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BENJAMIN CRUZ <speaker@senatorbjcruz.com>

MC Fwd: GWA WORK SESSION 5/15/18 / MEETING MATERIALS

1 message

BENJAMIN CRUZ <speaker@senatorbjcruz.com>
To: 34th Guam Legislature Clerks <clerks@guamlegislature.org>
Cc: Rennae Meno <rennae@guamlegislature.org>

Tue, May 15, 2018 at 3:07 PM

05/15/18	05/15/18	Consolidated Commission on Utilities	GWA Work Session May 15, 2018 /Materials.*	34-18-1883

---------- Forwarded message ----------
From: **Bernadette Lou Sablan** <l.sablan@gpagwa.com>
Date: Tue, May 15, 2018 at 3:00 PM
Subject: GWA WORK SESSION 5/15/18 / MEETING MATERIALS
To: "Andy Niven (ndynvn@yahoo.com)" <ndynvn@yahoo.com>, Angelica Perez <aperez@amibrokers.com>, Ann Borja - GWA <annborja@guamwaterworks.org>, "Annmarie Muna (amuna@ambrokers.com)" <amuna@ambrokers.com>, Artemio S Perez <aperez@gpagwa.com>, BENJAMIN CRUZ <speaker@senatorbjcruz.com>, "Cameron Mulka (cimiculka@guampdn.com)" <cimiculka@guampdn.com>, "Charlene Calvo (charlene.calvo@ipehq.com)" <charlene.calvo@ipehq.com>, Chilang F Unpingco <cfejeran@gpagwa.com>, "Fred Horecky (horeckylaw@teleguam.net)" <horeckylaw@teleguam.net>, "Gaynor Delano (gdumat-ol@guam.gannett.com)" <gdumat-ol@guam.gannett.com>, Gilda Mafnas <gildam@guamwaterworks.org>, Governor's Office <joy.unpingco@guam.gov>, "Greg P. Cruz" <gpcruz@guamwaterworks.org>, Heidi Ballendorf <heidi@guamwaterworks.org>, "Jams Y Kim (pacguam@gmail.com)" <pacguam@gmail.com>, "Jeff Johnson (jeffcharjohnson@hotmail.com)" <jeffcharjohnson@hotmail.com>, Jennifer G Sablan <jsablan@gpagwa.com>, "Jessica Peterson (webmaster@theguamguide.com)" <webmaster@theguamguide.com>, "Jessy Gogue (ocp.mayor@gmail.com)" <ocp.mayor@gmail.com>, "Joe John Mantanona (joejohnmantanona@gmail.com)" <joejohnmantanona@gmail.com>, "John O'Connor (john@postguam.com)" <john@postguam.com>, "John Reigel (jriegel@brwncald.com)" <jriegel@brwncald.com>, Joyce N Sayama <jsayama@gpagwa.com>, Karla Tydingco <ktydingco@guamwaterworks.org>, "Kevin Kerrigan (kevin@postguam.com)" <kevin@postguam.com>, Kim Garrido <kim.garrido@mec-guam.com>, "Louella Losinio (louella@postguam.com)" <louella@postguam.com>, Manny Apuron <mapuron@guamwaterworks.org>, "Maripaz N. Perez" <mnperez@gpagwa.com>, "Michael White (whitema@cdmsmith.com)" <whitema@cdmsmith.com>, "Nestor Licanto (nestor@kuam.com)" <nestor@kuam.com>, "Patricia L. Diego" <pldiego@gpagwa.com>, "PDN Newsroom (news@guampdn.com)" <news@guampdn.com>, "Peter Montinola (peter@isuguam.com)" <peter@isuguam.com>, Selma HG Blas <sblas@gpagwa.com>, "Telena Nelson (senatortcnelson@gmail.com)" <senatortcnelson@gmail.com>, "Therese Terlaje (senatorterlajeguam@gmail.com)" <senatorterlajeguam@gmail.com>
Cc: "paulkemp@guamwaterworks.org" <paulkemp@guamwaterworks.org>, Miguel C Bordallo <mcbordallo@guamwaterworks.org>, "Greg P. Cruz" <gpcruz@guamwaterworks.org>, Tom Cruz <thomas@guamwaterworks.org>, Kelly Clark <koclark@guamwaterworks.org>, Ann Borja - GWA <annborja@guamwaterworks.org>, "lizg@guamwaterworks.org" <lizg@guamwaterworks.org>

Hi GWA Stakeholders,

Attached is pdf file for today's GWA Work Session meeting materials – 263 pages.

Best,

Lou

GLAF 34-18-1883
Speaker Benjamin J.F. Cruz

MAY 15 2018
Time: 3:04 [ ] AM [ ] PM File No.
Received By:

2018 MAY 15 PM 3:22

B. Lou Sablan

Board Secretary

Consolidated Commission on Utilities

Admin Asst., Legal Counsel, GPA

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Website: http://guamccu.org/

http://guampowerauthority.com/home.html

http://guamwaterworks.org/

1883

OFFICE OF SPEAKER BENJAMIN J.F. CRUZ

Committee on Appropriations and Adjudication

I Mina'trentai Kuattro na Liheslaturan Guahan

Guam Congress Building | 163 Chalan Santo Papa | Hagatna, GU 96910

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GWAWS 5.15.18.pdf
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CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

GUAM WATERWORKS AUTHORITY WORK SESSION

CCU Conference Room
4:30 p.m., May 15, 2018

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 **Relative to Approval of the Construction Contract for the SCADA System for Water and Wastewater Facilities Phase A-1 / Resolution No. 28-FY2018**
   - 1.2 **Relative to Approval of Change Order to the Yigo and Astumbo Reservoir Construction Management Contract / Resolution No. 29-FY2018**
   - 1.3 **Relative to Approval of the Construction Management Contract for the Route 1 Asan-Adelup-Hagatna Sewer Line Rehabilitation Project / Resolution No. 30-FY2018**
   - 1.4 **Relative to Approval of the 2013 and 2016 Bond Reallocation / Resolution No. 31-FY2018**
   - 1.5 **Relative to Approval of Contract for Design and Construction of the GWA Interceptor Sewer Refurbishment Project for Northern District / Resolution No. 32-FY2018**
   - 1.6 **Relative to Approval of Funding Match Commitment for Bureau of Reclamation Grant as it Relates to GWA District Metering Project Grant Application / Resolution No. 33-FY2018**

2. **GM REPORT**
   - 2.1 **Updates**

3. **ISSUES FOR DISCUSSION**

4. **DIVISION REPORTS**
   - 4.1 **Communications**
   - 4.2 **Compliance & Safety**
   - 4.3 **Customer Service**
   - 4.4 **Engineering**
   - 4.5 **Finance**
   - 4.6 **Operations**

5. **ANNOUNCEMENTS**
   - 5.1 **Next CCU Meetings: GPA Work Session: 5/17/18; CCU Meeting: 5/22/18**

6. **ADJOURNMENT**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 28-FY2018
Relative to Approval of the Construction Contract for the SCADA System for Water and Wastewater Facilities Phase A-1

What is the project's objective and is it necessary and urgent?
GWA is developing and installing a SCADA System to monitor the operations of its water and wastewater systems, and to promptly alert operators when a fault or alarm condition occurs. This project primarily focuses on installing industrial controls, field instrumentation, and communications equipment to enable connectivity between 19 GWA assets with the Central SCADA Server located in Fadian through the use of GPA's TropOS wireless mesh network to enable continuous monitoring of these assets.

An important objective of the project is to implement SCADA for several of the GWA facilities that are part of Phase A-1 project so as to enhance GWA's ability to "monitor flow, pressure, tank levels and chlorine throughout the services area…" as required in Court Order Paragraph 28.

Where is the location?
Well A-01, Well A-03, Well A-05, Well A-06, Well A-12, Well A-23, Well A-25, Well A-29, Well A-30, Well A-31, Well A-32, Well M-17B, Well M-20A, Chaot Reservoir, Agana Heights Reservoir, Agana Heights Booster Pump Station, Hagatna Wastewater Treatment Plant, Fujita Sewer Pump Station, and Route 16 Sewer Pump Station.

How much will it cost?
GWA Management seeks CCU approval to enter into contract with G4S in the amount of Two Million Six Hundred Twenty-One Thousand Sixteen Dollars and Eighty-Five Cents ($2,621,016.85). GWA Management also seeks approval of a 10% contingency in the amount of Two Hundred Sixty-Two Thousand One Hundred One Dollars ($262,101.00) which will bring the total authorized funding amount to a maximum of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85).

When will it be completed?
The contract time is 365 calendar days.

What is the funding source?
The funding source will be from CIP EE 09-09, SCADA Improvement – Phase 4.

The RFP/BID responses (if applicable):
Three (3) out of twelve (12) interested parties submitted bids. Please refer to EXHIBIT A - Bid Abstract and EXHIBIT B - Recommendation Memo for details.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 28-FY2018

RELATIVE TO APPROVAL OF THE CONSTRUCTION CONTRACT FOR THE SCADA SYSTEM FOR WATER AND WASTEWATER FACILITIES PHASE A-1

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA was successful in completing the SCADA Master Plan with the intent to lay out a coordinated, prioritized sequence of SCADA Improvements to enhance operations, provide reliable and efficient systems, maintain desired service levels, contribute to protection of health and safety, and achieve regulatory compliance; and

WHEREAS, the GWA SCADA Master Plan proposed to accomplish the SCADA implementation in 3 main phases; and

WHEREAS, SCADA Phase A will consist of the central SCADA infrastructure and high priority facilities as identified by GWA Operations and Management at the time of the SCADA Master Plan development, which includes 210 GWA sites; and

WHEREAS, SCADA Phase B will consist of adding second tier high priority facilities as identified by GWA Operations and Management at the time of the SCADA Master Plan development, and integrate these locations into the SCADA system; and

WHEREAS, SCADA Phase C will consist of adding additional instruments and equipment to the facilities already implemented with SCADA under phase A and B; and

WHEREAS, due to funding limitations GWA is further separating Phase A into multiple implementations, with Phase A-1 consisting of 19 GWA facilities; and

WHEREAS, the implementation of SCADA for several of the GWA facilities that are part of Phase A-1 project are directly linked to the Court Order Paragraph 28 wherein the completion of the SCADA project will enhance GWA's ability to "monitor flow, pressure, tank levels and chlorine throughout the services area…"; and

WHEREAS, GWA has advertised the Invitation for Bid (IFB-02-ENG-2018) soliciting bid proposals from experienced, responsible, and responsive bidders to the SCADA System for Water and Wastewater Facilities Phase A-1 Project; and

WHEREAS, IFB packages were picked up by 12 interested parties, from which GWA received bid proposals from 3 of the 12 parties before the bid proposal deadline (see EXHIBIT A – Abstract of Bids); and

WHEREAS, GWA engineering analyzed all bid proposals received on March 28th, 2018 and determined that G4S Security Systems (Guam), Inc. ("G4S"), who submitted the lowest bid, as being the responsive and responsible bidder and met all the bid requirements set forth by GWA (see EXHIBIT B – Recommendation Memorandum); and

WHEREAS, GWA Management finds G4S's bid proposal of Two Million Six Hundred Twenty-One Thousand Sixteen Dollars and Eighty-Five Cents ($2,621,016.85) to be acceptable (See EXHIBIT C – Bid Proposal); and

WHEREAS, GWA Management seeks CCU approval to enter into contract with G4S for IFB-02-ENG-2018 in the amount of Two Million Six Hundred Twenty-One Thousand Sixteen Dollars and Eighty-Five Cents ($2,621,016.85) along with 10% contingency in the amount of Two Hundred Sixty-Two Thousand One Hundred One Dollars ($262,101.00) to bring

the total requested authorized funding amount to a maximum of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85); and

WHEREAS, GWA Management further seeks CCU approval to inform the PUC of the project intent given its relation to the Court Order Paragraph 28, and the contract amount of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85); and

WHEREAS, GWA Management further seeks CCU approval to petition the PUC to approve the total authorized funding amount of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85) and for GWA to enter into a contract with G4S; and

WHEREAS, the funding source for the construction project will be from CIP EE 09-09, SCADA Improvement – Phase 4; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by G4S are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept the bid proposal from G4S attached hereto as EXHIBIT C, and which is also incorporated into this Resolution in its entirety.
4. The CCU hereby further authorizes the management of GWA to enter into a contract with G4S in the amount of Two Million Six Hundred Twenty-One Thousand Sixteen Dollars and Eighty-Five Cents ($2,621,016.85).
5. The CCU hereby further approves the requested total maximum authorized funding amount of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85), funded by CIP EE 09-09, SCADA Improvement – Phase 4.

3

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6. The CCU hereby further authorizes the management of GWA to inform the PUC of the project intent given its relation to the Court Order Paragraph 28, and the contract amount of Two Million Eight Hundred Eighty-Three Thousand One Hundred Seventeen Dollars and Eighty-Five Cents ($2,883,117.85)

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 22nd day of May 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

//

EXHIBIT A ORIGINAL

GUAM WATERWORKS AUTHORITY
ABSTRACT OF BIDS

Project Name: **SCADA SYSTEM FOR GWA'S WATER AND WASTEWATER FACILITIES, PHASE A-1**

Bid Opening Date: March 28, 2018
Time: 3:00 p.m.

Project Number: E14-002-BND IFB NO.: IFB-02-ENG-2018

	Bidders Name	Section A-5 Bid Bond	CERTIFICATIONS								Addendum			Lump Sum Bid Price
			Qualifications Statement	Non-Collusion Affidavit	EEO Certification	Non-Segregated Facilities	Sex Offender Certification	Wage & Benefit Determination	Major Shareholders Affidavit	Special Instructions to Bidders	1	2	3	
1.	CHI CONSTRUCTION INC.	Dongbu Insurance Company Ltd. 15% of total bid amount	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$3,300,000.00
2.	GREG PEREZ	no bid submitted												
3.	USSI	no bid submitted												
4.	G4S	Safeco Insurance Company of America 15% of amount bid	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$2,621,016.91
5.	MOTOROLA SOLUTIONS INC.	no bid submitted												
6.	AYM INTERNATIONAL	no bid submitted												
7.	GPME	no bid submitted												
8.	PACIFIC DEVELOPMENTS	no bid submitted												
9.	HES MICRONESIA	no bid submitted												
10.	JMI EDISON	no bid submitted												
11.	EMC2/HYDROAIRE MECHANICAL SYSTEM	no bid submitted												
12.	KINDEN CORPORATION	Fidelity and Deposit Company of Maryland 15% of total bid amount	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$3,679,000.00
	GWA Estimate													$2,977,458.00

Bids Opened and Read by:
GLORIA P. BENSAN
(Name and Signature)

Tabulated By:
Nicole Ann Villaluz
(Name and Signature)

GWA Procurement Representative:
Victoria Heacock
(Name and Signature)

Witnesses:
3/28/18
03.28.18
3-28-18
3/28/18

EXHIBIT B

GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Gloria B. Nelson Public Service Building | 688 Route 15, Mangilao, Guam 96913
P.O. Box 3010, Hagatna, Guam 96932
Tel. No. (671) 300-6035

IFB No.: IFB-02-ENG-2018

Project: SCADA SYSTEM FOR GWA'S WATER AND WASTEWATER FACILITIES, PHASE A-I
GWA Project No. E14-002-BND

Subject: Bid Evaluation

Gloria Bensan and Calvin Yam have reviewed the bid proposals submitted by Chi Construction Inc., G4S, and Kinden Corporation for the referenced project submitted on March 28, 2018. All requirements of the bid were all submitted by three proposers.

The apparent low bidder, G4S' bid price as indicated in the Abstract of Bids was $2,621,016.91. Upon tallying bid estimates, G4S Base Bid total for individual locations were all correct, however, minor discrepancies were found in the Summary of Bid wherein total bid amount indicated for five (5) locations were off by few cents. The correct amount would have been **$2,621,016.85.** Upon computation, G4S correct bid price was 12 percent (12%) below Engineer's opinion of probable construction cost and 21% below the next lowest bid received.

Chi Construction Inc. submitted bid price of $3,300,000 which was 10.83% higher than GWA Engineer's estimate. Kinden Corporation submitted the bid price of $3,679,000 which was 23.6% higher than GWA Estimate.

After a meeting with G4S on April 4, 2018 to confirm the bid price and detail scope of work, it is recommended to award the project with G4S to provide construction services for the aforementioned project as their bid proposal was within reason for the scope of the project. Attached bid evaluation details and summarizes the proposed bids from all interested parties.

Gloria P. Bensan

IFB-02-ENG-2018

Addendum 1 – Attachment A

BID FORM

EXHIBIT C

BID RECIPIENT

This Bid is submitted to:

Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

BIDDER'S ACKNOWLEDGMENTS

Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

BIDDER'S REPRESENTATIONS

In submitting this Bid, Bidder represents that:

Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
01	February 27, 2018
02	March 8, 2018
03	March 14, 2018

Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

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Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.

The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

BIDDER'S CERTIFICATIONS

Bidder certifies that:

This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

Bidder has not solicited or induced any individual or entity to refrain from bidding; and

Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Buyer, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

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BASIS OF BID

Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the following price(s):

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 1: Base Bid for General Work

Base Bid Description of Work for General Work:
General Work consists of all activities necessary for successful execution of project work.

Item 1.01: Mobilization and Demobilization bid amount shall not exceed (5%) of total base bid amount.
Item 1.02: Insurance and Bonds bid amount shall not exceed (1%) of total base bid amount.
Item 1.06: bid amount shall include Asset Inventory, Operation and Maintenance Data, As-Built Plans, and As-Built Shop Drawings.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
1.00	General Work				
1.01	Mobilization and Demobilization (5%)	LS	131,050.85	1	131,050.85
1.02	Insurance and Bonds (1%)	LS	26,210.17	1	26,210.17
1.03	Permits	LS	39,315.25	1	39,315.25
1.04	Project Management	LS	183,960.47	1	183,960.47
1.05	Training	LS	44,504.04	1	44,504.04
1.06	Documentation	LS	49,441.50	1	49,441.50
1.07	Spare Parts	LS	19,992.70	1	19,992.70
			Base Bid for General Work:		494,474.98

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 2: Base Bid for Deep Well A-1

Base Bid Description of Work for Deep Well A-1:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 2.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 2.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 2.04 through 2.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 2.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
2.00	Deep Well A-1				
2.01	Temporary Facilities	LS	0.00	1	0.00
2.02	General Electrical Work	LS	34,048.49	1	34,048.49
2.03	RTU / Control Panel Modification	LS		0	
2.04	Surge Protection Device	LS	545.55	1	545.55
2.05	Power Monitor	LS	2,131.31	1	2,131.31
2.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
2.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
2.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
2.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
2.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
2.11	Temperature Sensor (Well Motor Casing)	LS		0	
2.12	Flow Indicator Transmitter	LS		0	
2.13	Pressure Indicator Transmitter	LS		0	
2.14	Intrusion Switch	LS	464.16	2	928.32
2.15	RTU Antenna	LS	3,224.95	1	3,224.95
2.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-1 Subtotal:		99,599.07

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 3: Base Bid for Deep Well A-3

Base Bid Description of Work for Deep Well A-3:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 3.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 3.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 3.04 through 3.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 3.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
3.00	Deep Well A-3				
3.01	Temporary Facilities	LS	0.00	1	0.00
3.02	General Electrical Work	LS	34,048.49	1	34,048.49
3.03	RTU / Control Panel Modification	LS		0	
3.04	Surge Protection Device	LS	545.55	1	545.55
3.05	Power Monitor	LS	2,131.31	1	2,131.31
3.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
3.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
3.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
3.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
3.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
3.11	Temperature Sensor (Well Motor Casing)	LS		0	
3.12	Flow Indicator Transmitter	LS		0	
3.13	Pressure Indicator Transmitter	LS		0	
3.14	Intrusion Switch	LS	464.16	2	928.32
3.15	RTU Antenna	LS	3,224.95	1	3,224.95
3.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-3 Subtotal:		99,599.07

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Table 4: Base Bid for Deep Well A-5

Base Bid Description of Work for Deep Well A-5:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 4.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 4.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 4.04 through 4.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 4.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
4.00	Deep Well A-5				
4.01	Temporary Facilities	LS	0.00	1	0.00
4.02	General Electrical Work	LS	39,723.09	1	39,723.09
4.03	RTU / Control Panel Modification	LS		0	
4.04	Surge Protection Device	LS	545.55	1	545.55
4.05	Power Monitor	LS	2,131.31	1	2,131.31
4.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
4.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
4.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
4.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
4.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
4.11	Temperature Sensor (Well Motor Casing)	LS		0	
4.12	Flow Indicator Transmitter	LS		0	
4.13	Pressure Indicator Transmitter	LS		0	
4.14	Intrusion Switch	LS	464.16	2	928.32
4.15	RTU Antenna	LS	3,224.95	1	3,224.95
4.16	Testing	LS	1,475.13	1	1,475.13
	Base Bid for Deep Well A-5 Subtotal:				105,273.67

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Table 5: Base Bid for Deep Well A-6

Base Bid Description of Work for Deep Well A-6:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 5.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 5.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 5.04 through 5.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.
Item 5.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
5.00	Deep Well A-6				
5.01	Temporary Facilities	LS	0.00	1	0.00
5.02	General Electrical Work	LS	39,723.09	1	39,723.09
5.03	RTU / Control Panel Modification	LS		0	
5.04	Surge Protection Device	LS	545.55	1	545.55
5.05	Power Monitor	LS	2,131.31	1	2,131.31
5.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
5.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
5.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
5.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
5.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
5.11	Temperature Sensor (Well Motor Casing)	LS		0	
5.12	Flow Indicator Transmitter	LS		0	
5.13	Pressure Indicator Transmitter	LS		0	
5.14	Intrusion Switch	LS	464.16	2	928.32
5.15	RTU Antenna	LS	3,224.95	1	3,224.95
5.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-6 Subtotal:		105,273.67

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Table 6: Base Bid for Deep Well A-12

Base Bid Description of Work for Deep Well A-12:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 6.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 6.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 6.04 through 6.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 6.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
6.00	Deep Well A-12				
6.01	Temporary Facilities	LS	0.00	1	0.00
6.02	General Electrical Work	LS	39,723.09	1	39,723.09
6.03	RTU / Control Panel Modification	LS		0	
6.04	Surge Protection Device	LS	545.55	1	545.55
6.05	Power Monitor	LS	2,131.31	1	2,131.31
6.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
6.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
6.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
6.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
6.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
6.11	Temperature Sensor (Well Motor Casing)	LS		0	
6.12	Flow Indicator Transmitter	LS		0	
6.13	Pressure Indicator Transmitter	LS		0	
6.14	Intrusion Switch	LS	464.16	2	928.32
6.15	RTU Antenna	LS	3,224.95	1	3,224.95
6.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-12 Subtotal:		105,273.67

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Table 7: Base Bid for Deep Wells A-23 and A-25

Base Bid Description of Work for Deep Wells A-23 and Deep Well A25:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Location of existing equipment as indicated on plans may have changed. Contractor is responsible for assessing and accounting for actual condition.

