CERTIFICATION AND FINANCING PROPOSAL

WASTEWATER SYSTEM IMPROVEMENTS
BRAWLEY, CALIFORNIA

Revised: March 14, 2013

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EXECUTIVE SUMMARY

WASTEWATER SYSTEM IMPROVEMENTS
BRAWLEY, CALIFORNIA

The project consists of improvements to two wastewater lift stations for the city of Brawley, CA (the "Project").

The purpose of the Project is to eliminate exposure to untreated wastewater discharges, contributing to the reduction of pollution and the risk of waterborne diseases.

The Project is expected to generate environmental and human health benefits related to the following Project outcomes:

- Improved wastewater collection service for 2,000 residential connections.
- Eliminate the risk of untreated wastewater spills, which could be as much as one million gallons per day (mgd).

8,000 residents of Brawley, CA.[1]

City of Brawley, CA

US$526,000

US$450,000 from NADB's Community Assistance Program (CAP)

Construction*	$ 526,000	100.0
	$ 526,000	
City of Brawley	$ 76,000	14.4
NADB CAP Grant	$ 450,000	85.6
	$ 526,000	100.0

* Includes costs related to construction only.

[1] Calculated based on 2,000 benefited service connections and four persons per household.

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WASTEWATER SYSTEM IMPROVEMENTS
BRAWLEY, CALIFORNIA

Project Type

The Project falls within the eligible sector of wastewater.

Project Location

The Project is located in the city of Brawley, California, 23 miles north of the U.S.-Mexico border.

Project Sponsor and Local Authority

The public-sector Project sponsor is the City of Brawley, CA (the "Sponsor"). Pursuant to the California Government Code, Title 4, Division 3, Part 2, Chapter 11, Section 38900; Brawley has legal authority to operate and maintain their wastewater collection system. The City of Brawley is authorized to provide utility services to the community and is responsible for developing infrastructure improvement projects.

2.1.1. Project Description

Geographic Location

The city ant e

General Community Profile

According to population projections of the U.S. Census Bureau, the city had 24,953 residents in 2010, having grown at an annual rate of 1.24% over the last ten years from a population of 22,052 in 2000.[2]

The city's economic activities are based primarily on agriculture, cattle and the feed industry. The economically active population is estimated to be 10,934 inhabitants. The poverty level for Brawley is estimated at 24.75%, while the state poverty level is estimated as 13.7%. The median household income (MHI) is estimated at US$39,676, as compared to the state MHI of US$60,883.[3]

The status of public services in Brawley is described in the following table.

[2] U.S. Census Bureau: American Community Survey at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_DP03.
[3] The economic information for this paragraph was obtained from the US Census Bureau: Selected Economic Characteristics at: http://quickfacts.census.gov/qfd/states.

Coverage	100%		
Supply source	Surface water, Colorado River Basin		
Number of hookups	5,469		
Coverage	100%		
Number of connections:	5,469		
Coverage	100%		
Treatment facilities			
	City of Brawley	Activated sludge	5.9 mgd
Collection coverage	100%		
Final disposal	Landfill		
Street paving coverage	98%		

Mgd = millions of gallons
Source: City of Brawley, July 2012.

Local Wastewater System

Water and wastewater services are provided by the City through its Public Works Department. Wastewater is collected and treated at the Brawley Wastewater Treatment Plant (WWTP), which has a design capacity of 5.9 million gallons a day (mgd). Current flows to the WWTP total 3.6 mgd. The facility was upgraded during the first quarter of 2012 with the installation of new treatment technology.

The City currently needs to address problems in its wastewater collection and conveyance infrastructure. Specifically, the City needs to address the deteriorating conditions at Lift Station No. 2. This lift station is the largest in the system, pumping approximately 30 percent (1 mgd) of the city's wastewater flows to the treatment plant. The wet well structure has deteriorated with collapsing concrete walls and pump engines that are frequently clogged with debris, requiring continuous maintenance service, such as motor repair and vacuum procedures that provide only temporary relief to the problem. The service area for this lift station includes Brawley's hospital, other medical facilities, and approximately 2,000 wastewater connections.

