors is outside of the scope of this Project.

The future interceptor projects will ease the utility's O&M burdens, reduce energy consumption, and eliminate the possibility of failures at the eliminated lift stations. System Duplicity is an additional element that has been designed into the new lift station to further eliminate failure risks. There will be dual wet wells, a backup generator, dual electrical controls, and a back-up pump. Furthermore, the duplicity will allow the lift station to be expanded more easily as demands increase. The new lift station will meet current demands with two variable speed pumps, a third pump on stand-by, and there is space for a fourth pump to meet future demands. Variable speed pumps are being used to reduce the lift station's energy footprint.

All of these Project elements will greatly improve AWSD's capacity to provide reliable sanitary service, for the foreseeable future, leading to enhanced environmental health along the border through improved wastewater services.

The environmental and human health outcomes anticipated for the Project include:

- Eliminate the risks of sewage overflows in populated areas surrounding the existing lift station, which fails, on average, twice per year;

- Increase capacity of the lift station which currently receives an average flow of 0.4 MGD to 0.9 MGD.

The environmental studies developed for the Project have not identified any significant risks or concerns, since the Project will be constructed in previously disturbed areas. No protection for special habitats for endangered or threatened species is needed in the Project area. If threatened or endangered species are encountered during construction work will cease immediately until appropriate mitigation measures can be implemented. Minor adverse effects are anticipated during construction, but those impacts can be managed with best management practices (BMPs). Potential construction impacts include:

- Local air quality will be temporarily impacted by increased dust, emissions of carbon monoxide, nitrous oxide, and sulfur dioxide emissions due to vehicles and equipment used during construction.
- Noise levels may be elevated during construction activities. This impact is short in duration and concentrated to the work area and will include temporary roadway blockages; as well as presence of workers in the area.
- Surface water quality could be temporarily impaired by storm water runoff carrying additional sediment and waste from the construction site.

By following BMPs the temporary impacts due to construction will be minimized and long-term environmental impacts resulting from the Project's implementation will be positive overall.

This Project contributes to improved water and energy resource management and conservation. This Project's development included an energy audit to help the utility identify areas for improved energy efficiency. The energy audit was used to identify more efficient pumps for this Project, and to identify energy saving projects for the wastewater treatment plant (WWTP), which are being developed separately.

The new wastewater collection system will meet 10-states and NMED standard criteria for waste

uncooked foods that have been in contact with contaminated water; or through poor hygiene habits that contribute to the dissemination of diseases by direct or indirect human contact. Table 4 shows waterborne decease statistics for the State of New Mexico.

Table 4
WATERBORNE DISEASE STATISTICS FOR NEW MEXICO

Disease	Number of Annual Cases Per 100,000 Residents				
	2007	2008	2009	2010	2013
Campylobacteriosis	18	17	16	17	16.5
E. Coli (STEC)	1.9	2.3	1.6	2.3	1.5
Giardiasis	5.7	5	5.7	5.2	4.8
Hepatitis A	0.6	0.9	0.5	0.2	1.0
Shigellosis	5.1	7.3	4.2	7.8	2.9

Source: New Mexico Department of State Health Services, NMHeath.org.

Transboundary Effects

No negative transboundary impacts are anticipated as a result of the Project, which is located approximately 16 miles from the US/Mexico border and will not generate any new discharges of treated wastewater.

2.3. FINANCIAL CRITERIA

The total estimated cost of the Project is US 2,811,400, which includes funding for construction, contingency and supervision costs, as well as taxes. The Project Sponsor requested US 2,811,400.

Table 3
USES AND SOURCES OF FUNDS
(US$)

Uses	Amount	%
Construction, contingencies, supervision, and taxes	2,811,400	100
TOTAL	**$2,811,400**	**100**
Source	**Amount**	**%**
NADB-BEIF (grant)	2,811,400	100
TOTAL	**$2,811,400**	**100**

The Project complies with all BEIF and PDAP criteria. Therefore, NADB proposes providing a BEIF grant for up to US 2,811,400 to the AWSD.

3. PUBLIC ACCESS TO INFORMATION

3.1. PUBLIC CONSULTATION

BECC released the Draft Project Certification Proposal for a 30-day public comment period beginning January 15, 2016. The following Project documentation was made available upon request:

- Anthony Water & Sanitation District, Wastewater System Improvements – Lift Station Replacement, Molzen Corbin and Associates, July 2013
- Anthony Water & Sanitation District, Wastewater System Improvements & Lift Station Replacement Environmental Information Document, Epsilon Systems Solutions, Inc. May 2013.
- Finding of No Significant Impact, Wastewater Infrastructure Construction Project Proposed by Anthony Water and Sanitation District, Environmental Protection Agency, January 8, 2014
- Construction Plans for the Sonic Lift Station Replacement, Molzen Corbin, June 2015.
- Public Participation Report including Public Meeting minutes, pictures, and materials

The public comment period ended on February 14, 2016, with no comments received.

3.2. OUTREACH ACTIVITIES

AWDS has conducted outreach efforts to communicate the Project goals, benefits, costs, and impacts. The community's public outreach efforts meet the requirements of the BEIF program. Activities such as the involvement of a local steering committee, public meetings, and appropriate project information access were conducted as described in the Public Participation Plan (PPP). The following information provides a summary of the outreach activities carried out to support this Project.

AWSD formed a steering committee on May 08, 2013 to develop a public participation plan and periodically met to help the Utility to disseminate information regarding the Project. The Project's technical and financial information has been made available to the public for review. Information on the Project was presented to the community during public meetings held on June 19, 2013, and December 17, 2015.

The first Public Meeting notice was posted at the Utility and published May 20, 2013 in the El Paso Times. Flyers for the second public meeting were posted at AWSD and in town on December 11, 2015.

The media search conducted by BECC for this Project did not identify any news articles related to the Project. Based on the results of the public meetings, there has been no opposition detected for the Project. Furthermore, based on feedback provided in survey responses

received at the public meetings, the community supports the Project, namely, because it will move the WWCS infrastructure away from existing residences and businesses, which are currently impacted by failures at the existing lift station.