Item 7.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 7.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 7.04 through 7.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.
Item 7.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
7.00	Deep Wells A-23 and A-25				
7.01	Temporary Facilities	LS	0.00	1	0.00
7.02	General Electrical Work	LS	79,445.66	1	79,445.66
7.03	RTU / Control Panel Modification	LS	28,343.38	2	56,686.76
7.04	Surge Protection Device	LS	510.42	2	1,020.84
7.05	Power Monitor	LS	2,096.19	2	4,192.38
7.06	Motor Starter (Well Pump)	LS		0	
7.07	Motor Starter (Booster Pump)	LS		0	
7.08	Control Panel (CP-1)	LS		0	
7.09	Level Sensor (Well)	LS	3,955.37	2	7,910.74
7.10	Level Sensor (Fuel)	LS	4,848.56	1	4,848.56
7.11	Well Motor Temperature Sensor	LS		0	
7.12	Flow Indicator Transmitter	LS		0	
7.13	Pressure Indicator Transmitter	LS		0	
7.14	Intrusion Switch	LS	467.87	3	1,403.61
7.15	RTU Antenna	LS	3,317.48	1	3,317.48
7.16	Testing	LS	2,880.03	1	2,880.03
	Base Bid for Deep Wells A-23 and A-25 Subtotal:				161,706.06

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 8: Base Bid for Deep Well A-29

Base Bid Description of Work for Deep Well A-29:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 8.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 8.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 8.04 through 8.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 8.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
8.00	Deep Well A-29				
8.01	Temporary Facilities	LS	0.00	1	0.00
8.02	General Electrical Work	LS	39,723.09	1	39,723.09
8.03	RTU / Control Panel Modification	LS		0	
8.04	Surge Protection Device	LS	545.55	1	545.55
8.05	Power Monitor	LS	2,131.31	1	2,131.31
8.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
8.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
8.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
8.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
8.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
8.11	Temperature Sensor (Well Motor Casing)	LS		0	
8.12	Flow Indicator Transmitter	LS		0	
8.13	Pressure Indicator Transmitter	LS		0	
8.14	Intrusion Switch	LS	464.16	2	928.32
8.15	RTU Antenna	LS	3,224.95	1	3,224.95
8.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-29 Subtotal:		105,273.67

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 9: Base Bid for Deep Well A-30

Base Bid Description of Work for Deep Well A-30:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 9.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 9.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 9.04 through 9.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 9.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
9.00	Deep Well A-30				
9.01	Temporary Facilities	LS	0.00	1	0.00
9.02	General Electrical Work	LS	39,723.09	1	39,723.09
9.03	RTU / Control Panel Modification	LS		0	
9.04	Surge Protection Device	LS	560.69	1	560.69
9.05	Power Monitor	LS	2,146.46	1	2,146.46
9.06	Motor Starter (Well Pump)	LS		0	
9.07	Motor Starter (Booster Pump)	LS	1,818.37	1	1,818.37
9.08	Control Panel (CP-1)	LS	44,360.69	1	44,360.69
9.09	Level Sensor (Well)	LS	4,005.64	1	4,005.64
9.10	Level Sensor (Fuel)	LS	4,771.18	1	4,771.18
9.11	Temperature Sensor (Well Motor Casing)	LS		0	
9.12	Flow Indicator Transmitter	LS		0	
9.13	Pressure Indicator Transmitter	LS		0	
9.14	Intrusion Switch	LS	418.36	5	2,091.80
9.15	RTU Antenna	LS	3,240.09	1	3,240.09
9.16	Testing	LS	1,490.28	1	1,490.28
			Base Bid for Deep Well A-30 Subtotal:		104,208.29

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 10: Base Bid for Deep Well A-31

Base Bid Description of Work for Deep Well A-31:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 10.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 10.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 10.04 through 10.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.
Item 10.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
10.00	Deep Well A-31				
10.01	Temporary Facilities	LS	0.00	1	0.00
10.02	General Electrical Work	LS	39,723.09	1	39,723.09
10.03	RTU / Control Panel Modification	LS		0	
10.04	Surge Protection Device	LS	557.45	1	557.45
10.05	Power Monitor	LS	2,143.22	1	2,143.22
10.06	Motor Starter (Well Pump)	LS		0	
10.07	Motor Starter (Booster Pump)	LS	1,815.13	1	1,815.13
10.08	Control Panel (CP-1)	LS	44,357.45	1	44,357.45
10.09	Level Sensor (Well)	LS	4,002.39	1	4,002.39
10.10	Level Sensor (Fuel)	LS	4,767.93	1	4,767.93
10.11	Temperature Sensor (Well Motor Casing)	LS		0	
10.12	Flow Indicator Transmitter	LS		0	
10.13	Pressure Indicator Transmitter	LS		0	
10.14	Intrusion Switch	LS	470.11	2	940.22
10.15	RTU Antenna	LS	3,236.85	1	3,236.85
10.16	Testing	LS	1,487.04	1	1,487.04
			Base Bid for Deep Well A-31 Subtotal:		103,030.77

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Table 11: Base Bid for Deep Well A-32

Base Bid Description of Work for Deep Well A-32:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 11.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 11.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.

Items 11.04 through 11.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.

Item 11.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
11.00	Deep Well A-31				
11.01	Temporary Facilities	LS	0.00	1	0.00
11.02	General Electrical Work	LS	39,723.09	1	39,723.09
11.03	RTU / Control Panel Modification	LS		0	
11.04	Surge Protection Device	LS	545.55	1	545.55
11.05	Power Monitor	LS	2,131.31	1	2,131.31
11.06	Motor Starter (Well Pump)	LS	2,350.04	1	2,350.04
11.07	Motor Starter (Booster Pump)	LS	1,803.22	1	1,803.22
11.08	Control Panel (CP-1)	LS	44,345.54	1	44,345.54
11.09	Level Sensor (Well)	LS	3,990.49	1	3,990.49
11.10	Level Sensor (Fuel)	LS	4,756.03	1	4,756.03
11.11	Temperature Sensor (Well Motor Casing)	LS		0	
11.12	Flow Indicator Transmitter	LS		0	
11.13	Pressure Indicator Transmitter	LS		0	
11.14	Intrusion Switch	LS	464.16	2	928.32
11.15	RTU Antenna	LS	3,224.95	1	3,224.95
11.16	Testing	LS	1,475.13	1	1,475.13
			Base Bid for Deep Well A-32 Subtotal:		105,273.67

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Table 12: Base Bid for Deep Well M-17B

Base Bid Description of Work for Deep Well M-17B:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 12.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 12.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 12.04 through 12.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.
Item 12.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
12.00	Deep Well M-17B				
12.01	Temporary Facilities	LS	0.00	1	0.00
12.02	General Electrical Work	LS	39,723.09	1	39,723.09
12.03	RTU / Control Panel Modification	LS	28,363.47	1	28,363.47
12.04	Surge Protection Device	LS	530.51	1	530.51
12.05	Power Monitor	LS	2,116.28	1	2,116.28
12.06	Motor Starter (Well Pump)	LS		0	
12.07	Motor Starter (Booster Pump)	LS	1,788.19	1	1,788.19
12.08	Control Panel (CP-1)	LS		0	
12.09	Level Sensor (Well)	LS	6,053.36	1	6,053.36
12.10	Level Sensor (Fuel)	LS	4,741.00	1	4,741.00
12.11	Temperature Sensor (Well Motor Casing)	LS		0	
12.12	Flow Indicator Transmitter	LS	13,982.20	1	13,982.20
12.13	Pressure Indicator Transmitter	LS	1,145.63	2	2,291.26
12.14	Intrusion Switch	LS	456.64	2	913.28
12.15	RTU Antenna	LS	3,209.91	1	3,209.91
12.16	Testing	LS	1,460.10	1	1,460.10
	Base Bid for Deep Well M-17B Subtotal:				105,172.65

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Table 13: Base Bid for Deep Well M-20A

Base Bid Description of Work for Deep Well M-20A:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 13.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 13.03: bid amount shall include all work relating to the modification of existing control panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 13.04 through 13.15: bid amounts shall include all work relating to proper installation and function in accordance with the design.
Item 13.16: bid amount shall include all work relating to checking and testing per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
13.00	Deep Well M-20A				
13.01	Temporary Facilities	LS	0.00	1	0.00
13.02	General Electrical Work	LS	39,723.09	1	39,723.09
13.03	RTU / Control Panel Modification	LS	28,376.99	1	28,376.99
13.04	Surge Protection Device	LS	544.04	1	544.04
13.05	Power Monitor	LS	2,129.80	1	2,129.80
13.06	Motor Starter (Well Pump)	LS		0	
13.07	Motor Starter (Booster Pump)	LS		0	
13.08	Control Panel (CP-1)	LS		0	
13.09	Level Sensor (Well)	LS	6,066.88	1	6,066.88
13.10	Level Sensor (Fuel)	LS	4,754.52	1	4,754.52
13.11	Temperature Sensor (Well Motor Casing)	LS		0	
13.12	Flow Indicator Transmitter	LS	13,995.72	1	13,995.72
13.13	Pressure Indicator Transmitter	LS	1,152.39	2	2,304.78
13.14	Intrusion Switch	LS	415.02	5	2,075.10
13.15	RTU Antenna	LS	3,223.44	1	3,223.44
13.16	Testing	LS	1,473.62	1	1,473.62
	Base Bid for Deep Well M-20A Subtotal:				104,667.98

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Table 14: Base Bid for Agana Heights Reservoir and Booster Pump Station

Base Bid Description of Work for Agana Heights Reservoir and Booster Pump Station:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 14.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 14.03: bid amount shall include all work relating to the modification of existing RTU panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 14.04 through 14.05: bid amounts shall include labor, material and related appurtenances needed for proper installation and function in accordance with the design.
Item 14.06: bid amount shall include all checking and testing work per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
14.00	Agana Heights Booster Pump Station				
14.01	Temporary Facilities	LS	0.00	1	0.00
14.02	General Electrical Work	LS	34,048.49	1	34,048.49
14.03	RTU / Control Panel Modification	LS	28,426.05	1	28,426.05
14.04	Power Monitor	LS	2,178.86	1	2,178.86
14.05	Intrusion Switch	LS	435.35	4	1,741.40
14.06	Testing	LS	1,522.68	1	1,522.68
	Base Bid for Agana Heights Reservoir and Booster Pump Station Subtotal:				67,917.48

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 15: Base Bid for Chaot Reservoir

Base Bid Description of Work for Chaot Reservoir:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 15.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Item 15.03: bid amount shall include all work relating to the modification of existing RTU panel which may include control relays, terminal blocks, signal isolators, powers supplies, batteries, operator terminals, etc. per design requirements.
Items 15.04 through 15.06: bid amounts shall include labor, material and related appurtenances needed for proper installation and function in accordance with the design.
Item 15.07: bid amount shall include all checking and testing work per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
15.00	Chaot Reservoir Station				
15.01	Temporary Facilities	LS	0.00	1	0.00
15.02	General Electrical Work	LS	34,048.49	1	34,048.49
15.03	RTU / Control Panel Modification	LS	28,416.82	1	28,416.82
15.04	Level Sensor (Fuel)	LS	4,794.35	1	4,794.35
15.05	Intrusion Switch	LS	416.29	6	2,497.74
15.06	RTU Antenna	LS	3,263.27	1	3,263.27
15.07	Testing	LS	1,513.46	1	1,513.46
			Base Bid for Chaot Reservoir Subtotal:		74,534.13

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 16: Base Bid for Hagatna STP

Base Bid Description of Work for Hagatna STP:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 16.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Items 16.03 through 16.06: bid amounts shall include labor, material and related appurtenances needed for proper installation and function in accordance with the design.
Item 16.07: bid amount shall include all checking and testing work per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
16.00	Hagatna STP				
16.01	Temporary Facilities	LS	0.00	1	0.00
16.02	General Electrical Work	LS	34,048.49	1	34,048.49
16.03	Power Monitor	LS	2,120.72	2	4,241.44
16.04	RTU Panel	LS	44,487.13	1	44,487.13
16.05	Level Sensor (Fuel)	LS	6,209.98	1	6,209.98
16.06	RTU Antenna	LS	3,366.54	1	3,366.54
16.07	Testing	LS	2,983.77	1	2,983.77
			Base Bid for Hagatna STP Subtotal:		95,337.35

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Table 17: Base Bid for Route 16 SPS

Base Bid Description of Work for Route 16 SPS:
Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 17.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.
Items 17.03 through 17.08: bid amounts shall include labor, material and related appurtenances needed for proper installation and function in accordance with the design.
Item 17.09: bid amount shall include all checking and testing work per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
17.00	Route 16 SPS				
17.01	Temporary Facilities	LS	0.00	1	0.00
17.02	General Electrical Work	LS	371,910.59	1	371,910.59
17.03	MSB/MCC	LS	59,000.35	1	59,000.35
17.04	RTU / Instrument Control Panel	LS	44,480.47	1	44,480.47
17.05	45kVA Transformer	LS	11,711.66	1	11,711.66
17.06	Level Sensor (Fuel)	LS	6,203.32	1	6,203.32
17.07	Intrusion Switch	LS	425.30	7	2,977.10
17.08	RTU Antenna	LS	3,359.88	1	3,359.88
17.09	Testing	LS	2,922.42	1	2,922.42
			Base Bid for Route 16 SPS Subtotal:		502,565.79

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IFB-02-ENG-2018 Addendum 1 – Attachment A

Table 18: Base Bid for Fujita SPS

Base Bid Description of Work for Fujita SPS:

Work consists of installing communication equipment, various sensors, control panels, motor starters and related appurtenances. Bid price shall include removing and re-installing, or relocating existing facilities that may be obstructing the installation of the intended work whether or not such removing, relocating, and/or reinstalling work is indicated on plans and spec.

Item 18.02: bid amount shall include all work relating to demolitions, conduits, fittings, wires, boxes, and interconnection work between panels, boxes, devices, and instruments.

Item 18.03: bid amount shall include all labor, material and related appurtenances need for the modification of RTU / Control Panel on site.

Items 18.04 through 18.08: bid amounts shall include labor, material and related appurtenances needed for proper installation and function in accordance with the design.

Item 18.09: bid amount shall include all checking and testing work per specification.

Item No.	Description	Unit	Unit Price [USD]	Qty	Bid Amount [USD]
18.00	Fujita SPS				
18.01	Temporary Facilities	LS	0.00	1	0.00
18.02	General Electrical Work	LS	39,723.09	1	39,723.09
18.03	RTU / Control Panel Modification	LS	28,365.14	1	28,365.14
18.04	Power Monitor	LS	2,117.95	1	2,117.95
18.05	Surge Protection Device	LS	532.19	1	532.19
18.06	Level Sensor (Fuel)	LS	3,977.13	1	3,977.13
18.07	Intrusion Switch	LS	407.67	6	2,446.02
18.08	RTU Antenna	LS	3,211.59	1	3,211.59
18.09	Testing	LS	1,461.77	1	1,461.77
			Base Bid for Fujita SPS Subtotal:		81,834.88

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Table 19: Base Bid Total

Item No.	Description	Unit	Bid Amount [USD]
1.00	General Work		494,474.98
2.00	Deep Well A-1	LS	99,599.07
3.00	Deep Well A-3	LS	99,599.07
4.00	Deep Well A-5	LS	105,273.67
5.00	Deep Well A-6	LS	105,273.67
6.00	Deep Well A-12	LS	105,273.67
7.00	Deep Wells A-23 and A-25	LS	161,706.06
8.00	Deep Well A-29	LS	105,273.67
9.00	Deep Well A-30	LS	104,208.29
10.00	Deep Well A-31	LS	103,030.77
11.00	Deep Well A-32	LS	105,273.67
12.00	Deep Well M-17B	LS	105,172.65
13.00	Deep Well M-20A	LS	104,667.98
14.00	Agana Heights Reservoir and Booster Pump Station	LS	67,917.48
15.00	Chaot Reservoir	LS	74,534.13
16.00	Hagatna STP	LS	95,337.35
17.00	Route 16 SPS	LS	502,565.79
18.00	Fujita SPS	LS	81,834.88
	Base Bid Total:		2,621,016.85

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Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

TIME OF COMPLETION

Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

Bidder accepts the provisions of the Agreement as to liquidated damages.

ATTACHMENTS TO THIS BID

The following documents are attached to and made a condition of this Bid:

Required Bid security in the form of 15% of the bid price.

List of Proposed Major Suppliers;

Required Bidder Qualification Statement with Supporting Data.

DEFINED TERMS

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

BID SUBMITTAL

This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): n/a

By: _____

(Individual's signature)

Doing business as: _____

Business address: _____

_____

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Phone: _____ Facsimile: _____

E-mail address: _____ _____

A Partnership

Partnership Name: n/a (SEAL)

By: _____

(Signature of general partner - attach evidence of authority to sign)

Name (typed or printed): _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

A Corporation

Corporation Name: G4S Security Systems (Guam), Inc.

State of Incorporation: Guam

Type (General Business, Professional, Service, other): Retail and Service

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): Vincent J. Walker

Title: Country Managing Director

(CORPORATE SEAL)

Attest David W. Dooley

(Signature of Corporate Secretary)

Business address: 1851 Army DR

Tamuning, Guam 96913

Phone: (671) 646-2307 Facsimile: (671) 649-7245

E-mail address: guam@gu.g4s.com

A Limited Liability Company (LLC)

LLC Name: n/a

State in which organized: _____

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

_____

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Phone: _____ Facsimile: _____

E-mail address: _____

A Joint Venture

First Joint Venturer Name: n/a (SEAL)

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone: _____ Facsimile: _____

E-mail address: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone: _____ Facsimile: _____

E-mail address: _____

Phone and Facsimile Number, and Address for receipt of official communications to Joint Venture: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, corporation, and limited liability company that is a party to the joint venture should be in the manner indicated above.)

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GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 29-FY2018
Relative to Approval of Change Order to the Yigo and Astumbo Reservoir Construction Management Contract

What is the project's objective and is it necessary and urgent?
The objective of the change order is to continue the construction management services for the Yigo No. 1, Yigo No. 3, and Astumbo No. 2 reservoir construction project and increase funding to the contract. The continued services are required due to delay by the contractor (Pernix) in completing the project. The Contractor has agreed through a Memorandum of Understanding to pay for the additional construction management cost for the duration of the project until final completion.

The Yigo and Astumbo Tank Construction project is a Court Order project, thus the urgency is to complete the project as soon as possible but maintain adequate Construction Management oversight.

Where is the project located?
The construction management services will be at the Yigo reservoirs site along Route 1 near the entrance to Anderson Air Force Base and the Astumbo reservoir is located off Ysengsong Road on Chalan Paluan.

How much will it cost?
GWA and the construction management firm has negotiated the cost of Four Hundred Eighty-One Thousand Five Hundred Sixty-Three Dollars ($481,563.00) to extend the services from February 19, 2018 to November 21, 2018 for the Astumbo site and from July 30, 2018 to November 21, 2018 for the Yigo site.

When will it be completed?
The construction management services will continue up until November 21, 2018. Should the contractor delay the project past the projected November 21, 2018 deadline, GWA will negotiate to extend the construction management contract. Cost will be covered by the contractor.

What is the funding source?
The funding for this project will be from the bond funds under the line item - PW 09-11 "Water System Reservoirs 2005 Improvements" and PW 12-05 "Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1".

The funding sources will be replenished by money received from the contractor through a deductive change order from the contractor's contract.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 29-FY2018

RELATIVE TO APPROVAL OF CHANGE ORDER TO THE YIGO AND ASTUMBO RESERVOIR CONSTRUCTION MANAGEMENT CONTRACT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA is currently working on critical reservoir projects under the 2011 Court Order ("CO") Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program; and

WHEREAS, Resolution No. 02–FY2015 and Resolution No. 43-FY2017 authorized the total funding of One Million Eight Hundred Forty-Nine Thousand Eight Hundred Forty Dollars and Thirty Cents ($1,849,840.30) for the construction management services of the Yigo No.1 reservoir, Yigo No. 3 reservoir, Yigo Elevated booster pump station, and Astumbo No. 1 reservoir construction; and

WHEREAS, the original completion date for the Yigo and Astumbo sites are as follows:

- Yigo No. 1 and pump station – October 31, 2017
- Yigo No. 3 – July 31, 2018
- Astumbo No. 1 – October 31, 2017; and

WHEREAS, GWA issued Change Order No. 1 to Change Order No. 3 for construction management services for the Yigo No. 3 reservoir and extension of construction management services to July 29, 2018 for the Yigo site and February 18, 2018 for the Astumbo site due to the Contractor's delay in completing the project; and

WHEREAS, due to continued delay by the Contractor, the revised final completion date is projected to be November 21, 2018; and

WHEREAS, the Contractor has agreed through a Memorandum of Understanding (EXHIBIT A) to pay for the additional construction management cost for the period of February 19, 2018 to November 21, 2018 for the Astumbo No. 1 Reservoir site and from July 30, 2018 to November 21, 2018 for the Yigo No. 1 and No. 3 Reservoir site; and

WHEREAS, GWA and GHD has negotiated a price of Four Hundred Eighty-One Thousand Five Hundred Sixty-Three Dollars ($481,563.00) for the construction management services described above (EXHIBIT B); and

WHEREAS, if the project is delayed further than the revised completion date of November 21, 2018 by the Contractor, the Contractor shall cover any additional construction management services and all other associated cost until final completion; and

WHEREAS, GWA management is requesting authorization to increase the funding amount by Four Hundred Eighty-One Thousand Five Hundred Sixty-Three Dollars ($481,563.00) to bring the total authorized funding to Two Million Three Hundred Thirty-One Thousand Four Hundred Three Dollars and Thirty Cents ($2,331,403.30); and

WHEREAS, the funding source to address paying the CM services due to the extended completion date will be from Internal Funded CIP, PW 09-11 "Water System Reservoirs 2005 Improvements", and PW 12-05 "Tank Major Repair Yigo No. 1, Mangilao No. 2, and Astumbo No. 1"; and

DRAFT

WHEREAS, money received from the Contractor through a deductive change order from Contractor's contract will be applied to replenish the funding sources used for the additional construction management work; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by GHD are fair and reasonable.
3. The CCU hereby authorizes GWA management to accept the fee proposal of Four Hundred Eighty-One Thousand Five Hundred Sixty-Three Dollars ($481,563.00) from GHD (EXHIBIT B) and execute a Change Order.
4. The CCU hereby approves the total funding amount to Two Million Three Hundred Thirty-One Thousand Four Hundred Three Dollars and Thirty Cents ($2,331,403.30.)
5. The CCU approves the funding sources from Internal Funded CIP; PW 09-11: Water System Reservoirs 2005 Improvements; and PW 12-05: Tank Major Repair Yigo No. 1, Mangilao No. 2, and Astumbo No. 1
6. The CCU approves that money received from the Contractor through a deductive change order from the Contractor's contract will be applied to replenish funding sources for the additional construction management work.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

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DULY AND REGULARLY ADOPTED, this 22nd day of May 2018.

Certified by:

Attested by:

_____
JOSEPH T. DUENAS
Chairperson

_____
J. GEORGE BAMBA
Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

///

///

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EXHIBIT A

Memorandum

16 March 2018

To:	Abhyash Chand, Pernix Guam, LLC Steve Greco, Pernix Guam, LLC Tom Cruz, GWA Brett Railey, GWA Garrett Yeoh, GWA Bryan Ryley, GHD Inc.		
From:	Aaron Sutton, GHD Inc.	**Tel:**	(671) 472-6792
Subject:	Contract Extension Memorandum of Understanding	**Job No:**	W13-001-BND
Project:	PW 12-05 GWA Construction of Yigo and Astumbo Reservoir		

This Memorandum of Understanding ("MOU) supplements the Contract between the Guam Waterworks Authority ("GWA) and Pernix Guam LLC ("Contractor) and will be attached to a Modification to that Contract. This MOU results from the meeting held at the Gloria B. Nelson Public Services Building, 688 Route 15, Mangilao, Guam, Multi-Purpose Room, 3rd Floor, on February 2, 2018 and a subsequent discussion on March 6, 2018 concerning the delays of construction of the Yigo Reservoir No. 1 and Astumbo Reservoir. This MOU details the time extensions and responsibilities for costs as agreed by the GWA and Contractor.

1. **Time Extension** GWA shall extend the Substantial Completion dates for the Astumbo Reservoir, Yigo No. 1 Reservoir and Yigo No. 2 Reservoir to October 15, 2018. The Final Completion of Yigo No. 1 & 2 Reservoirs and Astumbo Reservoir shall be achieved no later than November 21, 2018. With respect to the Astumbo Reservoir, Contractor may use the existing waterline to achieve Substantial Completion but the new waterline must be operational to achieve Final Completion.

   The time extensions above will cover any and all delays in connection with;

   - Change Orders No. 1, 2 and 3,
   - the asbestos abatement (Contract Change Request (CCR) No. 12),
   - the sub-contractor changes from RPG Construction to HSG Co. Ltd.,
   - the construction permit,
   - check valve vaults at both sites (CO No. 2),
   - flexible pipe fittings (CO No. 2 and CCR No. 14),

GHD I c. 865 S Marine Corps Drive Suite 202 Tamuning Guam 96913
T 1 671 472 6792 **F** 1 671 477 6229 **E** guam@ghd.com **W** www.ghd.com

- vault size increases (CCR No. 6, 10 and 23),
- Victaulic fittings (CCR No. 13),
- washdown pipe change (CCR No. 16),
- louver and door hardware change (CCR No. 19),
- conduits to the existing tank (CCR No. 20),
- stainless steel pump controller enclosure (CCR No. 22),
- changes resulting from Requests For Information up to and including RFI No. 73 for Yigo and RFI No. 22 for Astumbo.

Contract change requests after the date of the Contract Modification including this MOU may be considered to the extent allowed by the Contract Documents provided they are considered reasonable and justified in the opinion of GWA.

2. **Costs** GWA will carry the costs for extended Construction Management services through February 17, 2018 at the Astumbo Reservoir site. From February 18, 2018 to the date of Final Completion, costs for Construction Management services at the Astumbo site shall be borne by the Contractor.

   GWA will carry the costs for extended Construction Management services through July 31, 2018 at the Yigo No. 1 and 2 Reservoir sites. From July 31, 2018 to the date of Final Completion, costs for Construction Management services at the Yigo sites shall be borne by the Contractor.