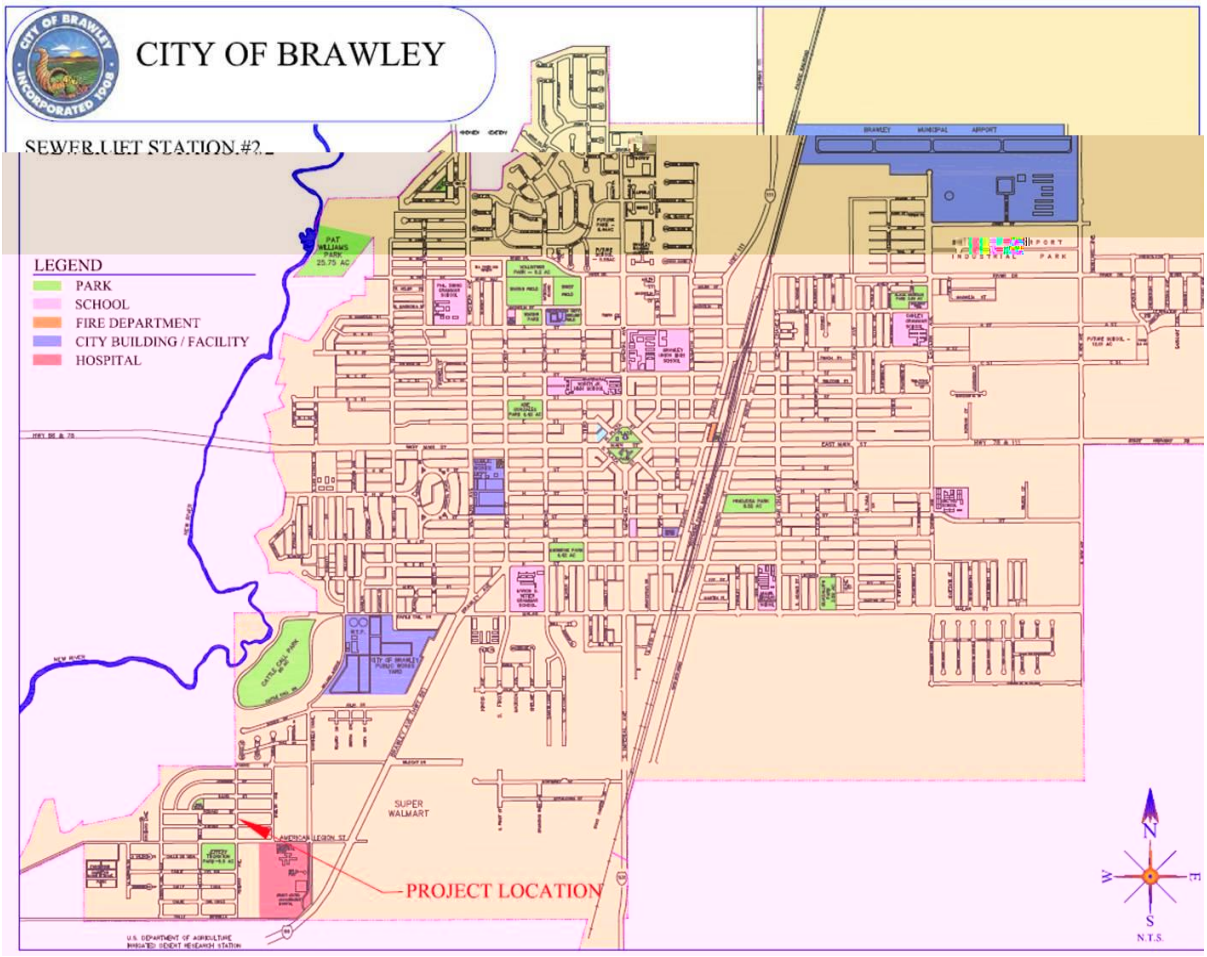
In addition to addressing infrastructure conditions at this lift station, the utility also requires access to a reliable back-up power source at Lift Station No. 1.

Project Scope and Design

The Project consists of improvements to Lift Stations No. 1 and No. 2 and includes the following components:

- Two 400-gallon per minute, five-horse power, skid mounted Gorman Rupp pumps with electronic level transducers and back-up float bulbs for dual control of liquid levels;
- One 6-foot diameter overflow sewer manhole;
- One 6-foot manhole at Richard Ave and American Legion Rd; and
- One 4-cycle engine generator at Lift Station 1.

Figure 2 shows the general location of the project at the southwest corner within the city of Brawley.



The final design specifications describe the use of energy efficient pump engines with variable frequency drives and soft start equipment, as well as high efficient energy generators, and enclosures. The specifications also require the use of energy-efficient equipment and sensors for the operation of the electromechanical infrastructure.

Construction permits will be the responsibility of the contractor and are considered a construction task. Table 2 shows the proposed schedule for project implementation milestones.