   The additional Construction Management services shall be invoiced to GWA by GHD directly, on a time and material basis, and are estimated to be in the total amount of $8,000 to $9,500 per week per site for the Astumbo and Yigo sites. GWA and Contractor agree that the total Construction Management costs shall not exceed $9,500 per week per site, or $19,000 per week for both sites. On a monthly basis, GWA shall provide a copy of the GHD invoice to Contractor and GWA may deduct the applicable portion of the CM's invoice amount as a deductive change order under the Contract with Pernix.

   GWA's agreement to cover the additional costs for Construction Management services through February 17, 2018 (Astumbo) and July 31, 2018 (Yigo) in lieu of assessing liquidated damages is contingent upon Final Completion of all work no later than November 21, 2018. Any delay in the Final Completion dates beyond November 21, 2018 will be considered eligible for liquidated damages at $4,500 per day per reservoir per site at the discretion of GWA.

   In the event that GWA is assessed fines for not complying with the November 11, 2011 Order For Preliminary Relief of the Federal District Court of Guam in Civil Case No. 02-00035 with respect to completion of the Astumbo and Yigo No. 1 and No. 2 reservoirs, Contractor shall reimburse GWA for the full amount of such fines.

   Except as revised by this MOU and related Change Order No. 4, all other terms and conditions of the Contract as revised by Change Orders No. 1, 2 and 3, including the provisions for inclement weather in Paragraph 1.10 of Section 01311, shall continue to apply.

By signing this MOU, all parties are agreeing to the above conditions.

Abhyash Chand
Pernix Guam, Inc.
(Contractor)

Thomas Cruz, PE
Guam Waterworks Authority
(Owner)

Aaron Sutton, PE
Construction Manager, **GHD Inc.**

Bryan Ryley
Construction Manager, **GHD Inc.**

Cc: Brett Railey, GWA
Garrett Yeoh, GWA
Steve Greco, Pernix

EXHIBIT B

April 20, 2018

Mr. Tom Cruz , P.E.
Chief Engineer
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

RE: Change Proposal 04 (CP-4) for Construction Management Services for PW12-05 GWA Yigo and Astumbo Replacement Reservoirs, GWA Project W13-001-BND
Additional CM Services for Astumbo and Yigo No. 1 and 2 Reservoirs Construction Due to Construction Delay

Dear Mr. Cruz:

GHD is pleased to submit this proposal for an amendment to our Scope of Work and Fee for the above referenced project. This scope of work defines the construction management services that will be provided by GHD Inc. and their subconsultants for additional CM services due to construction delays of Astumbo and Yigo No. 1 and 2 Reservoirs. The additional scope for **CP-04** as discussed with GWA is detailed below. The original project scope will be charged on a time and material (T&M) basis per the fees in the table below.

SCOPE OF WORK

General: GHD shall provide additional Construction Management (CM) Services for the nine (8) month period of February 19, 2018 through October 15, 2018, with final completion and closeout services to November 21, 2018 for the Astumbo Reservoir and an additional four (4) month period, from July 30, 2018 to October 15, 2018, with final completion and closeout services to November 21, 2018 for the Yigo No. 1 and 2 Reservoirs. This is based on the construction schedule submitted by the Contractor for the month of December 2017. The original contract completion date for CM services was for twelve (12) months following the notice to proceed for the Contractor on December 5, 2016 with an extended month for closeout. This CP is in conjunction with a Memorandum of Understanding (MOU) dated March 16, 2018 and signed by GHD, Pernix and GWA. The October 15, 2018 substantial completion date and November 21, 2018 final completion date are agreed upon in the MOU.

The extended CM services included in this Change Proposal will be billed on a Time and Material basis. GHD's invoices will be paid by GWA directly, and the same amount will be deducted from Pernix's contract as agreed upon in the before mentioned MOU.

Details: The Scope of Work will provide an extension of the construction phase tasks detailed in our original Scope of Work that relate to the construction of Astumbo and Yigo No. 1 and 2 Reservoirs. No additional QA testing and survey service are included as they were covered in the original Scope of Work and Change Order No. 2.

Data and Assumptions:

a. These CM Services are being provided for the construction of improvements shown on the construction plans and included in the bid schedule that was awarded to Pernix at the Astumbo and Yigo No. 1 and 2 Reservoir sites. If additional improvements are added to the construction contract then fees for additional CM Services will be negotiated with GWA.

b. For the Astumbo Reservoir, it is understood that the intent is for GHD to provide eight (8) consecutive months (171 work days or 238 concurrent calendar days) of half-time Resident Engineer (RE)/Project Manager (PM) services and eight (8) consecutive months of full time onsite inspection. RE/PM services have been estimated at 20 hours per week and onsite inspector at 40 hours per week up to a maximum of $9,500 per week. Five and a half (5.5) additional consecutive weeks (27 work days or 37 concurrent calendar days) of reduced time will be provided for the final completion time period per the MOU. During final construction phase (after substantial completion) of construction, GHD will provide RE/PM services estimated at 10 hours per week and onsite inspector at 20 hours per week. This is based upon a standard 40 hour work week.

   For the Yigo No. 1 and 2 Reservoirs, it is understood that the intent is for GHD to provide two and a half (2.5) consecutive months (54 work days or 76 calendar days) of half-time Resident Engineer (RE)/Project Manager (PM) services and two and a half (2.5) consecutive months of full time onsite inspection. RE/PM services have been estimated at 20 hours per week up to a maximum of $9,500 per week. Five and a half (5.5) additional consecutive weeks (27 work days or 37 concurrent calendar days) of reduced time will be provided for the final completion time period per the MOU. During final construction phase (after substantial completion) of construction, GHD will provide RE/PM services estimated at 10 hours per week and onsite inspection at 20 hours per week. This is based upon a standard 40 hour work week.

c. GWA agrees to negotiate with GHD for change orders for additional construction phase services for substantial completion beyond October 15, 2018 and final completion beyond November 21, 2018 at either site due to construction delays, adverse weather delays, or any other reason not due to the negligent acts of GHD until final acceptance of the project is achieved.

Our time and material fees are summarized in the following Fee Schedule:

FEE SCHEDULE FOR ADDITIONAL CONSTRUCTION MANAGEMENT SERVICES FOR ASTUMBO AND YIGO NO. 1 AND 2 RESERVOIRS

TASKS	TOTALS
Original Contract Amount	$1,387,982
Contract Amount with CO #1	$1,422,905
Contract Amount with CO #2	$1,820,471

Contract Amount with CO#3	$1,849,840.30
CP-04 Astumbo Reservoir CM Services from Construction Delay	$335,377
CP-04 Yigo Reservoirs CM Services from Construction Delay	$123,254
SUBTOTAL COST	**$458,631**
GUAM GRT (at 5%)	$22,932
TOTAL CHANGE PROPOSAL COST	**$481,563**
AMENDED CONTRACT AMOUNT	**$2,331,403.30**

* Work which exceeds the scope of this proposal will be brought to your attention for review, approval and fee adjustment. Such extra services, will be performed on a time and materials basis (per our Fee Schedule in effect at the time services are performed), or for a mutually agreed upon lump sum fees. Work performed will be billed monthly based on estimated percent complete. Payment is due within 30 days of receipt and acceptance of the invoice. We stand ready to provide the professional services necessary to assist GWA in this endeavor.

Sincerely,

Aaron Sutton
Construction Manager

Reviewed by

Bryan Ryley
Construction Manager

Attachments: GHD Change Proposal Fees for Astumbo and Yigo sites dated 04/20/2018
Cc: file

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 30-FY2018
Relative to Approval of Construction Management Contract for the Asan-Adelup-Hagatna, Route 1 Sewerline Rehabilitation and Replacement Project with Duenas, Camacho & Associates, Inc.

What are the project's objectives and are they necessary and urgent?
The objective of this is to manage the construction of the sewerline work to be completed along Route 1 in the Asan and Hagatna area, on a time and materials basis. The work during construction could include pipe replacement, cured-in-place-pipe installation, and manhole repairs along approximately 4,500 linear feet of sewerline pipe. The area of gravity sewerline from Asan into Adelup has deteriorated and experienced a number of collapses in the past two years, and requires immediate attention.

Where is the project located?
This project is located in the villages of Asan and Hagatna, along Route 1, from the Asan "War in the Pacific" National Historic Park to the Agana Main Pump Station. Construction activities will be limited to the government easements of the sewer infrastructure elements.

How much will it cost?
The construction management services contract value relative to the construction of Bid Schedule B, includes construction management, inspection, and project coordination services during construction for the amount of Eight Hundred Seventy Thousand Six Hundred Ten Dollars and Forty-One Cents ($870,610.41), plus a ten percent (10%) contingency of Eighty-Seven Thousand Sixty-One Dollars and Four Cents ($87,061.04), for a total amount of Nine Hundred Fifty-Seven Thousand Six Hundred Seventy-One Dollars and Forty-Five Cents ($957,671.45). This contract amount will be based on a Time and Materials basis.

When will it be completed?
The construction contract length of this project is 650 calendar days after an NTP is issued to the construction contractor. The construction management services will be for the whole time of the construction project and is estimated to be completed in May 2020.

What is the funding source?
The funding for this project will be from USEPA Grant and, if necessary, GWA Bond Funds.

The RFP/BID responses (if applicable):
Eight (8) proposal were received and evaluated.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 30-FY2018

RELATIVE TO APPROVAL OF A CONSTRUCTION MANAGEMENT CONTRACT FOR THE ASAN-ADELUP-HAGATNA, ROUTE 1 SEWERLINE REHABILITATION AND REPLACEMENT PROJECT S15-002-EPA

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established, and existing under the laws of Guam; and

WHEREAS, GWA has received a grant from the United States Environmental Protection Agency ("USEPA") under the State Revolving Fund ("SRF") program to improve the sewer collection system, which included the gravity sewer line along Route 1, from the Asan "War in the Pacific" National Historical Park to the Agana Main Pump Station; and

WHEREAS, the segments of gravity sewer line indicated is deteriorating and has experienced collapses, bellies in the sewer line, offsets, and sections of missing or badly corroded pipe, and the intent of this project is to rehabilitate, repair or replace these sections; and

WHEREAS, GWA procured engineering design services through RFP-02-ENG-2015 that included general civil engineering, geotechnical engineering, and archeological investigation for wastewater collection system evaluation, analysis and detailed design; and

DRAFT

WHEREAS, the professional engineering design services have been completed by HDR Engineering, Inc. through contract, which was signed on December 10, 2015, and all rendered design documents have been accepted by GWA in May 2017; and

WHEREAS, GWA and USEPA agree that efforts to rehabilitate, repair or replace these sewer lines are necessary and the proceeding order to accomplish such task is through services that include construction management; and

WHEREAS, GWA has advertised the Request for Proposal (RFP-04-ENG-2017) dated March 30, 2017, soliciting statement of qualifications from experienced and qualified engineering firms to provide construction management services for the ASAN-ADELUP-HAGATNA, ROUTE 1 SEWERLINE REHABILITATION AND REPLACEMENT PROJECT; and

WHEREAS, RFP packages were downloaded by multiple interested parties, from which GWA received proposal submittal from eight (8) engineering firms before the RFP submittal deadline; and

WHEREAS, the GWA A-E Selection Committee reviewed and evaluated the eight (8) proposals (see EXHIBIT A-Evaluation Score) and generated a short list of the top three (3) firms with a recommendation to award a contract to the firm DUENAS, CAMACHO & ASSOCIATES, INC. ("DCA") and any successor at interest thereto (see EXHIBIT B- GM Determination); and

WHEREAS, GWA advertised the initial Invitation to Bid (IFB-06-ENG-2017) for the construction of this project on May 12, 2017, and received no responsive and responsible bidders; and

WHEREAS, GWA advertised a second time, with the Invitation to Re-Bid (IFB-11-ENG-2017) on October 31, 2017, and again received no responsive and responsible bidders; and

DRAFT

WHEREAS, Following the second attempt, GWA revised the bid documents and Bid Form to include two separate, independent Bid Schedules, Bid Schedule A and Bid Schedule B, with Bid Schedule A being primarily repairs by Cured-In-Place-Pipe installation, and Bid Schedule B being repairs entirely by Open Cut and Replacement; and

WHEREAS, GWA advertised the next Invitation to Re-Bid (IFB-05-ENG-2018) on May 4, 2018, with the two revised Bid Schedules; and

WHEREAS, Bid Schedule A will be opened first, and if bids should be opened and found to be responsive and responsible, the lowest responsive and responsible bid will be selected; and

WHEREAS, if no Contractors submit for Bid Schedule A, Bid Schedule B will then be opened, and the lowest responsive and responsible bid will be selected from Bid Schedule B; and

WHEREAS, DCA and GWA negotiated the price for the construction management services to be provided if either Bid Schedule A or Bid Schedule B is selected; and

WHEREAS, If Bid Schedule A is selected, the construction management services with DCA will be in the amount of Six Hundred Eighty-Three Thousand Nine Hundred Thirty-One Dollars and Thirty-Four Cents ($683,931.34) on a Time and Materials basis (See EXHIBIT C – Fee Proposal); and

WHEREAS, If Bid Schedule B is selected, the construction management services with DCA will be in the amount of Eight Hundred Seventy Thousand Six Hundred Ten Dollars and Forty-One Cents ($870,610.41) on a Time and Materials basis (See EXHIBIT C – Fee Proposal); and

WHEREAS, GWA Management seeks approval of the fee proposal for the Scope of Work relative to the construction Bid Schedule B, which includes construction management, inspection, and project coordination services during construction of Eight Hundred Seventy Thousand Six Hundred Ten Dollars and Forty-One Cents ($870,610.41), plus a ten percent

(10%) contingency of Eighty-Seven Thousand Sixty-One Dollars and Four Cents ($87,061.04), for a total amount of Nine Hundred Fifty-Seven Thousand Six Hundred Seventy-One Dollars and Forty-Five Cents ($957,671.45); and

WHEREAS, funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds applicable to the project; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by Duenas, Camacho & Associates, Inc. (DCA) are fair and reasonable.
3. The CCU finds that the terms of the conditions set by GWA relative to commencement of work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
4. The CCU hereby authorizes the management of GWA to enter into a contract with DCA in the amount of Eight Hundred Seventy Thousand Six Hundred Ten Dollars and Forty-One Cents ($870,610.41) (EXHIBIT C).
5. The CCU hereby further approves the total funding amount for this project of Eight Hundred Seventy Thousand Six Hundred Ten Dollars and Forty-One Cents ($870,610.41), plus a ten percent (10%) contingency of Eighty-Seven Thousand Sixty-One Dollars and Four Cents ($87,061.04), to bring the total authorized funding amount to a maximum of Nine Hundred Fifty-Seven Thousand Six Hundred Seventy-One Dollars and Forty-Five Cents ($957,671.45).

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

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DULY AND REGULARLY ADOPTED, this 22nd day of May 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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Exhibit A (1 of 2)

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building • 688 Route 15 • Mangilao, Guam 96913

May 19, 2017

To: Thomas F. Cruz, P.E., Chief Engineer

From: Gloria P. Bensan
Chairperson, Consultant Selection Board

Subject: RFP-04-ENG-2017
Construction Management Services for the Asan-Adelup-Hagatna, Route 1 Sewerline Rehabilitation and Replacement
GWA Project No. S15-002-EPA

The following information is intended to document the evaluation process undertaken for the referenced solicitation.

EVALUATION COMMITTEE MEMBERS	
Name	**Title**
Clinton Huntington II	Senior Engineer
Rylma Carino	Junior Engineer
Anthony Chargualaf	Operations Manager
George Watson	Brown & Caldwell, PMO

Consultant	Evaluation Score				Total	Rank
1. AmOrient	85	89	81	75	330	4
2. EMPSCO Engineering Consultants	62	90	86	86	324	5
3. LYON	80	85	80	70	315	7
4. E.M. Chen & Associates, Inc.	77	88	81	70	316	6
5. Duenas, Camacho & Associates	82	92	92	90	356	1
6. TG Engineers, PC	83	91	90	85	349	2
7. Coeval Design Partners	70	84	74	66	294	8
8. AECOM	75	89	86	89	339	3

Scores were evaluated based on sum of the individual scores. The recommendation of the evaluation committee is shown in the ranking above.

Please review and approve at your earliest convenience so that we may proceed with the notification letters.

Exhibit A (2 of 2)

GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

TO: Thomas F. Cruz, P.E., Chief Engineer

FROM: Gloria P. Bensan

SUBJECT: CM Selection

DATE: May 18, 2017

Per our discussion with the General Manager and Legal Counsel on May 15, 2017, the CM selection team reconvened on May 16, 2017 at 2:30 pm to discuss the merits of evaluation for each proposal submitted for the following projects:

1. Asan-Adelup-Hagatna, Route 1 Sewerline Rehabilitation and Replacement
2. Route 2 War in the Pacific National Park Sewerline Rehabilitation and Replacement

Each selection committee reviewed the RFP proposals and reevaluated them based on the predetermined set of criteria. Committee members obtained reasonable, rational and consistent basis for their scores in comparison to the evaluation criteria outlined in the solicitation documents and determined the final ranking of proposers as shown in the attached evaluation summary.

Exhibit B (1 of 1)

GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

To: Miguel C. Bordallo, P.E., General Manager

From: Thomas F. Cruz, P.E., Chief Engineer

Subject: RFP-04-ENG-2017
Construction Management Services for the Asan-Adelup-Hagatna, Route 1 Sewerline Rehabilitation and Replacement
GWA Project No. S15-002-EPA

Date: May 19, 2017

The Selection Committee has completed all necessary actions for selecting the most qualified consultant for the referenced solicitation. All proposals were reviewed and scored according to the conditions established in the solicitation. The evaluation summary sheet is attached for your information.

The committee recommends the following top three (3) firms in order of preference for the project:

1. Duenas, Camacho & Associates
2. TG Engineers, PC
3. AECOM

Concurred:

VINCENT E. GUERRERO
Supply Management Administrator

5/22/2017
Date

GENERAL MANAGER'S DETERMINATION

Consultant Firm Selected:

Duenas Camacho & Assoc.

Remarks:

MIGUEL C. BORDALLO, P.E.
General Manager

5.23.17
Date

Exhibit C (1 of 9)

Website: www.dcaguam.com
Email: dca@dcaguam.com

April 23, 2018

Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913

Attention: **Mr. Thomas F. Cruz, Chief Engineer, GWA / George Watson, Brown & Caldwell**

Subject: **GWA RFP-04-ENG--2017, Construction Management Services for Asan-Adelup-Hagatna Route 1 Sewerline Rehabilitation and Replacement, GWA Project No. S15-002-EPA**

Re: *Revised* Fee Proposal Related to Bid Schedules A and B

Hafa Adai:

Duenas, Camacho & Associates, Inc. is pleased to submit this *revised* fee proposal for **GWA RFP-04-ENG-2017, Construction Management Services for Asan-Adelup-Hagatna Route 1 Sewerline Rehabilitation and Replacement, GWA Project No. S15-002-EPA.** The revisions and updates include the following:

1. Fee estimates for:
   a. CM Services under Base Bid Schedule A – CIPP Rehabilitation of Existing Sewer Lines
      Revised Fee Estimate: $683.931.34 including a $10,000 Time & Material allowance for Material Testing
   b. ~~CM Services under Base Bid Schedule B – Cut and Cover Construction of New Sewer Lines~~
      ~~**Fee Estimate: $654,143.21 including a $20,000 Time & Material allowance for Material Testing**~~
      Revised estimate for Bid Schedule B attached.
2. 2018 (current) DCA Personnel Labor and OH Rates
3. A GRT Tax Rate of 5% (recently enacted into law)

Our revised fee estimates for construction management services for each Bid Schedule are supported by the following:

- Detailed Fee Breakdown showing an estimate of effort and expenses
- Exhibit A – Estimated expenses for DCA and CH2M submitted earlier (no change)
- Deletion of Secure Safe Solutions for video surveillance (as requested by GWA)

As indicated in our Proposal submitted in response to the subject RFP, DCA will retain CH2M (our CM Team CIPP Specialist) if a Construction Contract is awarded under Base Bid Schedule A – CIPP Rehabilitation of Existing Sewer Lines. Geo-Engineering & Testing Inc. will provide geotechnical consultation and quality assurance material testing services. The cost for video surveillance by Secure Safe Solutions has been removed at GWA's request.

The estimate of CM effort is based on the following assumptions:

1. The Scope of CM services and tasks as described in the RFP;
2. Base Bid Schedules A and B as described in the amended Bid Form provided to DCA;
3. Project construction duration of 450 calendar days;
4. Full-time resident inspection and supplementary inspection (25% of resident inspection effort for CM Services under Base Bid Schedule A and 50% of resident inspection effort for CM services under Base Bid Schedule B);

Exhibit C (2 of 9)

April 23, 2018

5. Part-time CM support by our CIPP Specialist from CH2M under Base Bid Schedule A;
6. Current (2018) DCA personnel rates (loaded).

We look forward to negotiations.

Sincerely,

||Signed
JOHN P. DUENAS, P.E.
President
Enclosures

ENGINEERING * PLANNING * SURVEYING * ENVIRONMENTAL SERVICES * GEOGRAPHIC INFORMATION SYSTEM * CONSTRUCTION MANAGEMENT
GUAM P.O. Box 8900, Tamuning, Guam 96931/238 E. Marine Corps Drive, Suite 201 Diamond Plaza, Hagatña, GU 96910-5194 Tel: (671) 477-7991/Fax: (671) 479-6315
SAIPAN PMB 164, Box 10000, Saipan, MP 96950/Island Commercial Ctr., Chalan Pale Arnold Road, Gualo Rai, Saipan 96950 / Tel: (670) 234-9017/Fax: (670) 234-3842

Exhibit C (3 of 9)

Consolidated Fee Estimate

EXHIBIT A - BASE BID SCHEDULE A
DCA EXPENSES

DUENAS, CAMACHO & ASSOCIATES, INC MANAGEMENT SERVICES FOR ASAN-ADELUP-HAGATNA ROUTE 1 SEWERLINE REHABILITATION AND CONSTRUCTION					
	CM Inspection Related Expenses	Unit	Quan	Rate	Cost
1	**Miscellaneous Expenses**	LS			$ 500.00
2	Mileage (Inspection)	mi	3200	$ 0.33	$ 1,161.60
3	Mileage (miscellaneous)	mi	2800	$ 0.33	$ 1,016.40
4	Pictures, video, etc.	LS			$ 250.00
5	Reproduction	LS			$ 3,500.00
6	Communications, etc.	LS			$ 500.00
7	Miscellaneous Survey Materials	LS			$ 250.00
		GRT	5.25%		**$ 376.85**
		DCA EXPENSES			**$ 7,554.85**

CH2M EXPENSES

CH2M MANAGEMENT SERVICES FOR ASAN-ADELUP-HAGATNA ROUTE 1 SEWERLINE REPLACEMENT, GWA PROJECT NO. S15-002-EPA CONSTRUCTION REHABILITATION AND					
		Unit	Quan	Rate	Cost
1	Travel expenses for CH2M CIPPSpec Site Visit		3	$ 3,000.00	$ 9,000.00
2	Lodging (28 days total)	Days	28	$ 215.00	$ 6,622.00
3	Meals	Days	28	$ 75.00	$ 2,310.00
4	Rental Car	Days	28	$ 50.00	$ 1,540.00
5	Misc. Expenses	Trip	3	$ 100.00	$ 330.00
	Subtotal				**$ 19,802.00**
		CH2M EXPENSES			**$ 19,802.00**

Exhibit C (4 of 9)

GUAM WATERWORKS AUTHORITY
CONSTRUCTION MANAGEMENT SERVICES FOR ASAN-ADELUP-HAGATNA ROUTE 1 SEWERLINE REHABILITATION AND REPLACEMENT,
GWA PROJECT NO. S15-002-EPA

SCHEDULE A - BASE BID: CIPP

Task No.	Task Description		Duenas, Camacho & Associates, Inc. (DCA)													CH2M				Geo-Engineering & Testing (CM Support)			
			Principal In Charge	Construction Manager	Project Construction Manager	Resident Construction Inspector	Construction Inspector (Supplementary)	Civil Engineer (CM Support)	Staff Engineer (CM Support)	Engineering Technician (CM Support)	Chief Environmental Scientist	3-Man Crew	Chief Surveyor	Administrative Assistant (CM Support)	TOTALS	CH2M Project Manager (CM Support)	CH2M Project Engineer (CIPP QC Specialist)	CH2M Administrative Manager (CM Support)	TOTALS	Principal Geotechnical Engineer	Staff Engineer	Administrative Assistant	TOTAL
			PRIN	CM	PCM	RCI	CI	CE	SED	ET	CES	3MSC	RLS	ADM									
	Loaded 2018 DCA Labor Rates >>>>>	No.	$ 182.58	$ 160.30	$ 111.04	$ 72.93	$ 72.93	$ 136.21	$ 87.66	$ 58.00	$ 100.61	$ 166.06	$ 121.33	$ 71.90		$ 308.58	$ 189.90	$ 141.18		$ 170.00	$ 90.00	$ 60.00	
		Units																					
	CM SERVICES - TOTALS		90	285	1299	2571	707	138	156	100	76	144	48	403	$ 546,042.01	38	377	38	$88,548.25	22	0	0	$ 3,740.00
	CONSTRUCTION MANAGEMENT SERVICES																						
A.	**General Construction Management Tasks**		90	261	501	0	0	4	0	0	64	0	4	265	$ 140,368.74	16.5	165	16.5	$38,754.54	0	0	0	$ -
1	Project Controls		90	257	0	0	0	4	0	0	4	0	4	129	$68,329.09	12	120	12	$28,185.12				$0.00
2	Project Correspondence		0	0	129	0	0	0	0	0	0	0	0	0	$14,276.57	0	0	0	$0.00				$0.00
a.	*Daily Construction Log*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Weekly Status Report*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Material Testing Forms*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
d.	*Photo Log*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
3	Review & Processing of Payment Requests	15	0	0	60	0	0	0	0	0	0	0	0	15	$7,740.90	1.5	15	1.5	$3,523.14				$0.00
4	Conduct Project Meetings		0	0	60	0	0	0	0	0	0	0	0	8	$7,237.60	0	0	0	$0.00				$0.00
5	Pre-construction Conference		0	4	4	0	0	0	0	0	0	0	0	1	$1,157.26	0	0	0	$0.00				$0.00
6	Progress Meetings		0	0	30	0	0	0	0	0	0	0	0	15	$4,409.70	0	0	0	$0.00				$0.00
7	Other Meetings		0	0	10	0	0	0	0	0	0	0	0	8	$1,685.60	1	10	1	$2,348.76				$0.00
8	Project Coordination		0	0	10	0	0	0	0	0	0	0	0	30	$3,267.40	0	0	0	$0.00				$0.00
9	Requests for Information		0	0	30	0	0	0	0	0	0	0	0	0	$3,331.20	1.2	12	1.2	$2,818.51				$0.00
10	General Compliance Monitoring	15	0	0	30	0	0	0	0	0	30	0	0	15	$7,428.00	0	0	0	$0.00				$0.00
a.	*Regulations & Laws*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Labor Laws*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Licensure*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
d.	*Permits*		0	0	0	0	0	0	0	0	30	0	0	0	$3,018.30	0	0	0	$0.00				$0.00
e.	*Insurance*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
11	Claims and Disputes		0	0	60	0	0	0	0	0	0	0	0	8	$7,237.60	0	0	0	$0.00				$0.00
a.	*Records*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Claims*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
12	Stop Work Orders		0	0	15	0	0	0	0	0	0	0	0	6	$2,097.00	0	0	0	$0.00				$0.00
13	Schedule Monitoring		0	0	45	0	0	0	0	0	0	0	0	15	$6,075.30	0	0	0	$0.00				$0.00
14	Acceptance		0	0	18	0	0	0	0	0	0	0	0	15	$3,077.22	0.8	8	0.8	$1,879.01				$0.00
B.	**Interpretations and Clarifications**		0	2	15	0	0	0	0	0	12	0	0	12	$4,056.32	0	0	0	$0.00	8			$1,360.00
C.	**Shop Drawings/Submittals (Review and Coordination)**	60	0	4	120	0	0	60	120	60	0	0	0	60	**$40,451.80**	2	20	2	**$4,697.52**				**$0.00**
D.	**Substitutes (Evaluation and Coordination)**		0	4	30	0	0	0	0	0	0	0	0	0	**$3,972.40**	0.4	4	0.4	**$939.50**				**$0.00**
E.	**Inspections & Tests**		0	0	446	2571	643	32	0	0	0	0	0	60	$ 292,582.69	3.2	32	3.2	7516.032	8	0	0	1360
1	Resident Inspections		0	0	386	0	0	0	0	0	0	0	0	0	$42,829.71	0	0	0	$0.00	8			$1,360.00
a.	*Resident Inspector*		0	0	0	2571	643	0	0	0	0	0	0	0	$234,417.86	0	0	0	$0.00				$0.00
b.	*Special Inspections*		0	0	0	0	0	32	0	0	0	0	0	0	$4,358.72	3.2	32	3.2	$7,516.03				$0.00
2	Testing		0	0	60	0	0	0	0	0	0	0	0	60	$10,976.40	0	0	0	$0.00				$0.00
F.	**Change Management**	4	0	0	80	0	0	24	0	0	0	0	0	0	$ 12,152.24	0.8	8	0.8	$ 1,879.01	2	0	0	$ 340.00
1	Change Order Review		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0.2	2	0.2	$469.75	2			$340.00
2	Design Change		0	0	8	0	0	4	0	0	0	0	0	0	$1,433.16	0.2	2	0.2	$469.75				$0.00
3	Design Change/Verification Request		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0.2	2	0.2	$469.75				$0.00
4	Negotiation with Contractor		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0	0	0	$0.00				$0.00
5	Change Order Documents		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0.2	2	0.2	$469.75				$0.00
6	Estabish Change Order Pricing Bases		0	0	8	0	0	4	0	0	0	0	0	0	$1,433.16	0	0	0	$0.00				$0.00
G.	**Construction Survey Services**	12	0	0	12	0	0	0	0	0	0	144	44	0	**$30,583.64**	0	0	0	**$0.00**				**$0.00**
H.	**Disputes (Handling and Resolution)**		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00	4			$680.00
I.	**Contractor Completion Documents**		0	0	64	0	48	14	32	36	0	0	0	0	$ 17,407.26	2.2	22	2.2	$ 5,167.27	0	0	0	$ -
1	Substantial Completion		0	0	8	0	0	0	0	0	0	0	0	0	$888.32	0.8	8	0.8	$1,879.01				$0.00
2	Project Records		0	0	8	0	0	0	8	24	0	0	0	0	$2,981.60	0	0	0	$0.00				$0.00
3	Punch List Development		0	0	8	0	24	4	4	0	0	0	0	0	$3,534.12	0.8	8	0.8	$1,879.01				$0.00
4	Closing Inspections		0	0	16	0	8	4	4	0	0	0	0	0	$3,255.56	0.4	4	0.4	$939.50				$0.00
a.	*Agency Acceptance Inspections*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Pre-Final Inspection*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Final Inspection*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
5	Final Report		0	0	16	0	8	2	0	0	0	0	0	0	$2,632.50	0.2	2	0.2	$469.75				$0.00
6	Record Drawings		0	0	8	0	8	4	16	12	0	0	0	0	$4,115.16	0	0	0	$0.00				$0.00
J.	**Commissioning and Startup**		0	4	8	0	0	0	0	0	0	0	0	0	**$1,529.52**	0	0	0	**$0.00**				**$0.00**
K.	**Training**		0	4	12	0	16	4	4	4	0	0	0	6	**$4,699.44**	12	120	12	**$28,185.12**				**$0.00**
L.	**Warranties**		0	4	8	0	0	0	0	0	0	0	0	0	**$1,529.52**	0.6	6	0.6	**$1,409.26**				**$0.00**
M.	**Spare Parts**		0	2	4	0	0	0	0	0	0	0	0	0	**$764.76**	0	0	0	**$0.00**				**$0.00**

Exhibit C (5 of 9)

Task No.	Task Description	Principal In Charge	Construction Manager	Project Construction Manager	Resident Construction Inspector	Construction Inspector (Supplementary)	Civil Engineer (CM Support)	Staff Engineer (CM Support)	Engineering Technician (CM Support)	Chief Environmental Scientist	3-Man Crew	Chief Surveyor	Administrative Assistant (CM Support)	TOTALS	CH2M Project Manager (CM Support)	CH2M Project Engineer (CIPP QC Specialist)	CH2M Administrative Manager (CM Support)	TOTALS	Principal Geotechnical Engineer	Staff Engineer	Administrative Assistant	TOTAL
		PRIN	CM	PCM	RCI	CI	CE	SED	ET	CES	3MSC	RLS	ADM									
	Loaded 2018 DCA Labor Rates >>>>>	No.	$ 182.58	$ 160.30	$ 111.04	$ 72.93	$ 72.93	$ 136.21	$ 87.66	$ 58.00	$ 100.61	$ 166.06	$ 121.33	$ 71.90		$ 308.58	$ 189.90	$ 141.18		$ 170.00	$ 90.00	$ 60.00	
	Subconsultants	Expenses	Services		Totals		Reference	**ADDITIONAL TIME & MATERIAL COSTS**														
1	CH2M	$ 19,802.00	$ 88,548.25		$ 108,350.25		Exhibit A															
2	GeoEngineering & Testing, Inc. (Consultation)		$ 3,740.00		$ 3,740.00			Item No.	Category of Cost			Estimated Cost										
3	Secure Safe Solutions (months|cost/month)	13	$ -		$ -		Exhibit B															
		Exhibit B, Op 3						1	QA Material Testing			$ 10,000.00										
	Subtotal - Subconsultants	$ 19,815.00	$ 92,288.25		$ 112,090.25																	
	Coordination & Handling @	2.0%	$ 1,845.77		$ 2,241.81																	
	Subtotal - Subconsultants + DCA Handling		$ 94,134.02		$ 114,332.06																	

COST SUMMARY			
DCA LABOR		$	546,042.01
DCA EXPENSES	Exhibit A	$	7,554.85
DCA	**Subtotal**	**$**	**553,596.85**
SUBCONSULTANTS	CH2M	$	108,350.25
	GeoEngineering & Testing	$	3,740.00
	Secure Safe Solutions	$	-
	Subtotal	$	112,090.25
	DCA Handling 2%	$	2,241.81
	GRT 5.25%	$	6,002.43
SUBTOTAL		**$**	**673,931.34**
QA Testing Time & Material (Estimated)		*$*	*10,000.00*

Website: www.dcaguam.com
Email: dca@dcaguam.com

Exhibit C (6 of 9)

April 23, 2018

Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913

Attention: **Mr. Thomas F. Cruz, Chief Engineer, GWA / George Watson, Brown & Caldwell**

Subject: **GWA RFP-04-ENG--2017, Construction Management Services for Asan-Adelup-Hagatna Route 1 Sewerline Rehabilitation and Replacement, GWA Project No. S15-002-EPA**

Re: *Revised* Fee Proposal Related to Bid Schedule B

Hafa Adai:

Duenas, Camacho & Associates, Inc. is pleased to submit this *revised* fee proposal for **GWA RFP-04-ENG-2017, Construction Management Services for Asan-Adelup-Hagatna Route 1 Sewerline Rehabilitation and Replacement, GWA Project No. S15-002-EPA.** The revisions address the following changes:

1. Fee estimate for CM Services under Base Bid Schedule B – Cut and Cover Construction of New Sewer Lines based on the projected Construction Contract Completion Period from 450 to **650** calendar days. **Fee Estimate: $870,610.41 including a $20,000 Time & Material allowance for Material Testing**
2. 2018 (current) DCA Personnel Labor and OH Rates
3. A GRT Tax Rate of 5% (recently enacted into law)

Our revised fee estimate for construction management services for Base Bid Schedule B is supported by the attached detailed fee breakdown showing an estimate of effort and expenses for a construction period of 650 calendar days and the *deletion* of Secure Safe Solutions for video surveillance (as requested by GWA). Geo-Engineering & Testing Inc. will provide geotechnical consultation and quality assurance material testing services.

The estimate of CM effort is based on the following assumptions for Base Bid Schedule B:

1. The Scope of CM services and tasks as described in the RFP;
2. Base Bid Schedule B as described in the amended Bid Form provided to DCA;
3. Revised projected construction duration of from 450 to 650 calendar days;
4. Full-time resident inspection and supplementary inspection of 50% of the resident inspection effort;
5. Current (2018) DCA personnel rates (loaded).

We look forward to negotiations.

Sincerely,

||Signed
JOHN P. DUENAS, P.E.
President

Enclosures

Consolidated Fee Estimate

Exhibit C(7 of 9)

EXHIBIT A - BASE BID SCHEDULE B

DCA EXPENSES

DUENAS, CAMACHO & ASSOCIATES, INC CONSTRUCTION MANAGEMENT SERVICES FOR ASAN-ADELUP-HAGATNA ROUTE 1 SEWERLINE					
	CM Inspection Related Expenses	Unit	Quan	Rate	Cost
1	**Miscellaneous Expenses**	LS			$ 500.00
2	Mileage (Inspection)	mi	4650	$ 0.33	$ 1,687.95
3	Mileage (miscellaneous)	mi	3150	$ 0.33	$ 1,143.45
4	Pictures, video, etc.	LS			$ 250.00
5	Reproduction	LS			$ 3,500.00
6	Communications, etc.	LS			$ 500.00
7	Miscellaneous Survey Materials	LS			$ 500.00
		GRT	5.25%		**$ 424.27**
		DCA EXPENSES			**$ 8,505.67**

CH2M EXPENSES

CH2M CONSTRUCTION MANAGEMENT SERVICES FOR ASAN-ADELUP-HAGATNA ROUTE 1 SEWERLINE REHABILITATION AND REPLACEMENT, GWA PROJECT NO. S15-002-EPA					
		Unit	Quan	Rate	Cost
1	Travel expenses for CH2M CIPPSpec Site Visit		0	$ 3,000.00	$ -
2	Lodging (28 days total)	Days	0	$ 215.00	$ -
3	Meals	Days	0	$ 75.00	$ -
4	Rental Car	Days	0	$ 50.00	$ -
5	Misc. Expenses	Trip	0	$ 100.00	$ -
	Subtotal				**$ -**
		CH2M EXPENSES			**$ -**

Exhibit C (8 of 9)

Task No.	Task Description		Principal In Charge	Construction Manager	Project Construction Manager	Resident Construction Inspector	Construction Inspector (Supplementary)	Civil Engineer (CM Support)	Staff Engineer (CM Support)	Engineering Technician (CM Support)	Chief Environmental Scientist	3-Man Crew	Chief Surveyor	Administrative Assistant (CM Support)	TOTALS	CH2M Project Manager (CM Support)	CH2M Project Engineer (CIPP QC Specialist)	CH2M Administrative Manager (CM Support)	TOTALS	Principal Geotechnical Engineer	Staff Engineer	Administrative Assistant	TOTAL
			PRIN	CM	PCM	RCI	CI	CE	SED	ET	CES	3MSC	RLS	ADM									
	Loaded 2018 DCA Labor Rates >>>>>	No.	$ 182.58	$ 160.30	$ 111.04	$ 72.93	$ 72.93	$ 136.21	$ 87.66	$ 58.05	$ 100.61	$ 166.06	$ 121.33	$ 71.90		$ 308.58	$ 189.90	$ 141.18		$ 170.00	$ 90.00	$ 60.00	
	CONSTRUCTION MANAGEMENT SERVICES																						
A.	General Construction Management Tasks		130	375	718	0	0	4	0	0	91	0	4	322	$ 196,894.98	0	0	0	$ -	4	0	0	$ 680.00
1	Project Controls		130	371	0	0	0	4	0	0	4	0	4	186	$98,060.86	0	0	0	$0.00	4			$680.00
2	Project Correspondence		0	0	186	0	0	0	0	0	0	0	0	0	$20,621.71	0	0	0	$0.00				$0.00
a.	*Daily Construction Log*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Weekly Status Report*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Material Testing Forms*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
d.	*Photo Log*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
3	Review & Processing of Payment Requests	22	0	0	87	0	0	0	0	0	0	0	0	15	$10,701.97	0	0	0	$0.00				$0.00
4	Conduct Project Meetings		0	0	87	0	0	0	0	0	0	0	0	8	$10,198.67	0	0	0	$0.00				$0.00
5	Pre-construction Conference		0	4	4	0	0	0	0	0	0	0	0	1	$1,157.26	0	0	0	$0.00				$0.00
6	Progress Meetings		0	0	43	0	0	0	0	0	0	0	0	15	$5,890.23	0	0	0	$0.00				$0.00
7	Other Meetings		0	0	14	0	0	0	0	0	0	0	0	8	$2,179.11	0	0	0	$0.00				$0.00
8	Project Coordination		0	0	14	0	0	0	0	0	0	0	0	30	$3,760.91	0	0	0	$0.00				$0.00
9	Requests for Information		0	0	43	0	0	0	0	0	0	0	0	0	$4,811.73	0	0	0	$0.00				$0.00
10	General Compliance Monitoring	22	0	0	43	0	0	0	0	0	43	0	0	15	$10,250.00	0	0	0	$0.00				$0.00
a.	*Regulations & Laws*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Labor Laws*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Licensure*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
d.	*Permits*		0	0	0	0	0	0	0	0	43	0	0	0	$4,359.77	0	0	0	$0.00				$0.00
e.	*Insurance*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
11	Claims and Disputes		0	0	87	0	0	0	0	0	0	0	0	8	$10,198.67	0	0	0	$0.00				$0.00
a.	*Records*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Claims*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
12	Stop Work Orders		0	0	22	0	0	0	0	0	0	0	0	6	$2,837.27	0	0	0	$0.00				$0.00
13	Schedule Monitoring		0	0	65	0	0	0	0	0	0	0	0	15	$8,296.10	0	0	0	$0.00				$0.00
14	Acceptance		0	0	22	0	0	0	0	0	0	0	0	15	$3,570.73	0	0	0	$0.00				$0.00
B.	Interpretations and Clarifications		0	2	22	0	0	0	0	0	12	0	0	12	$4,796.59	0	0	0	$0.00	8			$1,360.00
C.	Shop Drawings/Submittals (Review and Coordination)	60	0	4	120	0	0	60	120	60	0	0	0	60	$40,451.80	0	0	0	$0.00				$0.00
D.	Substitutes (Evaluation and Coordination)		0	4	43	0	0	0	0	0	0	0	0	0	$5,452.93	0	0	0	$0.00				$0.00
E.	Inspections & Tests		0	0	617	3714	1857	32	0	0	0	0	0	60	$ 483,524.55	0	0	0	0	24	0	0	4080
1	Resident Inspections		0	0	557	0	0	0	0	0	0	0	0	0	$61,865.14	0	0	0	$0.00	24			$4,080.00
a.	*Resident Inspector*		0	0	0	3714	1857	0	0	0	0	0	0	0	$406,324.29	0	0	0	$0.00				$0.00
b.	*Special Inspections*		0	0	0	0	0	32	0	0	0	0	0	0	$4,358.72	0	0	0	$0.00				$0.00
2	Testing		0	0	60	0	0	0	0	0	0	0	0	60	$10,976.40	0	0	0	$0.00				$0.00
F.	Change Management	4	0	0	80	0	0	24	0	0	0	0	0	0	$ 12,152.24	0	0	0	$ -	8	0	0	$ 1,360.00
1	Change Order Review		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0	0	0	$0.00	8			$1,360.00
2	Design Change		0	0	8	0	0	4	0	0	0	0	0	0	$1,433.16	0	0	0	$0.00				$0.00
3	Design Change/Verification Request		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0	0	0	$0.00				$0.00
4	Negotiation with Contractor		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0	0	0	$0.00				$0.00
5	Change Order Documents		0	0	16	0	0	4	0	0	0	0	0	0	$2,321.48	0	0	0	$0.00				$0.00
6	Establish Change Order Pricing Bases		0	0	8	0	0	4	0	0	0	0	0	0	$1,433.16	0	0	0	$0.00				$0.00
G.	Construction Survey Services	30	0	0	30	0	0	0	0	0	0	360	45	0	$68,572.65	0	0	0	$0.00				$0.00
H.	Disputes (Handling and Resolution)		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00	6			$1,020.00
I.	Contractor Completion Documents		0	0	64	0	48	14	32	36	0	0	0	0	$ 17,407.26	0	0	0	$ -	0	0	0	$ -
1	Substantial Completion		0	0	8	0	0	0	0	0	0	0	0	0	$888.32	0	0	0	$0.00				$0.00
2	Project Records		0	0	8	0	0	0	8	24	0	0	0	0	$2,981.60	0	0	0	$0.00				$0.00
3	Punch List Development		0	0	8	0	24	4	4	0	0	0	0	0	$3,534.12	0	0	0	$0.00				$0.00
4	Closing Inspections		0	0	16	0	8	4	4	0	0	0	0	0	$3,255.56	0	0	0	$0.00				$0.00
a.	*Agency Acceptance Inspections*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
b.	*Pre-Final Inspection*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
c.	*Final Inspection*		0	0	0	0	0	0	0	0	0	0	0	0	$0.00	0	0	0	$0.00				$0.00
5	Final Report		0	0	16	0	8	2	0	0	0	0	0	0	$2,632.50	0	0	0	$0.00				$0.00
6	Record Drawings		0	0	8	0	8	4	16	12	0	0	0	0	$4,115.16	0	0	0	$0.00				$0.00
J.	Commissioning and Startup		0	4	8	0	0	0	0	0	0	0	0	0	$1,529.52	0	0	0	$0.00				$0.00
K.	Training		0	4	12	0	16	4	4	4	0	0	0	6	$4,699.44	0	0	0	$0.00				$0.00
L.	Warranties		0	4	8	0	0	0	0	0	0	0	0	0	$1,529.52	0	0	0	$0.00				$0.00
M.	Spare Parts		0	2	4	0	0	0	0	0	0	0	0	0	$764.76	0	0	0	$0.00				$0.00

	Subconsultants	Expenses	Services	Totals	Reference
1	CH2M	$ -	$ -	$ -	Exhibit A
2	GeoEngineering & Testing, Inc. (Consultation)		$ 8,500.00	$ 8,500.00	

ADDITIONAL TIME & MATERIAL COSTS			
Item No.	Category of Cost		Estimated Cost

COST SUMMARY	
DCA LABOR	$ 832,979.66

Exhibit C (9 of 9)

Task No.	Task Description	Principal In Charge	Construction Manager	Project Construction Manager	Resident Construction Inspector	Construction Inspector (Supplementary)	Civil Engineer (CM Support)	Staff Engineer (CM Support)	Engineering Technician (CM Support)	Chief Environmental Scientist	3-Man Crew	Chief Surveyor	Administrative Assistant (CM Support)	TOTALS	CH2M Project Manager (CM Support)	CH2M Project Engineer (CIPP QC Specialist)	CH2M Administrative Manager (CM Support)	TOTALS	Principal Geotechnical Engineer	Staff Engineer	Administrative Assistant	TOTAL
		PRIN	CM	PCM	RCI	CI	CE	SED	ET	CES	3MSC	RLS	ADM									
	Loaded 2018 DCA Labor Rates >>>>>	No.	$ 182.58	$ 160.30	$ 111.04	$ 72.93	$ 72.93	$ 136.21	$ 87.66	$ 58.86	$ 100.61	$ 166.66	$ 121.33	$ 71.90		$ 308.58	$ 189.90	$ 141.18		$ 170.00	$ 90.00	$ 60.00	
3	Secure Safe Solutions (months|cost/month)	13		$ -		$ -	Exhibit B															
		Exhibit B, Op 3						1	QA Material Testing			$	20,000.00									
	Subtotal - Subconsultants	$ 13.00	$	8,500.00	$	8,500.00																
	Coordination & Handling @	2.0%	$	170.00	$	170.00																
	Subtotal - Subconsultants + DCA Handling		$	8,670.00	$	8,670.00																

DCA EXPENSES		
	DCA	
SUBCONSULTANTS		

Exhibit A		$ 8,505.67
Subtotal		$ 841,485.33
CH2M		$ -
GeoEngineering & Testing		$ 8,500.00
Secure Safe Solutions		$ -
Subtotal		$ 8,500.00
DCA Handling	2%	$ 170.00
GRT	5.25%	$ 455.18
SUBTOTAL		**$ 850,610.51**
QA Testing Time & Material (Estimated)		*$ 20,000.00*
TOTAL		**$ 870,610.51**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 31-FY2018
Relative to Approval of the 2013 and 2016 Bond Proceeds Reallocation

What is the project's objective and is it necessary and urgent?
The objective of the 2013 bond reallocation is to move "unobligated" funds to CIP line item WW 11-02 Baza Gardens STP Replacement as a means of expending the fund as expeditiously as possible to comply with the 2013 Bond indenture requirements. WW 11-02 is the CP line item that funds the Baza Gardens Wastewater Conveyance projects which has a completion deadline in FY2018.