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Procurement	Anticipated: 4th quarter 2012
Construction period	Seven months from initiation

2.1.2. Technical Feasibility

Design Criteria

The final design proposed for the lift station was completed in accordance with the Standard Specifications for Public Works Construction (2012 Edition – Green Book) and the City of San Diego, Standard Drawings: Document #AEC 701042.

Selected Technology

During the final design process, technical alternatives related to the project components were evaluated. The following factors were reviewed to identify the most appropriate technology:

- Network layout;
- Required connection points for the system components ;
- Investment cost;
- Operation and maintenance cost ;
- Materials and equipment reliability; and
- Environmental impact.

The lift station has been designed for complete enclosure of raw wastewater and easy access for operation and maintenance (O&M). Peak flow rates, maximum instantaneous flow rates, full build-out in the Project area and treatment capacity were taken into consideration in order to avoid overflows.

2.1.3. Land Acquisition and Right-of-Way Requirements

The lift station and manhole construction will be completed within existing rights-of-way. No additional easements are required to implement the Project.

2.1.4. Management and Operations

Management, construction, and operation of the proposed Project will be the responsibility of the Public Works Department of the City of Brawley, which has sufficient resources and staff available for these purposes. The Department serves 5,469 water hookups and 5,469 wastewater connections, and provides treatment to approximately 3.6 mgd of wastewater. The Project Sponsor has an O&M manual that includes the primary tasks needed to ensure the proper operation of the new infrastructure and has established procedures that identify routine operation and maintenance tasks for the existing water infrastructure.

Operation and maintenance of the new infrastructure investment is estimated to be approximately $27,000 in year one; however, this cost will likely be offset by a reduction in man-hours and expenses associated with continuous repairs to the existing deteriorated infrastructure. The annual operations budget for 2013 includes funds to accommodate operation and maintenance of the new infrastructure. The Sponsor shall demonstrate the sufficient funding and appropriate structure of accounts as a condition of receiving the CAP grant funds.

The improvements to the wastewater system infrastructure will ensure reliable service and eliminate the risks of exposure to untreated wastewater discharges from the failure of lift station operations. The availability of adequate wastewater infrastructure protects the health of residents and local natural resources from pollution.

2.2.1. Compliance with Applicable Environmental Laws and Regulations

Applicable Laws and Regulations

The Project is subject to the formal environmental clearance process established under the California Environmental Quality Act (CEQA). CEQA applies to projects undertaken, funded or requiring an issuance of a permit by a public agency. There are no additional environmental clearance laws applicable to the Project.

Environmental Studies and Compliance Actions

The Project is located within existing municipal property; therefore, a categorical exclusion is applicable. Article 19, section 15301(b), of CEQA allows a categorical exemption for rehabilitation activities to existing facilities of publicly-owned utilities. The City received Notice of Exemption No. 22128EIR015 on February 22, 2012, filed with Imperial County, the applicable lead agency for the CEQA process.

Pending Environmental Tasks and Clearances

There are no pending environmental tasks or authorizations.

Compliance Documents

The only formal authorization required and obtained for the Project is Notice of Exemption No. 22128EIR015, dated February 22, 2012, and filed with Imperial County.

2.2.2. Environmental Effects / Impacts

Existing Conditions and Project Impact – Environmental

The current deteriorated conditions of Lift Station No. 2 and the lack of a back-up power at Lift Station No. 1 create a risk for exposure to untreated wastewater discharges. The implementation of the Project will mitigate these risks and provide adequate infrastructure to meet current and future demand.

The Project is expected to generate the following environmental and human health benefits:

- Improved wastewater service for 2,000 residential connections or approximately 8,000 residents.
- Eliminate the risk of untreated wastewater spills, which could be as much as one million mgd.

The environmental impact resulting from Project implementation will be positive overall, given that it will provide adequate wastewater collection and conveyance infrastructure.

Mitigation of Risks

Only minor environmental impacts are anticipated during construction of the Project, provided that the tasks are implemented in accordance with best management practices. Potential impacts may be present during the construction phase and include the following:

- Fugitive dust emissions;
- Combustion gas emissions from construction machinery; and
- Temporary roadway blockages and presence of workers in the area.

Typical mitigation measures to be practiced:

- Application of water to reduce fugitive dust emissions;
- Vehicle tune ups to reduce emissions; and
- Placement of warning signs to prevent potentially hazardous situations.

Natural Resource Conservation

The Project contributes to the conservation of natural resources by reducing risks of contamination to soil and water resources. Additionally, green building principles used in the design of energy efficient equipment for the proposed lift station improvements will reduce electricity demand and associated emissions.