The objective of the 2016 bond reallocation is to "focus" a little less than half of the current unobligated funds to the Court Order tank projects as a means of maintaining the design and construction activities to meet as best as possible the December 2020 deadline. An important note is that this reallocation of the 2016 bond funds will not completely address the required design and construction needs of the court order but will help GWA accelerate some of the projects which will help management the remaining tank projects to come. The planned 2019 bond issuance is still required to help complete the court order deadline requirements of December 2020.

Where is the project located?
The result of the bond reallocation will affect the fund certification for the Baza Gardens Wastewater Conveyance Projects, as well as help accelerate the procurement of the next set of tank improvements.

How much will it cost?
Six Million Five Hundred Forty-Two Thousand Six Dollars ($6,542,006.00) that are still identified as "Unobligated Project Cost" from the 2013 Bond proceeds will be reallocated to WW 11-03 Baza Gardens STP Replacement. Thirty Million Four Hundred Eighty Thousand One Hundred Fifty-Five Dollars ($30,480,155.00) that are also identified as "Unobligated Project Cost" from the 2016 Bond proceeds will be reallocated into PW 09-11 Water System Reservoirs 2005 Improvements.

When will it be completed?
The 2013 bond funds that will be reallocated is expected to be expended by end of FY2018. The 2016 bond funds that will be reallocated is expected to be encumbered by end of FY2019.

What is the funding source?
N/A

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 31–FY2018

RELATIVE TO APPROVAL OF THE 2013 AND 2016 BOND PROCEEDS REALLOCATION

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA management is working towards expending all unobligated 2013 Bond proceeds as expeditiously as possible to comply with bond indenture requirements; and

WHEREAS, GWA currently also has critical Court Order ("CO") projects related to Paragraph 29 of the 2011 Court Order which required GWA to "Repair, Rehabilitate, Replace or Relocate" all the water reservoir throughout the island and as such management seeks to focus efforts and funding to CIP line items directly linked to the tank projects; and

WHEREAS, GWA accounting has reconciled the 2013 Bond Capital Improvements Project (CIP) accounts and have determined there are several CIP line items with a remaining balance under the "Unobligated Project Cost" in the amount of Six Million Five Hundred Forty-Two Thousand Six Dollars ($6,542,006.00) (See EXHIBIT A); and

WHEREAS, GWA accounting has further reconciled the 2016 Bond Capital Improvements Project (CIP) accounts and have determined there are several CIP line items with a remaining balance under the "Unobligated Project Cost" in the amount of Fifty-Eight Million

Eight Hundred Sixteen Thousand Four Hundred Thirty-Six Dollars ($56,816,436.00) respectively (See EXHIBIT B); and

WHEREAS, GWA management seeks to reallocate Six Million Five Hundred Forty-One Thousand Nine Hundred Ninety-One Dollars ($6,541,991.00) of 2013 Bond proceeds from various CIP line items to the on-going Baza Gardens Wastewater Sewer Conveyance project (See EXHIBIT C); and

WHEREAS, GWA management further seeks to use Thirty-Two Million Eight Hundred Seventy-Eight Thousand Two Hundred Seventy-Two Dollars ($32,878,272.00) of the 2016 bond funds still identified in the un-obligated project cost to various on-going CIP projects such as the new production wells at AG-10, AG-12 and Y-8, production well meter replacement Phase I, fire hydrant replacement program, Bayside Sewer Pump Station rehabilitation, just to name a few, with the remainder of the unobligated funds being "focus" to the Court Order tank projects as a means of maintaining the design and construction activities to meet as best as possible the December 2020 deadline; and

WHEREAS, critical to this 2013 and 2016 bond reallocation is the necessary sequence of actions that need to be taken wherein the reallocation of the 2013 bond proceeds to the WW 11-03 Baza Gardens STP Replacement for which the Baza Gardens Wastewater Conveyance projects have funds certified under, will allow for funding to this project, other than the 2013 bond, to be "reimbursed" which in this case involves some funding from 2016 bond proceeds under the same CIP line item; and

WHEREAS, due to the 2016 bond funds that are certified to the Baza Gardens Wastewater Conveyance project being "reclassified" as a result of the completion of the 2013 bond reallocation, the 2016 bond expenditures under WW 11-03 Baza Gardens STP Replacement to increase by Six Million Seven Hundred Thirty-Six Thousand Three Hundred Seventy-Nine Dollars ($6,736,379.00) (See EXHIBIT D) which would then also be included in the funds "focused" to the tank projects; and

WHEREAS, the cumulative actions of the 2013 and 2016 bond reallocation as well as the application of Thirty-Two Million Eight Hundred Seventy-Eight Thousand Two Hundred Seventy-Two Dollars ($32,878,272.00) as noted above, will result in Thirty Million Four Hundred Eighty Thousand One Hundred Fifty-Five Dollars ($30,480,155.00) (See EXHIBIT E) being able to be directed into PW 09-11 Water System Reservoirs 2005 Improvements to ensure available funding is on hand to complete procurement of the next set of tanks requiring rehabilitation, repair or relocation; and

WHEREAS, the 2016 bond reallocation as it relates to addressing the tank projects is not intended to fully fund the needs for the remaining tanks as there will still need for funding from the next planned bond borrowing in 2019 however GWA management finds that this bond reallocation is necessary to focus efforts to continue to comply as best as possible with the Court Order project deadlines; and

WHEREAS, GWA management seeks CCU approval to petition the PUC to reallocate the 2013 and 2016 bond as indicated above; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The CCU finds the justification for the 2013 and 2016 bond reallocation to be acceptable.
2. The CCU approves Six Million Five Hundred Forty-One Thousand Nine Hundred Ninety-One Dollars ($6,541,991.00) of 2013 Bond proceeds from various CIP line items to be reallocated to WW 11-03 to fund the on-going Baza Gardens Wastewater Sewer Conveyance projects.
3. The CCU further approves Thirty Million Four Hundred Eighty Thousand One Hundred Fifty-Five Dollars ($30,480,155.00) of 2016 bond proceeds from various CIP line items to be reallocated to PW 09-11 Water System Reservoirs 2005 Improvements.
4. The CCU further approves GWA management seek PUC approval for the reallocation of 2013 and 2016 bond funds as indicated herein.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 22nd day of May 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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DRAFT

Exhibit A (1 of 1)

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of April 30,2018

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	77,400	22,600	$ 100,000	$ -	$ 22,600
"A" Series Well Transmission Line	$ 400,000	$ 400,000	369,846	(0)	$ 369,846	$ 30,154.27	$ 30,154
Water Booster Pump Station	$ 6,000,000	$ 1,861,000	1,656,428	23,536	$ 1,679,964	$ 181,035.67	$ 204,572
Meter Replacement Program		$ 999,000	996,532	-	$ 996,532	$ 2,467.67	$ 2,468
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0.49	$ 62,041
Leak Detection	$ 100,000	$ 20,000	16,916	-	$ 16,916	$ 3,083.75	$ 3,084
Potable Water System Planning	$ 800,000	$ 624,000	603,390	20,610	$ 624,000	$ -	$ 20,610
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	189,930	10,071	$ 200,000	$ (0.27)	$ 10,070
New Deep Wells at Down Hard	$ 2,000,000	$ 810,000			$ -	$ 810,000.00	$ 810,000
Master Meters	$ 4,000,000	$ 784,000	531,188	180,872	$ 712,060	$ 71,939.97	$ 252,812
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	578,858	280,943	$ 859,801	$ 122,199.03	$ 403,142
Water Wells	$ 4,200,000	$ 4,200,000	2,284,474	745,555	$ 3,030,029	$ 1,169,971.27	$ 1,915,527
Water Distribution System	$ 12,000,000	$ 11,151,000	6,718,325	4,194,128	$ 10,912,453	$ 238,547.16	$ 4,432,675
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	336,036	1,074	$ 337,110	$ 93,890.09	$ 94,964
Mechanical/Electrical Equipment	$ 430,000	$ 430,000	328,686	98,112	$ 426,798	$ 3,201.64	$ 101,314
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	10,857,217	3,020,784	$ 13,878,000	$ (0.30)	$ 3,020,783
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000.00	$ 90,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	241,603	1,088,684	$ 1,330,287	$ 1,949,712.96	$ 3,038,397
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	5,398,068	6,206,932	$ 11,605,000	$ 0.30	$ 6,206,932
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
		$ -					
Wastewater System Planning	$ 800,000	$ 651,000	550,968	99,933	$ 650,900	$ 99.53	$ 100,032
Lift Station Upgrades	$ 5,000,000	$ 946,000	562,785	363	$ 563,149	$ 382,851.50	$ 383,215
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 780,000	555,848	104,465	$ 660,314	$ 119,686.50	$ 224,152
Baza Gardens STP Replacement		$ 3,114,883	969,594	2,145,275	$ 3,114,869	$ 14.50	$ 2,145,290
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	341,226	30,473	$ 371,699	$ 101,301.00	$ 131,774
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	43,563,454	23,636,545	$ 67,200,000	$ 0.17	$ 23,636,546
Agana WWTP Interim Measures		$ 673,000	611,247	61,753	$ 673,000	$ (0.19)	$ 61,753
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
		$ -					
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	91,348	8,513	$ 99,861	$ 520,139.31	$ 528,652
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,480,769	19,230	$ 1,500,000	$ 0.32	$ 19,231
Electrical Upgrade - Water Booster	$ 325,000	$ 2,000			$ -	$ 2,000.00	$ 2,000
Electrical Upgrade -Water Booster	$ 350,000	$ 200,000	977	-	$ 977	$ 199,023.00	$ 199,023
Electrical Upgrade - Other Water	$ 250,000	$ 150,000	60,700	-	$ 60,700	$ 89,300.00	$ 89,300
SCADA Improvements – Phase 3	$ 1,850,000	$ 923,000	427,949	294,410	$ 722,359	$ 200,641.00	$ 495,051
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
		$ -					$ -
Laboratory Modernization	$ 1,500,000	$ 1,173,000	1,163,037	8,428	$ 1,171,465	$ 1,535.20	$ 9,963
Land Survey	$ 2,000,000	$ 2,000	1,038	15	$ 1,053	$ 947.50	$ 963
General Plant Improvements / Water	$ 2,000,000	$ 2,600,000	1,265,043	1,176,695	$ 2,441,737	$ 158,262.64	$ 1,334,957
Allowance for COI							$ 275,005
Interest Earned							$ 602,317
Total Construction Fund (2013 Series Revenue Bond)	**$ 139,325,000**	**$ 139,325,000**	**$ 89,217,649**	**$ 43,565,345**	**$ 132,782,994**	**$ 6,542,006**	**$ 50,984,672**

PUC's Docket 14-04 dated February 25, 2014

ts are new projects added thru the reallocation of PUC's Docket 15-02

Exhibit B (1 of 1)

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of April 30,2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000	27,351	122,648.72	$ 150,000	$ 4,351,000	$ 4,473,649
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	257,062	619,231.76	$ 876,294	$ 1,399,706	$ 2,018,938
Deep Well Rehabilitation	$ 250,000	$ 250,000		110,013.00	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000	151,539	-	$ 151,539	$ 3,464,461	$ 3,464,461
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		668,355.20	$ 668,355	$ 472,645	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	1,923,069	12,345,718.67	$ 14,268,787	$ 14,081,213	$ 26,426,931
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		500,000.00	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000		1,822,132.80	$ 1,822,133	$ 72,867	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		7,300,000.00	$ 7,300,000	$ 109,830	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
						$ -	
Wastewater System Planning	$ 349,000	$ 349,000	118,587	194,396.23	$ 312,983	$ 36,017	$ 230,413
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	193,511	321,243.53	$ 514,755	$ 1,889,245	$ 2,210,489
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000		555,478.00	$ 555,478	$ 2,364,522	$ 2,920,000
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	10,030,819	19,174,963.36	$ 29,205,782	$ 194,388	$ 19,369,351
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	225,258	26,846.67	$ 252,105	$ 274,895	$ 301,742
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	902,989	216,710.57	$ 1,119,700	$ 1,880,300	$ 2,097,011
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	2,803,249	17,799,005.51	$ 20,602,254	$ 197,746	$ 17,996,751
						$ -	
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	18,000	599,496.51	$ 617,497	$ 559,503	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
						$ -	
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	130,370	1,130,153.37	$ 1,260,524	$ 737,476	$ 1,867,630
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	647,695	896,065.14	$ 1,543,760	$ 1,225,703	$ 2,121,768
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned							$ 1,007,853
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 18,800,568**	**$ 64,402,459**	**$ 83,203,027**	**$ 56,816,436**	**$ 122,226,749**

Exhibit C (1 of 1)

2013 Bond Reallocation			
CIP No.	Name	Additional Funds	Reduction Funds
PW 05-05	"A" Series Well Transmission Line		$ 30,154
PW 05-06	Water Booster Pump Station		$ 181,036
PW 05-07	Meter Replacement Program		$ 2,468
PW 05-09	Leak Detection		$ 3,084
PW 05-14	New Deep Wells at Down Hard		$ 810,000
PW 05-16	Master Meters		$ 71,940
PW 09-01	Ugum Water Treatment Plant Intake		$ 122,199
PW 09-02	Water Wells		$ 1,169,971
PW 09-03	Water Distribution System		$ 238,547
PW 09-04	Pressure Zone Realignment /		$ 93,890
PW 09-08	Mechanical/Electrical Equipment		$ 3,201
PW 11-02	Ugum Water Treatment Plant Reservoir		$ 90,000
PW 12-04	Agana Heights & Chaot Tanks		$ 1,949,713
WW 05-04	Wastewater System Planning		$ 99
WW 09-01	Lift Station Upgrades		$ 382,852
WW 09-06	Wastewater Collection System Repl/Rehab		$ 119,687
WW 11-03	Baza Gardens STP Replacement	$ 6,541,991	
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP		$ 101,301
EE 09-01	Wastewater Pump Station Electrical Upgrade		$ 520,139
EE 09-03	Electrical Upgrade - Water Booster		$ 2,000
EE 09-04	Electrical Upgrade -Water Booster		$ 199,023
EE 09-05	Electrical Upgrade - Other Water		$ 89,300
EE 09-08	SCADA Improvements – Phase 3		$ 200,641
MC 05-01	Laboratory Modernization		$ 1,535
MC 05-02	Land Survey		$ 948
MC 09-01	General Plant Improvements / Water		$ 158,263
		$ 6,541,991	$ 6,541,991

14.5

$ 6,542,006

Exhibit D (1 of 1)

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of April 30,2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000	27,351	122,648.72	$ 150,000	$ 4,351,000	$ 4,473,649
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	257,062	619,231.76	$ 876,294	$ 1,399,706	$ 2,018,938
Deep Well Rehabilitation	$ 250,000	$ 250,000		110,013.00	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000	151,539	-	$ 151,539	$ 3,464,461	$ 3,464,461
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		668,355.20	$ 668,355	$ 472,645	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	1,923,069	12,345,718.67	$ 14,268,787	$ 14,081,213	$ 26,426,931
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		500,000.00	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000		1,822,132.80	$ 1,822,133	$ 72,867	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		7,300,000.00	$ 7,300,000	$ 109,830	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
						$ -	
Wastewater System Planning	$ 349,000	$ 349,000	118,587	194,396.23	$ 312,983	$ 36,017	$ 230,413
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	193,511	321,243.53	$ 514,755	$ 1,889,245	$ 2,210,489
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000		555,478.00	$ 555,478	$ 2,364,522	$ 2,920,000
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	3,488,813	19,174,963.36	$ 22,663,776	$ 6,736,394	$ 25,911,357
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	225,258	26,846.67	$ 252,105	$ 274,895	$ 301,742
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	902,989	216,710.57	$ 1,119,700	$ 1,880,300	$ 2,097,011
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	2,803,249	17,799,005.51	$ 20,602,254	$ 197,746	$ 17,996,751
						$ -	
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	18,000	599,496.51	$ 617,497	$ 559,503	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
						$ -	
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	130,370	1,130,153.37	$ 1,260,524	$ 737,476	$ 1,867,630
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	647,695	896,065.14	$ 1,543,760	$ 1,225,703	$ 2,121,768
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned							$ 1,007,853
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 12,258,562**	**$ 64,402,459**	**$ 76,661,021**	**$ 63,358,442**	**$ 128,768,755**

2016 Bond Reallocation			
CIP No.	Name	Additional Funds	Reduction Funds
PW 05-06	Water Booster Pump Station		$ 4,139,000
PW 05-07	Meter Replacement Program		$ 3,101,000
PW 05-08	Barrigada Tank Repair/Replacement		$ 1,013,000
PW 05-09	Leak Detection		$ 1,080,000
PW 05-10	Potable Water System Planning		$ 1,399,706
PW 05-16	Master Meters		$ 1,464,461
PW 09-01	Ugum Water Treatment Plant Intake		$ 18,000
PW 09-03	Water Distribution System		$ 49,000
PW 09-08	Mechanical/Electrical Equipment		$ 100,000
PW 09-11	Water System Reservoirs 2005 Improvements	$ 30,480,170.00	
PW 12-01	Water Audit Program & Water Loss Control Plan		$ 450,000
PW 12-05	Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 72,867
PW 12-06	Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 109,830
PW 14-01	Fire Hydrant Replacement Program		$ 800,000
WW 05-04	Wastewater System Planning		$ 36,017
WW 09-01	Lift Station Upgrades		$ 689,245
WW 09-06	Wastewater Collection System Repl/Rehab		$ 1,864,522
WW 11-03	Baza Gardens STP Replacement		$ 6,736,394
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP		$ 274,895
WW 11-08	Agat/Santa Rita STP Replacement		$ 997,669
WW 12-03	Agana WWTP Interim Measures		$ 827,000
EE 09-01	Wastewater Pump Station Electrical Upgrade		$ 100,000
EE 09-02	Electrical Upgrade - Water Wells		$ 650,000
EE 09-03	Electrical Upgrade - Water Booster		$ 323,000
EE 09-08	SCADA Improvements – Phase 3		$ 99,503
EE 09-09	SCADA Improvements – Phase 4		$ 2,121,882
MC 05-02	Land Survey		$ 737,476
MC 09-01	General Plant Improvements / Water		$ 1,225,703
		$ 30,480,170	$ 30,480,170

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 32-FY2018
Relative to Approval of a Contract for Design and Construction of the GWA Interceptor Sewer Refurbishment Project, Northern District, GWA Project No. S-18-003-OEA, (OEA Grant OCON 676-16-01)

What is the project's objective and is it necessary and urgent?
The objective of the Interceptor Sewer Refurbishment project is to maintain wastewater collection service to Andersen Air Force Base, provide service to the military forces being relocated to Guam, and to mitigate impacts to groundwater resources. The sewer refurbishment project is necessary to protect the groundwater aquifer by improving the wastewater collection system to ensure that the relocation of military assets to Guam do not adversely affect the civilian infrastructure or resources. The installation is urgent to meet the scheduled military relocation.

Where is the location?
The interceptor sewer is located near the entrance to Andersen AFB at the north gate and runs generally west along Route 9 and south along Route 3 and terminates at the Northern District Wastewater Treatment Plant. The sewer comprises approximately 8.4 miles of 18-inch to 42-inch diameter pipe.

How much will it cost?
GWA Management seeks CCU approval for the proposed bid price of Twenty-Two Million Eight Hundred Ninety-Seven Thousand Eight Hundred Eight Dollars ($22,897,808.00) plus a ten percent (10%) contingency of Two Million Two Hundred Eighty-Nine Thousand Seven Hundred Eighty Dollars and Eighty Cents ($2,289,780.80) to bring the total authorized funding amount requested to Twenty-Five Million One Hundred Eighty-Seven Thousand Five Hundred Eighty-Eight Dollars and Eighty Cents ($25,187,588.80)

When will it be completed?
The anticipated completion of the construction activities by the contractor is October 2020, however this is dependent on weather conditions.

What is the funding source?
Funding for the Interceptor Sewer Refurbishment project is from the General Assistance Grant for water and wastewater improvements in support of the relocation of U.S. Marines and their dependents to Guam OEA Grant No. OCON676-16-01, dated August 26, 2016, for $30,600,000.

The RFP/BID responses (if applicable):
- 13 firms registered for and picked up the bidding documents
- 3 firms submitted bids
- Core Tech-Hawaiian Dredging, LLC is recommended as the lowest priced, responsive and responsible bidder.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 32–FY2018

RELATIVE TO APPROVAL OF CONTRACT FOR DESIGN AND CONSTRUCTION OF THE GWA INTERCEPTOR SEWER REFURBISHMENT PROJECT, NORTHERN DISTRICT, GWA PROJECT NO. S18-003-OEA (OEA GRANT OCO N676-16-01)

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the U.S. Department of Defense, Office of Economic Adjustment awarded to GWA a General Assistance Grant (OCON676-16-01) for community investment August 26, 2016 for $30,600,000, of which funding for the interceptor sewer refurbishment is included; and

WHEREAS, the General Assistance Grant is to be used for water and wastewater improvements in support of the relocation of U.S. Marines and their dependents to Guam; and

WHEREAS, the report "Final Guam Water and Wastewater Assessment Report in Support of the Economic Adjustment Committee Implementation Plan," (NAVFAC, Department of the Navy, February 2015) has recommended the refurbishment of GWA's Interceptor Sewer from the Andersen Air Force Base (AAFB) gate on Rt. 9 to the Northern District Wastewater Treatment Plant; and

WHEREAS, the refurbishment is necessary to prevent sewer collapses and the resultant loss of wastewater sewer services to proposed Marine Corps housing at AAFB and cantonment at Finegayan; and

WHEREAS, GWA has advertised an Invitation for Bid IFB-03-ENG-2018 dated January 23, 2018, soliciting bid proposals from experienced, responsible, and responsive bidders to design and construct refurbishments to the interceptor sewer through a multi-step bid; and

WHEREAS, the Pre-Bid Conference was attended by thirteen (13) interested firms and thirteen (13) firms picked up the appropriate documents on flash drive, from which GWA received bid submittals from three (3) firms before the bid submittal deadline (See EXHIBIT A – Abstract of Bids); and

WHEREAS, Step 1 of the multi-step bid was conducted by GWA where firms presented their qualifications and a technical offer on March 15, 2018; and

WHEREAS, GWA Engineering evaluated the proposals and technical offers and issued a Qualified Bidders List on March 19, 2018 qualifying all three (3) firms that submitted technical offers and requested them to submit price proposals by April 26, 2018 as Step 2 of the multi-step bid; and

WHEREAS, GWA Engineering and the Program Manager (PM/CM) analyzed all bid price proposals received and determined that Core Tech-Hawaiian Dredging, LLC, who submitted the lowest bid as being the responsive and responsible bidder and met all the bid requirements set forth by GWA (See EXHIBIT B – Recommendation Memorandum); and

WHEREAS, GWA Management finds the Core Tech-Hawaiian Dredging, LLC bid proposal of Twenty-Two Million Eight Hundred Ninety-Seven Thousand Eight Hundred Eight Dollars ($22,897,808.00) to be acceptable (See EXHIBIT C – Bid Proposal); and

WHEREAS, GWA Management is seeking approval to enter into contract with Core Tech-Hawaiian Dredging, LLC for IFB-03-ENG-2018 in the amount Twenty-Two Million Eight Hundred Ninety-Seven Thousand Eight Hundred Eight Dollars ($22,897,808.00), and

WHEREAS, GWA Management further seeks CCU approval of a ten percent (10%) contingency of Two Million Two Hundred Eighty-Nine Thousand Seven Hundred Eighty Dollars

and Eighty Cents (2,289,780.80) to bring the total authorized funding to Twenty-Five Million One Hundred Eighty-Seven Thousand Five Hundred Eighty-Eight Dollars and Eighty Cents ($25,187,588.80); and

WHEREAS, the funding source for the project will be from the General Assistance Grant (OCON676-16-01); and

WHEREAS, GWA management intends to inform the Public Utilities Commission of the project and contract amount in accordance to the PUC Contract Review Protocol given the funding source is a federal grant; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by Core Tech-Hawaiian Dredging, LLC are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept the bid from Core Tech-Hawaiian Dredging, LLC attached hereto as EXHIBIT C, and which is also incorporated into this Resolution in its entirety.
4. The CCU hereby authorizes the management of GWA to execute an Agreement with Core Tech-Hawaiian Dredging, LLC in the amount of. Twenty-Two Million Eight Hundred Ninety-Seven Thousand Eight Hundred Eight Dollars ($22,897,808.00)
5. The CCU hereby authorizes the funding total of Twenty-Two Million Eight Hundred Ninety-Seven Thousand Eight Hundred Eight Dollars ($22,897,808.00), along with a ten percent (10%) contingency of Two Million Two Hundred Eighty-Nine Thousand Seven Hundred Eighty Dollars and Eighty Cents (2,289,780.80), bringing the total requested funding amount to Twenty-Five Million One Hundred Eighty-Seven Thousand Five Hundred Eighty-Eight Dollars and Eighty Cents ($25,187,588.80).

6. The CCU hereby further approves the funding source for the project will be from the General Assistance Grant (OCON676-16-01).
7. The CCU authorizes GWA management to inform the PUC of the project and contract cost per the PUC Contract Review Protocol.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 22nd day of May 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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Exhibit A - Abstract of Bids (1 of 2)

Guam Waterworks Authority **Interceptor Sewer Refurbishment** **Bid Tab** **4/26/2018**

				Engineer's Estimate		Core Tech		Granite		Insituform	
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price
1	Mobilization, Insurance, Bonds, and Demobilization	LS	1			$ 2,254,477.84	$ 2,254,477.84	$ 2,100,000.00	$ 2,100,000.00	$ 2,079,800.00	$ 2,079,800.00
2	All work to provide survey and legal descriptions for preparation of permanent easements on Ancestral Lands	LS	1			$ 38,795.00	$ 38,795.00	$ 40,000.00	$ 40,000.00	$ 21,100.00	$ 21,100.00
3	All work required for field verification, design and Design Professional Services, including but not limited to design submittals, flow management plans, meetings, permitting assistance, coordination, and other services to provide full design support for the project	LS	1			$ 1,528,978.00	$ 1,528,978.00	$ 1,871,284.00	$ 1,871,284.00	$ 819,700.00	$ 819,700.00
4	Archaeological Survey and Report for complete project	LS	Allowance	$40,000	$40,000	$ 40,000.00	$40,000	$ 40,000.00	$40,000	$ 40,000.00	$40,000
5	Building Permit Fees	LS	Allowance	$85,000	$85,000	$ 85,000.00	$85,000	$ 85,000.00	$85,000	$ 85,000.00	$85,000
6	Plan Check Fee	LS	Allowance	$55,000	$55,000	$ 55,000.00	$55,000	$ 55,000.00	$55,000	$ 55,000.00	$55,000
7	Highway Encroachment Permit Fee	LS	Allowance	$20,000	$20,000	$ 20,000.00	$20,000	$ 20,000.00	$20,000	$ 20,000.00	$20,000
8	ProjectWise Construction Management Software	EA	Allowance	$25,000	$25,000	$ 25,000.00	$25,000	$ 25,000.00	$25,000	$ 25,000.00	$25,000
9	Furnish new 12-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000			$ 26.03	$ 130,147.00	$ 15.00	$ 75,000.00	$ 29.00	$ 145,000.00
10	Furnish new 18-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000			$ 50.42	$ 252,096.00	$ 30.00	$ 150,000.00	$ 47.00	$ 235,000.00
11	Sum of all work associated with unexploded ordinance survey and compliance on DoD	LS	1			$ 104,148.00	$ 104,148.00	$ 650,000.00	$ 650,000.00	$ 215,900.00	$ 215,900.00
12	Sum of all work associated with unexploded ordinance survey and compliance off DoD	LS	1			$ 6,719.00	$ 6,719.00	$ 60,000.00	$ 60,000.00	$ 54,700.00	$ 54,700.00
	Phase 1 Bid Items (Manhole 2492 to Manhole 6016)										
13	Sum of all work to make repair at 178 feet downstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 500.00	$ 500.00	$ 27,300.00	$ 27,300.00
14	Sum of all work to make repair at 109 feet upstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 50,000.00	$ 50,000.00	$ 21,900.00	$ 21,900.00
15	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	3,779			$ 333.64	$ 1,260,841.05	$ 400.00	$ 1,511,600.00	$ 522.00	$ 1,972,638.00
16	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	7,397			$ 403.42	$ 2,984,105.14	$ 470.00	$ 3,476,590.00	$ 501.00	$ 3,705,897.00
17	Sum of all work to Rehabilitate Manholes	EA	29			$ 11,902.52	$ 345,173.00	$ 25,000.00	$ 725,000.00	$ 5,800.00	$ 168,200.00
18	Furnish and Install New Manhole to replace MH 6018 with new 24-inch diameter PVC stub-out to accommodate Route 3 widening project, complete in	LS	1			$ 22,827.00	$ 22,827.00	$ 50,000.00	$ 50,000.00	$ 71,100.00	$ 71,100.00
19	Record Drawings	LS	1			$ 5,282.00	$ 5,282.00	$ 500.00	$ 500.00	$ 15,300.00	$ 15,300.00
	Phase 2 Bid Items (Manhole 6016 to Manhole 5916)										
20	Sum of all work to make repair at 6 feet downstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 500.00	$ 500.00	$ 27,300.00	$ 27,300.00
21	Sum of all work to make repair at 102 feet downstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 80,000.00	$ 80,000.00	$ 27,300.00	$ 27,300.00
22	Sum of all work to make repair at 220 feet downstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 500.00	$ 500.00	$ 27,300.00	$ 27,300.00
23	Sum of all work to make repair at 98 feet upstream of MH 5917	LS	1			$ 38,891.00	$ 38,891.00	$ 500.00	$ 500.00	$ 16,400.00	$ 16,400.00
24	Sum of all work to make repair at 202 feet upstream of MH	LS	1			$ 38,891.00	$ 38,891.00	$ 500.00	$ 500.00	$ 16,400.00	$ 16,400.00
25	Furnish and install 18-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	1,071			$ 268.49	$ 287,553.00	$ 340.00	$ 364,140.00	$ 870.00	$ 931,770.00
26	Furnish and install 24-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	2,157			$ 305.25	$ 658,425.98	$ 350.00	$ 754,950.00	$ 1,029.00	$ 2,219,553.00
27	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	13,763			$ 367.50	$ 5,057,869.47	$ 400.00	$ 5,505,200.00	$ 469.00	$ 6,454,847.00
28	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	3,199			$ 431.27	$ 1,379,620.89	$ 470.00	$ 1,503,530.00	$ 771.00	$ 2,466,429.00
29	Sum of all work to Rehabilitate Manholes	EA	70			$ 11,231.66	$ 786,216.00	$ 25,000.00	$ 1,750,000.00	$ 5,800.00	$ 406,000.00
30	Record Drawings	LS	1			$ 9,356.00	$ 9,356.00	$ 500.00	$ 500.00	$ 15,300.00	$ 15,300.00
	Phase 3A Bid Items (Manhole 2511 to Manhole 2492)										
31	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	3,077			$ 345.42	$ 1,062,858.88	$ 370.00	$ 1,138,490.00	$ 340.00	$ 1,046,180.00

Exhibit A - Abstract of Bids (2 of 2)

Guam Waterworks Authority **Interceptor Sewer Refurbishment** **Bid Tab** **4/26/2018**

				Engineer's Estimate		Core Tech		Granite		Insituform	
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price
32	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	3,932			$ 365.36	$ 1,436,584.90	$ 450.00	$ 1,769,400.00	$ 225.00	$ 884,700.00
33	Sum of all work to Rehabilitate Manholes	EA	23			$ 9,960.35	$ 229,088.00	$ 25,000.00	$ 575,000.00	$ 5,800.00	$ 133,400.00
34	Record Drawings	LS	1			$ 4,770.00	$ 4,770.00	$ 500.00	$ 500.00	$ 6,800.00	$ 6,800.00
	Phase 3B Bid Items (Northern District WWTP Influent to Manhole 2511)										
35	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	433			$ 287.11	$ 124,319.02	$ 370.00	$ 160,210.00	$ 860.00	$ 372,380.00
36	Furnish and install 42-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work	LF	5611			$ 403.88	$ 2,266,185.83	$ 390.00	$ 2,188,290.00	$ 326.00	$ 1,829,186.00
37	Sum of all work to Rehabilitate Manholes	EA	16			$ 9,960.25	$ 159,364.00	$ 25,000.00	$ 400,000.00	$ 5,800.00	$ 92,800.00
38	Record Drawings	LS	1			$ 4,770.00	$ 4,770.00	$ 500.00	$ 500.00	$ 5,800.00	$ 5,800.00
BASE BID Total of All Unit Price Bid Items					$ 35,534,558.00		**$ 22,897,808.00**		**$ 27,178,184.00**		**$ 26,758,380.00**
Bid Alternate A					$ 30,585,767.00		$ 20,989,504.00		$ 23,856,001.00		$ 25,222,549.00
Bid Alternate B					$ 24,471,257.00		$ 19,123,798.00		$ 21,246,013.00		$ 23,419,705.00

EXHIBIT B - Recommendation Memorandum

Memorandum

414 Soledad Avenue, Suite 602
Hagatna, Guam 96910

T: 671.300.4220

Prepared for:	Guam Waterworks Authority
Project Title:	GWA Interceptor Refurbishment Project, Northern District
Project No.:	S18-003-OEA (OEA Grant OCON 676-16-001)
Subject:	Bid Evaluation and Recommendation of Award
Date:	May 8, 2018
To:	Miguel C. Bordallo, P.E., General Manager, GWA
From:	William P. Gilman, P.E., Brown and Caldwell
Copy to:	Gloria Bensan, GWA

This memorandum summarizes the evaluation of Multi-Step Bids received for the GWA Interceptor Sewer Refurbishment Project, Northern District, GWA IFB-03-ENG-2018 and presents recommendation for award.

GWA issued an Invitation For Bid for Technical Proposals (Step 1) on January 23, 2018. The following Design-Build firms submitted Technical Proposals on February 13, 2018:

- Core Tech-Hawaiian Dredging, LLC
- Granite Construction Company Guam
- Insituform Technologies, LLC

Scoring and evaluation of Step 1 Technical Proposals was performed by a GWA Evaluation Committee that found all proposals acceptable and instructed all three firms to submit price proposals and required documentation for Step 2.

Price Proposals were received from all three firms on April 26, 2018 and publicly read aloud.

Brown and Caldwell tabulated the Bids, checked quantities and extensions for accuracy (see attached Bid Tabulation sheet) and finds Core Tech-Hawaiian Dredging, LLC the apparent low bidder with a Total Base Bid Price of $22,897.808.00. Further examination of Core Tech-Hawaiian Dredging, LLC's bid indicated no unbalance, where prices are out of proportion or unusually low. Consequently, Brown and Caldwell believes Core Tech-Hawaiian Dredging, LLC to be the lowest, responsive, responsible bidder and recommends issuance of a Notice of Award.

EXHIBIT C - Bid Proposal

Core Tech - Hawaiian Dredging, LLC

388 South Marine Corps Drive, Suite 400, Tamuning, Guam 96913 T 671 473 5000 • F 671 473 5500

April 26, 2018

Mr. Miguel C. Bordallo, P.E.
General Manager
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, GU 96913

Re: Multi-Step Bid for the Design and Construction of the GWA Interceptor Sewer Refurbishment Project Northern – Technical Proposal, IFB-03-ENG-2018, GWA Project No. S18-003-OEA

Hafa Adai Mr. Bordallo,

Core Tech-Hawaiian Dredging, LLC (CHL) is pleased to submit Step 2 Price Proposal to Guam Waterworks Authority in response to this Multi-Step Bid for the Design and Construction of the GWA Interceptor Sewer Refurbishment Project, Northern District, IFB-03-ENG-2018, GWA Project No. S18-003-OEA, offering our team expertise and commitment in completing the requirements of this solicitation.

The undersigned hereby acknowledges receipt of Addendum 1, 2, 3, 4, 5, 6 & 7.

As required by the IFB, the following is authorized to negotiate on the Offeror's behalf in connection with this solicitation as stated on page 10 of CHL's Operating Agreement provided in Step 1 and which is found in the last section entitled 'Forms/Documents Required by Bid/Addendum Not Referred to Above':

Name: Conchita D. Bathan
Title: Member of Management Committee
Phone: (671) 473-5000
Fax: (671) 473-5500
Email: chit.bathan@coretechintl.com

Core Tech-Hawaiian Dredging, LLC looks forward to delivering this project for the Guam Waterworks Authority. Should you have any questions regarding our Step 2 proposal, please contact the undersigned through email or telephone.

Sincerely,

Conchita D. Bathan
Member, Management Committee
and CTI Chief Executive Officer

Cc: Ho S. Eun, CTI Chairman
J. Majkut, HDCC President
Kenneth Rekdahl P.E., DCA Vice President

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed - in whole or in part - for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offerors as a result of - or in connection with - the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction is contained in this proposal.

Core Tech - Hawaiian Dredging, LLC

GUAM WATERWORKS AUTHORITY
Interceptor Sewer Refurbishment Project, Northern district
GWA Project No. IFB-03-ENG-2018, OEA Grant OCON676-16-01

PRICE PROPOSAL (Step 2)

Core Tech-Hawaiian Dredging, LLC
388 South Marine Corps Drive, STE 400
Tamuning, Guam 96913
Phone: (671) 473-5000
Fax: (671) 473-5500

"Core Tech-Hawaiian Dredging, LLC (CHL) agrees to abide by all terms, conditions, and provisions included in **Guam Waterworks Authority's Invitation for Project No. IFB-03-ENG-2018 GWA Interceptor Sewer Refurbishment Project** and agrees to furnish any or all items upon which prices are offered at the price set opposite each item."

The following person is authorized to sign this proposal and negotiate on CHL's behalf with the Government in connection with this proposal:

Ms. Conchita D. Bathan
Authorized Representative and
Member of Management Committee for
Core Tech-Hawaiian Dredging, LLC
E-mail: chit.bathan@coretechintl.com

4/26/2018

Conchita D. Bathan Date

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed - in whole or in part - for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of - or in connection with - the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction is contained in this proposal.



Core Tech - Hawaiian Dredging, LLC

Table of Contents

Procurement Checklist

Bid Bond

Bid Proposal and Bid Schedule (Bid Form - Section 00410)

Certification of Bidder Regarding Equal Employment Opportunity (Appendix H)

Special Instructions to Bidders – Estimated Quantities (Appendix K)

Forms/Documents Required by Bid/Addendum Not Referred to Above

CHL Operating Agreement (Page 10 – Evidence of Authority to Sign)
with Company Resolution for GWA IFB-03-ENG-2018

List of Proposed Subcontractors and Proposed Suppliers

Acknowledgement of Addenda

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:
Core Tech - Hawaiian Dredging, LLC
388 South Marine Corps Drive, Suite 400
Tamuning, Guam 96913

SURETY *(Name, and Address of Principal Place of Business)*:
Fidelity and Deposit Company of Maryland
1299 Zurich Way, 5th Floor
Schaumburg, IL 60196 - 1056

OWNER *(Name and Address)*:
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

BID
Bid Due Date: April 26, 2018
Description *(Project Name— Include Location)*
GWA Interceptor Sewer Refurbishment Project, Northern District
Bid No. IFB-03-ENG-2018
GWA Project No. S18-003-OEA

BOND
Bond Number: N/A
Date: April 4, 2018
Penal sum ***Fifteen Percent (15%) of Bid Amount*** $ ----------
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
Core Tech - Hawaiian Dredging, LLC (Seal)	Fidelity and Deposit Company of Maryland (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By:	By:
Signature	Signature (Attach Power of Attorney)
Conchita D. Bathan	Pamela A. Cruz
Print Name	Print Name
Member, Management Committee Chief Executive Officer	Attorney-In-Fact
Title	Title
Attest:	Attest:
Signature Johann Cruz	Signature

Countersigned by: Takagi & Associates, Inc.
Resident General Agent

Title Chief Financial Officer

Title

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **MICHAEL BOND, Vice President,** in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Hidenobu TAKAGI, Pamela A. CRUZ and Jo TAKAGI, all of Tumon, Guam, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings,** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND,** this 23rd day of November, A.D. 2016.

ATTEST:

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: _____

Secretary
Eric D. Barnes

_____

Vice President
Michael Bond

State of Maryland
County of Baltimore

On this 23rd day of November, A.D. 2016, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **MICHAEL BOND, Vice President, and ERIC D. BARNES, Secretary,** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

_____

Constance A. Dunn, Notary Public
My Commission Expires: July 9, 2019

POA-F 016-0012A

GOVERNMENT OF GUAM
DEPARTMENT OF REVENUE AND TAXATION
OFFICE OF THE BANKING AND INSURANCE COMMISSIONER

CERTIFICATE OF AUTHORITY

RENEWAL 239

Know All Men By These Presents That:

Name **FIDELITY AND DEPOSIT COMPANY OF MARYLAND**

Address 1400 AMERICAN LANE
SCHAUMBURG IL 60196 1056

Classes of Insurance Authorized

ACCIDENT & HEALTH
FIDELITY & SURETY
FIRE
MARINE
MISCELLANEOUS
MOTOR VEHICLE
PROP. DAMAGE & LIABILITY
WORKMENS COMP

Having complied with the Insurance Law of Guam, is hereby authorized to transact as an insurer, the above named Classes of Insurance in Guam from the 01 ***day of*** July , ***20*** 17 , ***to the*** 01 ***day of*** July , ***20*** 18 , ***unless authority is revoked for failure to comply with the law.***

General Agent(s):

TAKAGI & ASSOCIATES INC
CASSIDY'S ASSOCIATED INSURERS INC

In Witness Whereof, I have hereunto subscribed my name officially and have hereon impressed my Seal of Office at the City of Hagatña, Guam on this 06 ***day of*** June ***A.D. 20*** 17.

Artemio B Ilagan

ARTEMIO B. ILAGAN
Banking and Insurance Commissioner

Doc. No. 34GL-18-1883.*
88
GWA Work Session - May 15, 2018 - ISSUES FOR DECISION

SECTION 00410

BID FORM

GWA Interceptor Sewer Refurbishment

GWA IFB-03-ENG-2018

TABLE OF CONTENTS

Page

ARTICLE 1 – Bid Recipient 1
ARTICLE 2 – Bidder's Acknowledgements 1
ARTICLE 3 – Bidder's Representations 1
ARTICLE 4 – Bidder's Certification 2
ARTICLE 5 – Basis of Bid 3
ARTICLE 6 – Time of Completion 11
ARTICLE 7 – Attachments to this Bid 11
ARTICLE 8 – Defined Terms 11
ARTICLE 9 – Bid Submittal 11

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
GWA Engineering Division, Rm 202
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, GU 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 120 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum, Date
1	February 8, 2018
2	February 23, 2018
3	March 2, 2018

Refer to attachment for additional Addendum No./Date List.

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the e execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	Mobilization, Insurance, Bonds, and Demobilization	LS	1	2,254,477.84	$2,254,477.84
2	All work to provide survey and legal descriptions for preparation of permanent easements on Ancestral Lands.	LS	1	38,795.00	$38,795.00
3	All work required for field verification, design and Design Professional Services, including but not limited to design submittals, flow management plans, meetings, permitting assistance, coordination, and other services to provide full design support for the project	LS	1	1,528,978.00	$1,528,978.00
4	Archaeological Survey and Report for complete project	LS	Allowance	40,000.00	$40,000
5	Building Permit Fees	LS	Allowance	85,000.00	$85,000
6	Plan Check Fee	LS	Allowance	55,000.00	$55,000
7	Highway Encroachment Permit Fee	LS	Allowance	20,000.00	$20,000
8	ProjectWise Construction Management Software	EA	Allowance	25,000.00	$25,000
9	Furnish new 12-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	26.0294	$130,147.00
10	Furnish new 18-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	50.4192	$252,096.00
11	Sum of all work associated with unexploded ordinance survey and compliance on DoD property	LS	1	104,148.00	$104,148.00
12	Sum of all work associated with unexploded ordinance survey and compliance off DoD property	LS	1	6,719.00	$6,719.00
Phase 1 Bid Items (Manhole 2492 to Manhole 6016)					
13	Sum of all work to make repair at 178 feet downstream of MH 6036	LS	1	38,891.00	$38,891.00
14	Sum of all work to make repair at 109 feet upstream of MH 6017	LS	1	38,891.00	$38,891.00

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
15	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place,	LF	3,779	333.6441	$1,260,841.05
16	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	7,397	403.4210	$2,984,105.14
17	Sum of all work to Rehabilitate Manholes	EA	29	11,902.5172	$345,173.00
18	Furnish and Install New Manhole to replace MH 6018 with new 24- inch diameter PVC stub-out to accommodate Route 3 widening project, complete in place	LS	1	22,827.00	$22,827.00
19	Record Drawings	LS	1	5,282.00	$5,282.00
Phase 2 Bid Items (Manhole 6016 to Manhole 5916)					
20	Sum of all work to make repair at 6 feet downstream of MH 5926	LS	1	38,891.00	$38,891.00
21	Sum of all work to make repair at 102 feet downstream of MH 5929	LS	1	38,891.00	$38,891.00
22	Sum of all work to make repair at 220 feet downstream of MH 5432	LS	1	38,891.00	$38,891.00
23	Sum of all work to make repair at 98 feet upstream of MH 5917	LS	1	38,891.00	$38,891.00
24	Sum of all work to make repair at 202 feet upstream of MH 5917	LS	1	38,891.00	$38,891.00
25	Furnish and install 18-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	1,071	268.4902	$287,553.00
26	Furnish and install 24-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	2,157	305.2508	$658,425.98
27	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	13,763	367.4976	$5,057,869.47
28	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	3,199	431.2663	$1,379,620.89

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
29	Sum of all work to Rehabilitate Manholes	EA	70	11,231.6571	$786,216.00
30	Record Drawings	LS	1	9,356.00	$9,356.00
Phase 3A Bid Items (Manhole 2511 to Manhole 2492)					
31	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place.	LF	3,077	345.4205	$1,062,858.88
32	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place.	LF	3,932	365.3573	$1,436,584.90
33	Sum of all work to Rehabilitate Manholes	EA	23	9,960.3478	$229,088.00
34	Record Drawings	LS	1	4,770.00	$4,770.00
Phase 3B Bid Items (Northern District WWTP Influent to Manhole 2511)					
35	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	433	287.1109	$124,319.02
36	Furnish and install 42-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	5611	403.8827	$2,266,185.83
37	Sum of all work to Rehabilitate Manholes	EA	16	9,960.2500	$159,364.00
38	Record Drawings	LS	1	4,770.00	$4,770.00
BASE BID Total of All Unit Price Bid Items					$22,897,808.00

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Total of Unit Price Bids = Total Base Bid Price $ 22,897,808.00

5.02 **Bid Alternate A:** Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	Mobilization, Insurance, Bonds, and Demobilization	LS	1	2,168,766.00	$2,168,766.00
2	All work to provide survey and legal descriptions for preparation of permanent easements on Ancestral Lands.	LS	1	38,815.00	$38,815.00
3	All work required for field verification, design and Design Professional Services, including but not limited to design submittals, flow management plans, meetings, permitting assistance, coordination, and other services to provide full design support for the project	LS	1	1,500,472.00	$1,500,472.00
4	Archaeological Survey and Report for complete project	LS	Allowance	40,000.00	$40,000
5	Building Permit Fees	LS	Allowance	85,000.00	$85,000
6	Plan Check Fee	LS	Allowance	55,000.00	$55,000
7	Highway Encroachment Permit Fee	LS	Allowance	20,000.00	$20,000
8	ProjectWise Construction Management Software	EA	Allowance	25,000.00	$25,000
9	Furnish new 12-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	26.0428	$130,214.00
10	Furnish new 18-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	50.4452	$252,226.00
11	Sum of all work associated with unexploded ordinance survey and compliance on DoD property	LS	1	104,202.00	$104,202.00
12	Sum of all work associated with unexploded ordinance survey and compliance off DoD property	LS	1	6,723.00	$6,722.00
Phase 1 Bid Items (Manhole 2492 to Manhole 6016)					
13	Sum of all work to make repair at 178 feet downstream of MH 6036	LS	1	38,911.00	$38,911.00
14	Sum of all work to make repair at 109 feet upstream of MH 6017	LS	1	38,911.00	$38,911.00
15	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place,	LF	3,779	340.5279	$1,286,855.00
16	Furnish and install 36-inch diameter CIPP, including service	LF	7,397	411.6834	$3,045,222.00

	connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place				
17	Sum of all work to Rehabilitate Manholes	EA	29	12,110.0000	$351,190.00
18	Furnish and Install New Manhole to replace MH 6018 with new 24- inch diameter PVC stub-out to accommodate Route 3 widening project, complete in place	LS	1	22,839.00	$22,839.00
19	Record Drawings	LS	1	5,284.00	$5,284.00
Phase 2 Bid Items (Manhole 6016 to Manhole 5916)					
20	Sum of all work to make repair at 6 feet downstream of MH 5926	LS	1	38,911.00	$38,911.00
21	Sum of all work to make repair at 102 feet downstream of MH 5929	LS	1	38,911.00	$38,911.00
22	Sum of all work to make repair at 220 feet downstream of MH 5432	LS	1	38,911.00	$38,911.00
23	Sum of all work to make repair at 98 feet upstream of MH 5917	LS	1	38,911.00	$38,911.00
24	Sum of all work to make repair at 202 feet upstream of MH 5917	LS	1	38,911.00	$38,911.00
25	Furnish and install 18-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	1,071	276.6825	$296,327.00
26	Furnish and install 24-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	2,157	312.1196	$673,242.00
27	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	13,763	374.3991	$5,152,855.00
28	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	3,199	438.2010	$1,401,805.00
29	Sum of all work to Rehabilitate Manholes	EA	70	11,438.7857	$800,715.00
30	Record Drawings	LS	1	9,360.00	$9,360.00
Phase 3A Bid Items (Manhole 2511 to Manhole 2492)					
31	Perform cleaning and CCTV inspection of 30-inch diameter sewer	LF	3,077	91.1505	$280,470.00