No Action Alternative

The no-action alternative was not considered viable, since failing to improve the lift station infrastructure would significantly limit the utility's ability to provide adequate collection and conveyance services and mitigate risks for improper discharge of untreated wastewater.

Existing Conditions and Project Impact – Human Health

Waterborne diseases are caused by pathogenic microorganisms that are transmitted as a result of inadequate wastewater disposal practices and unsafe water supplies. An individual can become ill after drinking water that has been contaminated with these organisms, eating 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 3 shows waterborne statistics for Imperial County in California.

Amebiasis	3	0	0	0	0
Campylobacteriosis	40	33	18	19	23
Coccidioidomycosis	1	4	9	8	11
Cryptosporidiosis	0	1	0	0	0
Giardiasis	0	1	0	3	2
Shigellosis	16	49	21	24	18

Source: California Department of Public Health, Infectious Disease Office.

There is a risk of exposure to untreated wastewater due to lift station failure and deteriorating infrastructure, which increases the vulnerability of area residents to waterborne diseases. The infrastructure improvements to be implemented under this Project will reduce this risk and thus prevent potential health threats. According to the World Health Organization (WHO), access to safe water and sanitation facilities, as well as better hygiene practices can reduce ascariasis-related morbidity by 29%.[4]

Transboundary Effects

Due to the proximity of Brawley to Mexicali, Baja California, there are frequent border crossings between the two communities. Therefore, environmental and health conditions in Brawley may also affect Mexicali. The improvements to the wastewater conveyance infrastructure will have a direct positive impact on the health of the area residents by reducing the risk of sewage spills and related waterborne diseases. No negative transboundary impacts are anticipated as a result of the Project.

[4] WHO, Water, Sanitation and Hygiene Links to Health, Facts and figures updated November 2004 (http://www.who.int/water_sanitation_health/publications/facts2004/en/).

2.3.1. Uses and Sources of Funds

The total estimated cost for construction of the Project is US$526,000. The Project Sponsor requested a US$450,000 grant from NADB through its Community Assistance Program (CAP) to complete the financing of the Project. Table 4 presents a summary of total Project costs and sources of funds.

Construction	$ 526,000	100.0
City of Brawley	$ 76,000	14.4
NADB CAP grant	$ 450,000	85.6

2.3.2 Program Criteria Compliance

The Project complies with all CAP criteria. It is located within the U.S.-Mexico border region served by BECC and NADB, is being sponsored by a public sector entity and is in an environmental sector eligible for NADB financing. Additionally, as a wastewater project, it is considered a priority under the CAP program. As shown in the above table, the Project Sponsor has agreed to cover more than 14% of the project cost, which exceeds the 10% minimum required under the program.

The Project was selected through an evaluation and prioritization process using criteria mainly based on financial need, level of project readiness and number of residents to benefit. The representative degree of financial need in the project area was evaluated by comparing household income. In the U.S., the median household income (MHI) of a community was compared to the average MHI of U.S. communities in the border region. For the current evaluation, the average U.S. border MHI was US$71,823. During the 2006-2010 period, the MHI for Brawley was estimated at US$39,676, considerably below the average U.S. border MHI, as well as the state MHI of US$60,883. According to the U.S. Census Bureau, 24.7% of residents in Brawley were living below the poverty level during that period.

All necessary permits and authorizations have been obtained, and the Project Sponsor is ready to initiate bidding for construction once funding has been approved. Upon completion, an estimated 8,000 residents will directly benefit from improved wastewater services and the reduced risk of exposure to sewage spills.

2.3.3. Conclusion

For the above reasons, NADB proposes providing the City of Brawley, California, a US$450,000 CAP grant, in accordance with the terms and conditions proposed in Annex B.

BECC published the draft certification and financing proposal for a 14-day public comment period beginning November 5, 2012. The following list of Project documents was made available for public access:

- Final Design for the Rehabilitation of Lift Station No. 2, prepared by PSOMAS for City of Brawley in 2007.
- Notice of Exemption, 20128EIR015, dated February 22, 2012.

The 14-day public comment period ended on November 19, 2012 with no comments received.

The Sponsor promoted the Project at several City Council meetings. The meetings were open to the general public, and meeting agendas were made available beforehand.

The Project also received attention from local media, such as the *Imperial Valley Press*. Information in news articles highlighted the Project as being considered for a US$450,000 grant from NADB to improve the City's wastewater infrastructure.