32	Perfrom cleaning and CCTV inspection of 36-inch diameter sewer.	LF	3,932	101.5918	$399,459.00
Phase 3B Bid Items (Northern District WWTP Influent to Manhole 2511)					
33	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	433	287.6051	$124,533.00
34	Furnish and install 42-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	5611	404.5855	$2,270,129.00
35	Sum of all work to Rehabilitate Manholes	EA	16	10,353.0000	$165,648.00
36	Record Drawings	LS	1	$4,777.00	$4,777.00
Bid Alternate A: Total of All Unit Price Bid Items					$20,989,504.00

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Total of Unit Price Bids = Total Bid Alternate A Price $ 20,989,504.00

5.03 **Bid Alternate B:** Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	Mobilization, Insurance, Bonds, and Demobilization	LS	1	2,113,085.73	$2,113,085.73
2	All work to provide survey and legal descriptions for preparation of permanent easements on Ancestral Lands.	LS	1	38,837.00	$38,837.00
3	All work required for field verification, design and Design Professional Services, including but not limited to design submittals, flow management plans, meetings, permitting assistance, coordination, and other services to provide full design support for the project	LS	1	1,475,150.00	$1,475,150.00
4	Archaeological Survey and Report for complete project	LS	Allowance	40,000.00	$40,000
5	Building Permit Fees	LS	Allowance	85,000.00	$85,000
6	Plan Check Fee	LS	Allowance	55,000.00	$55,000
7	Highway Encroachment Permit Fee	LS	Allowance	20,000.00	$20,000
8	ProjectWise Construction Management Software	EA	Allowance	25,000.00	$25,000
9	Furnish new 12-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	26.0574	$130,287.00
10	Furnish new 18-inch diameter HDPE bypass piping, to be transferred to GWA at completion of project	LF	5,000	50.4734	$252,367.00
11	Sum of all work associated with unexploded ordinance survey and compliance on DoD property	LS	1	104,261.00	$104,261.00
12	Sum of all work associated with unexploded ordinance survey and compliance off DoD property	LS	1	6,727.00	$6,727.00
Phase 1 Bid Items (Manhole 2492 to Manhole 6016)					
13	Sum of all work to make repair at 178 feet downstream of MH 6036	LS	1	38,933.00	$38,933.00
14	Sum of all work to make repair at 109 feet upstream of MH 6017	LS	1	38,933.00	$38,933.00
15	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place,	LF	3,779	347.4345	$1,312,954.98
16	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow	LF	7,397	418.6303	$3,096,608.33

	management, traffic control, and all other necessary work, complete-in-place				
17	Sum of all work to Rehabilitate Manholes	EA	29	12,452.5172	$361,123.00
18	Furnish and Install New Manhole to replace MH 6018 with new 24- inch diameter PVC stub-out to accommodate Route 3 widening project, complete in place	LS	1	22,852.00	$22,852.00
19	Record Drawings	LS	1	5,286.00	$5,286.00
Phase 2 Bid Items (Manhole 6016 to Manhole 5916)					
20	Sum of all work to make repair at 6 feet downstream of MH 5926	LS	1	38,933.00	$38,933.00
21	Sum of all work to make repair at 102 feet downstream of MH 5929	LS	1	38,933.00	$38,933.00
22	Sum of all work to make repair at 220 feet downstream of MH 5432	LS	1	38,933.00	$38,933.00
23	Sum of all work to make repair at 98 feet upstream of MH 5917	LS	1	38,933.00	$38,933.00
24	Sum of all work to make repair at 202 feet upstream of MH 5917	LS	1	38,933.00	$38,933.00
25	Furnish and install 18-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	1,071	283.5537	$303,686.01
26	Furnish and install 24-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	2,157	319.0107	$688,106.01
27	Furnish and install 30-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	13,763	381.3249	$5,248,174.60
28	Furnish and install 36-inch diameter CIPP, including service connection reinstatement, flow management, traffic control, and all other necessary work, complete-in-place	LF	3,199	445.1629	$1,424,076.12
29	Sum of all work to Rehabilitate Manholes	EA	70	11,780.96	$824,667.00
30	Record Drawings	LS	1	9,364.00	$9,364.00
Phase 3A Bid Items (Manhole 2511 to Manhole 2492)					
31	Perform cleaning and CCTV inspection of 30-inch diameter sewer.	LF	3,077	91.33	$281,034.10
32	Perform cleaning and CCTV inspection of 36-inch diameter sewer.	LF	3,932	101.80	$400,261.09

Phase 3B Bid Items (Northern District WWTP Influent to Manhole 2511)					
33	Perform cleaning and CCTV inspection of 30-inch diameter sewer	LF	433	62.64	$27,121.00
34	Perform cleaning and CCTV inspection of 42-inch diameter sewer	LF	5611	89.15	$500,238.04
Bid Alternate B: Total of All Unit Price Bid Items					$19,123,798.00

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Total of Unit Price Bids = Total Bid Alternate B Price $ 19,123,798.00

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 14.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;
B. List of Proposed Subcontractors;
C. List of Proposed Suppliers;

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*
Core Tech-Hawaiian Dredging, LLC

By:
[Signature]

[Printed name] Conchita D. Bathan, Member of Management Committee

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature]

[Printed name] Johann Cruz

Title: Chief Financial Officer

Submittal Date: April 26, 2018

Address for giving notices:

388 South Marine Corps Drive, STE 400

Tamuning, GU 96913

Telephone Number: (671) 473-5000

Fax Number: (671) 473-5500

Contact Name and e-mail address: Conchita D. Bathan

chit.bathan@coretechintl.com

Bidder's License No.: License#CLB15-1204 (2018 Contractor's License)
(where applicable)

APPENDIX H

CERTIFICATION OF BIDDER REGARDING EQUAL EMPLOYMENT OPPORTUNITY

GENERAL

In accordance with Executive Order 11246 (30 F.R. 12319-25), the implementing rules and regulations thereof, and orders of the Secretary of Labor, a Certification regarding Equal Opportunity is required of bidders or prospective Contractors and their proposed sub-contractors prior to the award of Contract or sub-contracts.

CERTIFICATION OF BIDDER

Bidder's Name: Core Tech-Hawaiian Dredging, LLC

Address: 388 South Marine Corps Drive, STE 400, Tamuning, Guam 96913

Internal Revenue Service Employer Identification No.: 66-0848212

1. Participation in a previous Contract or sub-contract.

   a. Bidder has participated in a previous Contract or sub-contract subject to the Equal Opportunity *clause* *[ ] Yes [X] No*

   b. Compliance reports were required to be filled in connection with such Contract or sub-contract ..... [ ] Yes [X] No

   c. Bidder has filed all compliance reports required by Executive Orders 10925, 11114, 11246 or by regulations of the Equal Employment Opportunity Commission issued pursuant to Title VII or the Civil Rights Act of 1964 ..... [ ] Yes [ ] No N/A

   d. If answer to item c is "NO", please explain in detail on reverse side of this certification.

2. Dollar Amount of Bid: $ See attached Bid Proposal Form.

3. Anticipated performance period 860 days.

4. Expected total number of employees who will perform the proposed construction:

Approximately 30 employees.

5. Non-segregated Facilities

a. Notice to Prospective Contractor.

(1) A Certification of Non-segregated Facilities, as required by the May 9, 1967, order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted to the recipient prior to the award of a Contract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

(2) Contractors receiving Contract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective sub-contractors for supplies and construction Contracts where the sub-contracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

b. Notice to Prospective sub-contractors of Requirements for Certification of Non-segregated Facilities.

(1) A Certification of Non-segregated Facilities, as required by the May 9, 1967, order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a sub-contract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

(2) Contractors receiving sub-contract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of this notice to prospective sub-contractors for supplies and construction Contracts, where the sub-contractors exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.

c. Certification of Non-segregated Facilities.

The Contractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this Contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, or housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin because of habit, local custom, or otherwise. The Contractor agrees that (except where he has obtained identical certifications from proposed sub-contractors for specific time periods) he will obtain identical certifications in duplicate from proposed sub-contractors prior to the award of sub-contracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause, and that he will retain the duplicate of such certifications in his files. The Contractor will include the original in his Bid Package.

6. Race of ethnic group designation of bidder. Enter race or ethnic group in the appropriate box:

[ ]	African American	[ ] Spanish American	[ ] Oriental
[ ]	Aleut	[ ] American Indian	[ ] Eskimo
[ ]	White (other than Spanish American)		
[X]	Pacific Islander		

REMARKS:
Certification: the information above is true and complete to the best of my knowledge and belief.

Name and Title of Signer:

Conchita D. Bathan, Member of Management Committee

(Please Type)

(Signature)

04/26/2018

(Date)

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

APPENDIX K

SPECIAL INSTRUCTIONS TO BIDDERS – ESTIMATED QUANTITIES

For use only in indefinite quantity Contracts or where there has been an estimated amount included in GWA's bid specifications that is to be used to determine the bid price

Bidders are hereby served notice that the following Directives or information described below must be taken into account when preparing the Bid Proposal. The Bidder shall acknowledge the directives by signing and submitting this section with their Bid Proposal.

Directive #1

The bidder is cautioned to note that while the quantities specified in the Bid Schedule are based upon the best information available to GWA, the quantities for the items listed in the Bid Schedule may or may not be completely accurate. Thus, GWA makes no assurances or warranty to any bidder that the quantities listed are 100% accurate.

I, Conchita D. Bathan being an Authorized Representative acknowledge the directive as describe above and ensure the Bid Proposal as submitted addresses the directive.

Core Tech-Hawaiian Dredging, LLC
(Company Name)

(Signature)

04/26/2018
(Date)



Evidence of Authority to Sign

Core Tech-Hawaiian Dredging, LLC

Operating Agreement

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.

LLC-2104

DEPT. OF REVENUE & TAXATION
GOVERNMENT OF GUAM
OCT 30 2015
BUSINESS REGISTRATION

OPERATING AGREEMENT

Of

CORE TECH – HAWAIIAN DREDGING, LLC

October 23, 2015

DEPT OF REVENUE & TAXATION
GOVERNMENT OF GUAM
OCT 30 2015
BUSINESS REGISTRATION

Operating Agreement

Of

CORE TECH – Hawaiian Dredging, LLC
A Guam Limited Liability Company

THIS AGREEMENT ("Agreement") is effective as of October 23, 2015, by and between **CORE TECH INTERNATIONAL CORPORATION ("CTI")**, a Guam corporation, and **HDCC GUAM, LLC ("HDCC")**, a Nevada limited liability company, and is the Operating Agreement of **CORE TECH – HAWAIIAN DREDGING, LLC**, a Guam limited liability company (the "Company"). CTI and HDCC referred to herein individually as a "Member" and collectively as the "Members."

RECITALS:

A. WHEREAS, the Interim General Manager, Mark G. Miller, of Guam Waterworks Authority, has issued on August 31, 2015, an INVITATION TO BID, IFB-07-ENG-2015 for a Multi-step bid for the construction of Agat-Santa Rita Wastewater Treatment Plant Replacement, GWA Project No. S14-002-BND ("Project");

B. WHEREAS, HDCC and CTI believe that they have complementary capabilities for the pursuit of bidding on the Project and, if successful, enter into a contract or contracts with to perform the work on the Project; and

C. WHEREAS, the Members believe there are other future construction projects in Guam which they may want the Company to pursue on a case-by-case basis;

NOW, THEREFORE, in consideration of the mutual agreements, promises, and undertakings hereinafter set forth, the receipt and sufficiency of which are hereby acknowledged, the Members hereto agree that the following shall constitute the operating agreement of the Company.

Article 1
The Project

1.1 **The Contract.** The Members have agreed to form a limited liability company for the sole purpose of preparing and submitting a proposal (the "Proposal") to the Government of Guam ("Client") in response to the Invitation to Bid ("IFB") for the Project and, if successful, enter into a contract to perform the Project ("Contract"). The terms and conditions of this Agreement govern the relationship of the Members and the rendering of services required under this Agreement and under any subsequent contractual agreement with the Client relating to the Project, unless otherwise agreed to by the Members in writing.

1.2 **Services.** In connection with the Project, each Member shall perform services in the functional areas as set forth in **Attachment 1** - Scope of Work/ Percentage Interests to this Agreement. It is the intent of the Members, as part of each section or portion of the work as set forth in Attachment 1, to mutually agree upon division of responsibility among the Members such that the full work scope of each section or portion can be accomplished in the most efficient and cost effective manner. Except as specified in Section 4.5 of this Agreement, no Member to this Agreement shall enter into a separate agreement directly with the Client or any third party for services in connection with the Project without the prior written approval of the other Member.

1.4 **Expenses.** Except as may be mutually agreed upon in writing by the Management Committee, each Member shall bear its own costs and expenses in connection with the negotiation of this Agreement, preparation of the Proposal for the Project, negotiation and execution of the Contract, including, but not limited to, the fees of any attorney, financial advisor, or other consultant services.

1.5 **Employees.** Unless otherwise agreed by the Management Committee, the Company shall have no employees. Each Member's personnel will remain on the payroll of the Member that employs them.

1.6 **Future Projects.** Should the Members agree to have the Company pursue future projects on Guam, this Agreement shall be amended to set forth the details concerning such project or projects and the interests and responsibility of the Members with regard to the same.

Article 2
Formation of the Company

2.1 **Company.** Subject to the terms and conditions of this Agreement, the Members hereby agree to jointly form this Guam limited liability company named "Core Tech – Hawaiian Dredging, LLC", under and in accordance with the laws of the Guam, which shall engage in the business described herein.

2.2 **Purpose.** The purpose and business of the Company shall be (a) to prepare and submit a Proposal for and, if successful, perform the Project; (b) to exercise all other powers necessary and reasonably connected with the Company's business (as limited hereinabove) which may legally be exercised by limited liability companies under Guam law; and (c) to engage in all activities necessary, customary, convenient, or incident to perform the Project.

2.3 **Place of Business.** The principal place of business of the Company shall be located at 388 South Marine Corps Drive, Suite 400, Tamuning, Guam 96913, or such other place as the Management Committee may from time to time determine.

2.4 **Term.** Unless terminated sooner pursuant to this Article 7, this Agreement shall remain in full force and effect until the earliest of:

2.4.1 Dissolution by written agreement of the Members;

2.4.2 Completion of the Contract and all work and obligations under the Contract represented by the later of the issuance of a final payment release under the Contract awarded to the Company and satisfaction of any warranty obligations or ten years from the substantial completion of the Contract;

2.4.3 An official government announcement that the IFB for the Project has been canceled; or

2.4.4 Sixty (60) days after the award of the contract(s) for the Project to another contractor to the exclusion of the Company, except that, should a bid protest be filed challenging the award, the Agreement shall remain in effect throughout the protest period and during any corrective action other than cancellation of the IFB and re-solicitation.

Article 3
Capital – Ownership Interests – Bank Account

3.1 **Capital Structure**. The capital structure of the Company shall consist of one (1) class of ownership. The Company shall maintain a separate capital account of each Member of the Company. Each Member shall contribute initial capital, in such amount or amounts as the Management Committee shall determine, to cover administrative costs of the Company. Such capital contributions shall be made by each Member in proportion to their respective ownership interests. The interests of each Member in the Company shall be as set forth in **Attachment 1 -** Scope of Work/ Percentage Interests to this Agreement.

3.2 **Additional Contributions.** The Management Committee may require Members to make any additional Capital Contributions to their respect ownership accounts in proportion to their respective percentage interests.

3.3 **Failure to Contribute.** If a Member fails to timely provide a required Capital Contribution, the Company may take such action as it deems necessary and appropriate including but not limited to instituting a court proceeding to obtain payment, canceling the Member's Company Interest, or exercising any other right or remedy available at law or equity.

3.4 **Allocation of Profits and Losses.** Profits and losses for any Fiscal Year (and each item of income, gain, loss, and deduction entering into the computation thereof) shall be allocated among the Members (and credited to their respective Capital Accounts) in accordance with their Ownership Interests set forth in Section 3.1 above.

3.5 **Accounting**. The Company shall jointly retain an accountant to perform such duties as may be determined by the Management Committee. For the purposes of this Agreement, certified account balances of the accountant shall be final, conclusive and binding upon the Members.

3.6 **Bank Accounts.** The Company will establish and maintain bank accounts in the name of Core Tech – Hawaiian Dredging, LLC. Such bank accounts (the "LLC Accounts") may be opened in such financial institutions as may be determined by the Management Committee. Each Member shall designate an individual or individuals authorized on its behalf to endorse checks deposited into the LLC Accounts and to sign checks drawn against the LL Accounts. Except as otherwise authorized by the Management Committee, all checks drawn against the LLC Accounts shall require the signature of the each Member of the Company or their authorized representative. All payments received by the Company in connection with this Agreement shall be promptly deposited in the LLC Accounts and invoices received by the Company shall be paid promptly by wire transfer or by check drawn against such account.

Article 4
Rights and Obligations of Members

4.1 **Limited Liability.** Except as otherwise provided for in this Agreement, no Member shall be personally liable for any debts, liabilities, or obligations of the Company; provided that each Member shall be responsible for the making of any Capital Contribution required to be made to the Company by such Member pursuant to the terms hereof, and for the amount of any distribution made to such Member that must be returned to the Company pursuant to the terms hereof.

4.2 **Liability of a Member to the Company.** When a Member has received a distribution made by the Company in violation of this Agreement or Guam law, the Member is liable to the Company for a period of six (6) years after such a prohibited distribution for the amount of the wrongful distribution. This provision is intended to be in compliance with Guam law.

4.3 **Survival of Obligations.** Dissolution of the Company shall not release any Member from any liability which at the time of dissolution has already accrued to such Member or for any obligations to the other Members that explicitly survive dissolution.

4.5 **Exclusivity.** Except as indicated below or as otherwise indicated in this Agreement, no Member or its affiliates shall participate in any manner in the submission of a proposal to Client in response to the IFB or include the use of a Member's name or experience in any such proposal for either the Project or any competitive proposal with respect to the Project thereunder, nor take any action detrimental to, or in conflict with, the Company's opportunity with respect to such proposal. Except as provided above with respect to the Project, this Agreement shall in no manner prevent any Member from pursuing work for any current or potential client (including, but not limited to, Client), and associating with any other persons or companies for such purposes, so long as the contemplated work or association does not involve, or create a conflict of interest for, the Project. Should the Parties execute an agreement to pursue other projects on Guam, the Members' obligations with respect to such work shall be set forth in a separate written agreement.

Article 5
Management of the Company

5.1 **Management of the Company.** The Managing Member of the Company shall be CTI. The business and affairs of the Company including, but not limited to, assignment and reassignment of services between the Members, preparation of the schedule of services, settlement of disputes with the Client, and any other matters affecting the performance of services under this Agreement, shall be managed by and under the direction of the Company's management team known as the "Management Committee", which shall be composed of four (4) representatives (the "Management Committee representatives") two (2) of which shall be from (or designated by) CTI, and two (2) of which shall be from HDCC. A representative of the Managing Member shall preside over all meetings of the Management Committee. Each Member shall designate, in writing, the names of its representatives and an alternate for each. In no event shall the Project Manager or Deputy Project Manager serve as a Management Committee representative. The power to act for or to bind the Company shall be vested in the Management Committee, subject to the Management Committee's authority to delegate powers and duties and the terms of this Agreement.

The initial members of the Management Committee are:

For CTI	Ho S. Eun Chit Bathan
For HDCC:	Gerry Majkut Tom Valentine

5.2 **Vacancy on the Management Committee.** Each Member agrees to maintain its number of designated representatives on the Management Committee for the duration of this Agreement and the Project. If, for any reason, a Management Committee representative position becomes vacant, the Member holding that position shall replace promptly the position with a new representative.

5.3 **Manner of Acting – Consent, Disagreements and Deadlock.**

5.3.1 Unanimous Consent. The Members agree that every act or decision done or made by the Management Committee shall be by unanimous vote at a meeting duly held by the Management Committee representatives.

5.3.2 Actions or Decisions. The following actions must be agreed upon unanimously by the Members prior to implementation by the Company: (i) act in contravention of this Agreement or the Company's Articles of Organization; (ii) act in a manner that would make it impossible to carry on the business of the Company except in furtherance of an approved sale of the assets of the Company or dissolution and liquidation of the Company; (iii) act in a manner that would subject any Member to liability in any jurisdiction; (iv) voluntarily take any act of bankruptcy; (v) change the Company's fiscal year; (vi) refusal to be taxable as a partnership for federal or state income tax purposes; (vii) submit any matter to litigation or other binding dispute resolution process, confess any judgment against the Company, settle any lawsuit or claim; (viii) acquire, sell, license, or lease, or otherwise dispose of any asset of the Company, including in a series of connected transactions; (ix) assign or incur

any debt; (x) loan any money; (xi) make any distributions to any Member in conflict with this Agreement or the Ownership Interests specified herein; (xii) enter into or offer to enter into any contract or agreement to perform services or provide products; (xiii) issue any performance, bonding or process guarantees; (xiv) allow any lien to be placed on any major asset; (xv) select any auditors, accountants, attorneys, officers, or bankers of the Company; (xvi) enter into any lease, sale or purchase of any Company property; (xvii) issue any public release or advertisement regarding this Agreement or the Contract without the written approval of all Members, such consent not to be unreasonably withheld and such approved public release or advertisement shall mention all Members; (xviii) take any other action required of the Management Committee by this Agreement; (xix) take any action arising out of any matter brought to Management Committee by a Member; (xx) proposed bid price to submit to the Client; (xxi) dissolve the Company; or (xxii) do any of the following which by Guam law, 18 GCA §15114(D)(2), requires the unanimous decision of the Members: (A) to continue the business after dissolution; (B) Approval of transfer of a membership interest and admission of the assignee as a member; (C) Any amendment of the Articles of Organization or this Operating Agreement.

5.3.3 Consent Disagreement. The Members shall attempt in an amicable and expeditious manner to settle any disagreement that may arise between them in connection with implementing any action that requires unanimous consent ("Consent Disagreement"). The Members recognize the possibility that a Consent Disagreement will lead to deadlock and, in such event, agree to follow the procedures set forth in Sections 5.3.4 below to resolve the matter, notwithstanding any other provision in this Agreement; provided, however, that pending the review of such matter by the Referee, the performance of the project and this Agreement shall not be delayed or hindered by reason thereof.

5.3.4 Resolution by Referee. Should the Members, or their authorized representatives, fail to resolve the Consent Disagreement within five (5) days after having convened, the Members agree to appoint a neutral person ("Referee") with appropriate qualifications and experience to facilitate resolution of the disagreement. The Referee shall be selected from a list furnished by the American Arbitration Association, unless otherwise agreed to in writing by the Members. If the Members are unable to agree on the Referee, the Members shall proceed in accordance with the Wind Down provision below. If the Members are able to agree on the Referee, the cost of the Referee will be shared equally among the Members. The Referee will be bound to confidentiality and will be given wide latitude to review available information from the Members. Within five (5) days (or such longer period as may be necessary as determined by the Referee or as agreed upon in writing by the Members), the Referee will document in a written memorandum to the Members the Referee's recommendation to resolve the Consent Disagreement. The Referee's recommendation shall be adopted and implemented by the Members after five (5) days of the recommendation (or sooner if mutually agreed in writing by the Members) unless one Member gives notice (the "Rejection Notice") to the other Member(s) within such five (5) day period

stating that the implementation of the Referee's decision will be materially adverse to the interests of such Member.

5.3.5 Wind Down. If the Members are unable to agree on the Referee or if one Member issues a Rejection Notice, then, within ten (10) days of one Member determining that the Members are unable to agree on the Referee or five (5) days of the giving of the Rejection Notice (as the case may be), one Member may issue a notice in writing ("Deadlock Notice") to the other Members. The Deadlock Notice shall contain a proposed course of action to break the deadlock.

If the Members receiving the Deadlock Notice agree in writing within seven (7) days to the proposed course of action described in the Deadlock Notice, then the Consent Disagreement shall be resolved on such basis. If the Members receiving the Deadlock Notice do not so agree, then the following provisions shall apply:

5.3.5.1 All work under the Contract existing at such time will be performed in accordance with the Company's contractual obligations, and the Members agree to satisfactorily perform and complete their portions of the work in good faith and in accordance with their respective contractual obligations;

5.3.5.2 The Company will pursue such course of action as may be in the best interests of all members.

Any notice given under this Section 5.3.5 will be made by certified mail, return-receipt requested.

5.4 **Staffing.**

5.4.1 The Members expect that the work of the Company will be performed through agreements with the Members to perform work under the Contract. Notwithstanding the foregoing, the Members understand and recognize that certain tasks with respect to the overall management of the Company need to be performed by the Company outside of such agreements, such as, but not limited to, retaining and supervising the Company's auditors (the "G&A Tasks"). With respect to such G&A Tasks, the Members agree that they shall supply to the Company such of the Member's supervisory, managerial, and other personnel as shall reasonably be required in order to successfully perform the tasks related to overall management of the Company, as determined by the Management Committee.

5.4.2 The Project Manager: The Project Manager shall, subject to the direction and control of the Management Committee, have overall management responsibilities for the Project.

Article 6
Insurance- Bonds

6.1 **Company-Placed Insurance**

6.1.1 The Members shall make certain that the Company purchases and maintains, in a company or companies lawfully authorized to do business in place in which the Project work is located insurance required by the Contract. The Members shall also make certain that the Company purchases and maintains, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project work is located, the types and limits of insurance sufficient to cover reasonably foreseeable third party personal injury, property damages and loss or damage to the project during construction and other risks, as considered appropriate for scope being undertaken or required by the Contract and Task Orders thereunder ("Company-placed insurance")

6.1.2 The exact limits of insurance to be purchased, as well as the overall structure of the insurance Project will be determined by the Management Committee during the Proposal preparation process and prior to the submission of a proposal for any Task Order, including the seed project.

6.1.3 The Management Committee will approve the purchase of the insurance with consideration as to price, terms, conditions, exclusions, limitation, reputation, solvency and other factors related to assuring that the insurance will respond to the perils for which it was obtained. All Company-placed insurance will be agreed upon by the Members and placed by the Members.

6.1.4 The Company-placed insurance shall be maintained by the Company from the commencement of any services under the Contract until all services to be performed by the Members under the Contract have been completed or until such time as this Agreement has been terminated, whichever is later.

6.2 **Bonding**

The Company will provide the Client with the bonding required by the IFB, including, but not limited to, a bid bond and performance and payment bonds Project. It is understood that if the Contract for the Project is awarded to the Company it will be necessary for the Members to each indemnify the surety or sureties on performance and payment bonds required by the Client. Each of the Members agrees to execute any and all indemnity agreements as may be necessary to procure the execution by such sureties of such bonds. Each of the Members agrees to indemnify and hold harmless the other Members from any liability on any such bond indemnity in excess of such Member's pro-rata share of any such liability agreed to in writing by the Members prior to bidding on the Project.

Article 7
Default, Termination and Dissolution

7.1 **Default**

7.1.1 Events of Default: A Member shall be in default ("Defaulting Member") when:

.1 it has committed a material breach of this Agreement that is not corrected within fourteen (14) days after receipt of written notice of such breach from the non-defaulting Members or either one of them;

.2 there exists an uncured failure of a Member to follow the direction of the Project Manager with respect to completion of a Member's scope of work under a task order;

.3 the actual (or notice of the proposed) suspension or debarment by the Client of any Member that, if not cured, would preclude performance by the other Members to perform the Project;

.4 the insolvency of a Member;

.5 the filing by or against any Member for a petition in bankruptcy or insolvency, or for the reorganization, or for the appointment of a receiver or trustee, or the making of an assignment for the benefit of creditors;

.6 there exists an uncured failure of a Member to make a capital contribution when due; or

.7 a Disposition by one Member without the unanimous consent of the other Members.

7.1.2 Effect of Default. Following an event of default:

.1 The other Member referred to as the "Surviving Member" shall be entitled to take possession of the Defaulting Member's plant, equipment, subcontractors, employees, drawings, and designs as well as materials on site and materials in progress to allow the Company to complete the balance of the project at the time of the default.

.2 The "Surviving Member" shall, upon notice or discovery thereof, do whatever is necessary to continue performing the Contract, and the Defaulting Member, or its administrators, trustees or representatives, shall make every effort to aid the Surviving Member in continuing performance of the Contract.

.3 The Defaulting Member shall grant the Surviving Member a paid up license in any of the Defaulting Member's intellectual property necessary for the timely and efficient performance of the Contract, but for no other purpose.

.4 The Defaulting Member shall assign, in the sole discretion of the Surviving Member, any subcontracts, purchase orders, or labor agreements relating to the performance of the Contract to the Surviving Member.

.5 The Defaulting Member shall be liable to and shall indemnify, defend and hold harmless the Company and the Surviving Member from all loss, cost, liability and damages that the Company or the other Member shall incur as a result of such default.

.6 The Defaulting Member shall be entitled to the unpaid balance of compensation otherwise due the Defaulting Member to the extent that it exceeds the cost of completing the work of such Member, the expenses incurred as a result of the default, and all other obligations of the defaulting Member hereunder; the Defaulting Member shall be obligated to pay to the Surviving Member such costs and obligations that exceed the unpaid balance of compensation.

.7 The Defaulting Member shall remain subject to the exclusivity provisions of Section 4.5.

.8 The Surviving Member shall be free to carry on the business of the Company.

.9 The Defaulting Member shall not be entitled to serve or vote on the Management Committee.

7.2 **Right to Terminate.** Except as specifically provided in this Agreement, no Member shall have the right to terminate this Agreement.

Article 8
Responsibilities Regarding the Project

8.1 **Negotiation of the Contract.** The Members shall be jointly responsible for the preparation of the material terms of the Company's response to the IFB and negotiation of the Contract.

8.2 **Lower Tier Subcontracts.** Each Member shall be responsible for subcontracting and material procurement within its scope of work, unless otherwise agreed to in writing or as contemplated by the final estimate approved by the Members.

8.3 **Performance of the Project.** Each Member agrees to ensure performance of the Project and to complete performance despite the withdrawal, liquidation, or any other incapacity of any other Members. The responsibilities of the Members with regard to the performance of the Project shall be as provided in this Agreement, including its **Attachment 1.**

Article 9
Binding Authority

9.1 **Project Specific Authority.** The Members agree that for purposes of the Project only, Ho S. Eun or Conchita D. Bathan are authorized to execute and deliver to the Client on behalf of the Company all bids, proposals, agreements, contracts, modifications, amendments, bonds, applications, certifications, representations, permits, acknowledgments, and any and all other documents of whatever kind and nature relating to the Project and required under or pursuant to the IFB, and any bid guarantee being submitted therefor. In addition, the Members agree that Ho S. Eun or Conchita D. Bathan (for CTI) or Tom Valentine, Gerry Majkut or Gary M. Yokoyama (for HDCC) are individually authorized to sign teaming agreements between the Company and the Company's proposed subcontractors for the Project.

9.2 **General Authority; Authorized Representatives.** No Member, agent, or employee of the Company shall have any power or authority to bind the Company in any way or to pledge its credit or to render it pecuniarily liable for any purpose, unless authorized to do so by this Agreement or by the Management Committee. Except as provided in Section 9.1 or as otherwise determined by the Management Committee, all contracts, agreements, and other instruments shall be signed by both CTI and HDCC through their respective authorized representatives. The initial authorized representatives for each Member are as follows:

For CTI:	Ho S. Eun Conchita D. Bathan
For HDCC:	Tom Valentine Gerry Majkut

Each Member may designate additional authorized representatives, or replace its initial authorized representatives, by giving written notice thereof to the other Member.

Article 10
Miscellaneous

10.1 **Amendments.** Amendments and modifications to this Agreement may be made only in writing with the prior written approval of all Members.

10.2 **Representation of Shares of Other Entities Held by the Company.** The Management Committee, or any other Person authorized by the Management Committee, is authorized to vote or represent on behalf of the Company any and all shares of any corporation, partnership, trust, or other Entity, foreign or domestic, standing in the name of the Company. The authority granted may be exercised in person or by a proxy duly executed by such designated Person.

10.3 **Governing Law and Venue.** This Agreement shall be governed by and construed in accordance with federal contract law to the extent applicable; otherwise, the laws of the Territory of Guam shall apply. The parties consent to the exclusive jurisdiction of the U.S. District Court of Guam.

10.4 **Further Action.** Each Member agrees to perform all further acts and execute, acknowledge, and deliver any documents which may be reasonably necessary, appropriate, or desirable to carry out the provisions of this Agreement.

10.5 **Entire Agreement.** The terms and conditions contained in this Agreement (including attachments) constitute the entire agreement between the Members concerning the subject matter hereof, and shall supersede all previous communications, either oral or written, between the Members hereto, and no agreement or understanding varying or extending this Agreement shall be binding upon a Member unless in writing, signed by a duly authorized officer or representative of each Member, and adopted as provided in this Agreement.

10.6 **Confidentiality.** Each Member agrees to enforce non-disclosure agreements with teaming subcontractors who may participate in bid and proposal activities, strategy meetings, reviews, or other project meetings. The Members shall, during and after the term of this Agreement, keep in strict confidence and consider as proprietary, all information of a

commercial nature, including business and financial information of each Member and agreements, including this Agreement, and arrangements between the Members, and all information of a technical nature, including patents, know-how, designs, copyrights, licenses or sub-licenses, trademarks and trade secrets, provided or disclosed to any Member, except such commercial or technical information which is in or becomes part of the public domain or which a Member already had in its possession and not subject to non-disclosure obligations or which a Member is required to disclose by law, judicial process or governmental agency.

10.7 **Government Compliance.** Each of the Members represents and warrants that it and its affiliates that may become involved in the Project satisfy all relevant government financial compliance requirements, including the development, preparation and maintenance of government pricing and costing rates, as necessary and as required under applicable law. In the event the Company is awarded the Contract, the Members shall cause the Company and any affiliates involved with the Contract, and all appropriate subcontractors, to satisfy all governmental compliance requirements. Any costs incurred by a Member to satisfy such requirements shall be borne by that Member (or its Affiliate, as applicable) and the Member shall not seek reimbursement from the other Member or the Company for any such costs. The Management Committee shall ensure that all lower-tier subcontracts meet United States Contractor Purchasing System Review standards.

10.8 **Recruitment of Employees.** The Members agree that no Member shall solicit or employ the personnel of the other Members assigned to support the Project from the effective date of this Agreement until one (1) year after its termination. This provision shall not restrict the right of any Member to solicit generally in the media for required personnel, nor does it restrict the hiring of any employee of a Member who (i) who responds to any public advertisement placed by a hiring Member; or (ii) has been terminated by an employing Member prior to commencement of employment discussions between a Member and such employee. Violations of this Section shall be specifically enforceable only and shall not be deemed a material breach of this Agreement.

10.9 **Notices.** All notices, certificates, acknowledgments and other reports ("Notices") sent by a Member shall be in writing and deemed properly delivered when duly mailed by certified mail to the other Members at their addresses as follows, or to such other address as the Members may designate by written notice to the others. Additionally, Notices sent by any other means (e.g., email, facsimile, overnight delivery, or courier) are acceptable subject to written confirmation of both the transmission and receipt of the Notice.

To CTI:

Core Tech International Corporation:
Attn: Ho S. Eun, Chairman
388 S. Marine Corps Drive
Suite 400
Tamuning, Guam 96913

Ph: 671-473-5000 (Office), 671-486-5000 (Cell)

To HDCC:

HDCC Guam, LLC
Attn: Mr. Tom Valentine
201 Merchant Street, 9th Floor
Honolulu, Hawaii 96813

Telephone: (808) 735-3244 (Office) / (808) 224-8235 (mobile)

With copy to:

Gary M. Yokoyama, General Counsel
Hawaiian Dredging Construction Company, Inc.
201 Merchant Street, 11th Floor
Honolulu, Hawaii 96813

Email: gyokoyama@hdcc.com
Telephone: (808) 735-3323 (Office)

A Member may change the individuals identified above by notice to the other Members without formal amendment of this Agreement.

10.10 **Computation of Time**. Unless otherwise indicated, all references in this Agreement to "days" shall mean calendar days.

10.11 **Counterpart Signatures.** This Agreement may be executed in counterparts, each of which shall be deemed an original, and said counterparts shall together constitute one and the same agreement, binding on all of the parties hereto, notwithstanding all of the parties are not signatory to the original or same counterparts.

IN WITNESS WHEREOF, the Members have caused this Agreement to be executed by their duly authorized representatives as of the day and year first set forth above.

CORE TECH INTERNATIONAL CORPORATION

By: _____
Ho S. Eun, President

("CTI")

HDCC GUAM, LLC
By Hawaiian Dredging Construction Company, Inc., Its Member

By: _____
J. Majkut, President

("HDCC")

Attachment 1
Scope of Services/Percentage Interests

As of the date of formation of the Company, the Client has not issued 100% plans and specifications for the Project. Consequently, CTI and HDCC acknowledge and agree that they are presently unable to determine responsibility for the scopes of work to be performed by each of them, or to finally allocate the Percentage Interests in the Company. Therefore, the scopes of work and Percentage Interest set forth below are preliminary and are subject to change pending the Client's issuance of 100% plans and specifications. Once such plans and specifications have been prepared and reviewed by CTI and HDCC, they shall jointly determine whether the scopes of work and Percentage Interest should be adjusted.

A. Scopes of Work:

CTI shall be primarily responsible for procuring all labor, material, equipment and facilities necessary to complete the Project, except for the following scopes of work which shall be the responsibility of HDCC:

a. overall project management
b. procurement of processing equipment
c. installation of processing equipment
d. start-up and testing of processing equipment

B. MEMBER'S PERCENTAGE INTEREST IN THE COMPANY:
Unless otherwise agreed by CTI and HDCC, the following percentages shall be each Member's interest in the Company:

HDCC Guam, LLC:		30%
Core Tech International Corporation		70%
	Total:	100%

C. INITIAL CAPITAL CONTRIBUTION

HDCC Guam, LLC:		$30,000
Core Tech International Corporation		$70,000
	Total:	$100,000

COMPANY RESOLUTION

For New Project

GWA Project No. IFB-03-ENG-2018

OEA Grant OCON676-16-01

This Resolution is dated: March 13, 2018.

Members of Core Tech-Hawaiian Dredging, LLC are:

Core Tech International Corporation: "Core Tech"

HDCC Guam, LLC: "HDCC"

Whereas, Core Tech-Hawaiian Dredging, LLC, ("Company") has received information concerning a new **"Project"** described as follows:

Invitation to Bid: IFB-03-ENG-2018
For the GWA Interceptor Sewer Refurbishment Project, Northern District

Whereas, the Members of the Company desire to bid for the **Project**;

Whereas, this Resolution is made pursuant to the "Third Amendment to Operating Agreement", dated April 28, 2017, which allows for future projects to be memorialized without requiring a formal amendment of the Operating Agreement;

Now Therefore, all the Members of Core Tech-Hawaiian Dredging, LLC, ("Company"), hereby unanimously adopt and approve the following ***Resolutions*** for a new **Project**, known as "GWA Project No. IFB-03-ENG-2018":

Resolved – the Project. That the Company shall bid on the Project known as the "GWA Project No. IFB-03-ENG-2018"

Resolved – Share of Responsibilities. The work, responsibilities and liabilities for this project shall be split or basically shared as near as possible to 50/50.

Resolved – Member's Ownership Profit & Loss Temporary 50-50 split. The Company's Management Committee has agreed to make a temporary change in the percentage splits in the profit and loss for this project. The Company's by-laws sets the percentage split on the ownership and sharing of profit and loss as: Core Tech – 70%; and HDCC – 30% (hereafter referred to as the "Basic Split"). The Basic Split shall not apply to this project only, instead, the percentage split for this project shall be 50-50 for the profit and loss. The Company shall make all accounting and record adjustments necessary to accommodate this temporary split.

Resolved – Record Keeping and Compensation. That if and upon the Company being awarded the contract for the Project, the Parties agreed to accumulate, track, and report to the other Party, its direct labor, materials, and other project costs. In addition, each Party agreed that the labor, stockyard, plant and equipment rates to be charged to the Project shall be at the rates agreed upon in writing by the Parties and is attached to this Resolution as Exhibit 1.

As specified in Exhibit 1, the Parties agreed to recover the Home Office Overhead Cost (HOOHC) at a budgeted amount, which will be included in the bid price for this Project. This amount will cover each Parties HOOHC including but not limited to home office management, facilities, depreciation of company assets, vehicles, travel for home office staff, salaries of home office staff, legal and accounting. This amount will be split by the Parties based on agreed profit and loss percentage split for this Project. The Parties agreed to bill the Company for HOOHC based on the percentage of completion billed by the Company for the Project.

Each Party agreed to bill the Company for the actual hours incurred by the Field salaried staff for the Project at actual pay rates multiplied by a fixed multiplier or fringe rate of 55.52% for Core Tech and 45% for HDCC. Craft labor provided by Core Tech shall be billed to the Company at an agreed rate as shown on exhibit 1. HCCC will bill the project at the actual payrates plus a fringe rate of 74.85% plus travel and subsistence costs as defined in the appropriate trade union agreement. The fringe rate covers all fringe related expenses including but not limited to workers comp, retirement benefits, bonuses, all vehicle costs, computer health insurance. HDCC assigned Project Manager vehicle costs, travel and housing costs shall be a direct cost to the project and shall be billed to the company at cost without any mark up. All labor charges to the Project must be supported by timesheets showing hours worked on the Project, signed by the employees and approved by their supervisors / managers and can be traced back to actual payment to the employee. Either Party has the right to audit the other Party's books and records to validate the charges to the Contract.

Each Party agreed to get reimbursed for the actual cost paid on behalf of the Company with no mark up.

Each Party agreed that the rental rates for equipment owned by Core Tech, if used by the Company for the Project shall be at an agreed upon rate as shown on Exhibit 2.

Warehouse space shall be charged at a monthly agreed rate of .90/SF , stockyard at $.45/SF.

Resolved - Company's Management Committee. The approval of the Company's Management Committee is required form many things as stated in this Agreement. Since the Management Committee is made up of a representative of each party, then, for practical purposes, whenever the work, actions, costs, etc. of a Party would normally require the approval of the Company's Management Committee, then the written approval by the other Party shall be sufficient for the requesting Party to proceed.

IN WITNESS WHEREOF, the Members have executed this Resolution by their duly authorized representatives as of March 13 2018.

MEMBER:

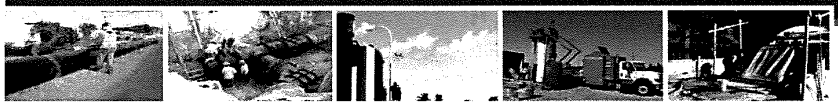
CORE TECH INTERNATIONAL CORPORATION

By: _____
Ho Sang Eun, its Chairman

MEMBER:

HDCC GUAM, LLC
By Hawaiian Dredging Company, Inc.,

By: _____
J. Majkut, its President



Core Tech - Hawaiian Dredging, LLC

List of Proposed
Subcontractors and Suppliers

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.



Core Tech - Hawaiian Dredging, LLC

List of Proposed Subcontractors and Suppliers

Michels Corporation

817 W. Main Street
P.O. Box 128
Brownsville, WI 53006

Scope of Work

- Television Inspection of Sewers
- Water Cured-in-Place Pipe or Ultraviolet (UV) Cured-in-Place Pipe (CIPP)
- Manhole Rehabilitation

Duenas, Camacho & Associates, Inc.

238 East Marine Corps Drive
Suite 201
Hagatna, GU 96910
(671) 477-7991

Scope of Work

- Designer
- Land Surveying

Note: Bypass pumping will be self-performed by Core Tech-Hawaiian Dredging, LLC (bidder).

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.



Core Tech - Hawaiian Dredging, LLC

Acknowledgement of Addenda

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.



Acknowledgement of Receipt of Addenda

Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date
1	February 8, 2018
2	February 23, 2018
3	March 2, 2018
4	March 6, 2018
5	April 4, 2018
6	April 10, 2018
7	April 18, 2018

Use or disclosure of data contained on this sheet is subject to the restriction on the cover page of this proposal.

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 33-FY2018
Relative to Approval of Funding Match Commitment for Bureau of Reclamation Grant as it Relates to GWA District Metering Project Grant Application

What is the project's objective and is it necessary and urgent?
GWA management seeks CCU approval of the project intent as well as CCU commitment to the legal and financial obligations associated with the 50% matching requirement per Department of Interior, Bureau of Reclamation, Water-Smart Program.

The project intends to install distribution main meters at fourteen locations including vault boxes and related piping. Included in the scope will be all related equipment & infrastructure for power and communication which will allow the meters to have AMI capabilities. With the AMI infrastructure in-place at those locations, given ideal conditions customers meters may also be brought into the AMI infrastructure, although this is not directly related to the project. Data from the distribution main meters and customer meters can be examined in real-time; any sharp deviation from normal water supply levels would indicate a possible distribution main break. This will allow GWA to dispatch leak detection crews to identify possible line breaks in a relatively narrower area, thereby reducing response time. This project is urgent given that GWA water loss rate is relatively high.

Where is the location?
Distribution main meters will be located at key supply entry points in the following location: Hagatna; Asan; Agat-Santa Rita; Anao Point; Yigo; Baza Gardens, Yona; East Gayinero, Yigo; Ipan, Talofofo; Bear Rock, Inarajan; Nimitz Hill, Piti; Pago Bay, OCP; Paradise Estates, Dededo; Piti; TaloVerde, Tamuning; Talofofo;

How much will it cost?
Estimated overall total project cost is $2,000,000.00

When will it be completed?
Estimated project completion will be 36 months from the time funding/NEPA is secured.

What is the funding source?
The grant proposal is to the Bureau of Reclamation, that includes a 50-50 match requirement. If successful, Bureau of Reclamation will be providing fifty-percent (50%) of total project costs estimated at $1M.

The RFP/BID responses (if applicable):
Not Applicable

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 33-FY2017

RELATIVE TO APPROVAL OF FUNDING MATCH COMMITMENT FOR BUREAU OF RECLAMATION GRANT AS IT RELATES TO GWA DISTRICT METERING PROJECT GRANT APPLICATION

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA is submitting a distribution main metering grant proposal (See EXHIBIT A) to the Department of Interior, Bureau of Reclamation, Water-Smart Program, wherein the project intends to install district meters at 14 closed water subset-systems at various locations to allow the Agency to record and analyze quantity supply and quantity consumed; spikes in supply without a corresponding spike in consumption may indicate a water line break for that specific closed system being metered, thus narrowing the area for leak detection, thereby reducing water loss and O&M costs; and

WHEREAS, some critical aspects of the project are installation of related equipment & infrastructure for power and communication which will allow the district meters to have AMI capabilities; and

WHEREAS, the GWA Engineering acknowledges that the intended purpose of the proposed project is to reduce real water loses and increase water savings; and

DRAFT

WHEREAS, the estimated total grant proposal project cost is Two Million Dollars ($2,000,000.00) which includes design and construction with a fifty percent (50%) matching requirement of One Million Dollars ($1,000,000.00) from GWA of total eligible project costs; and

WHEREAS, all grantee's submitting proposals to the Department of Interior, Bureau of Reclamation, Water-Smart Program are required to include as part of the grant application financial and legal commitment from its board of directors; due within thirty (30) days of grant submittal; and

WHEREAS, the General Manager & Chief Engineer advocates the implementation of the proposed grant project and intends to set aside One Million Dollars ($1,000,000.00) in matching requirement to be provided from bond proceeds applicable to the project such as PW 05-06 Master Meters, PW 12-01 Water Audit Program & Water Loss Control Plan; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that this project's intent will assist in water loss reduction by making line break detection more efficient and tracking of quantity of supply data more reliable in those subset water system metered sectors and recognizes water and costs savings.
3. The CCU hereby supports the management of GWA to enter into a grant or cooperative agreement with the Department of Interior, Bureau of Reclamation, for the purposes of the WaterSmart grant program.
4. The CCU hereby further authorizes the management of GWA to commit to the legal and financial obligations associated with the fifty percent (50%) matching requirement per Department of Interior, Bureau of Reclamation, Water-Smart Program in the amount of One Million Dollars ($1,000,000.00).

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RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 22nd day of May, 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS **J. GEORGE BAMBA**
Chairperson Secretary

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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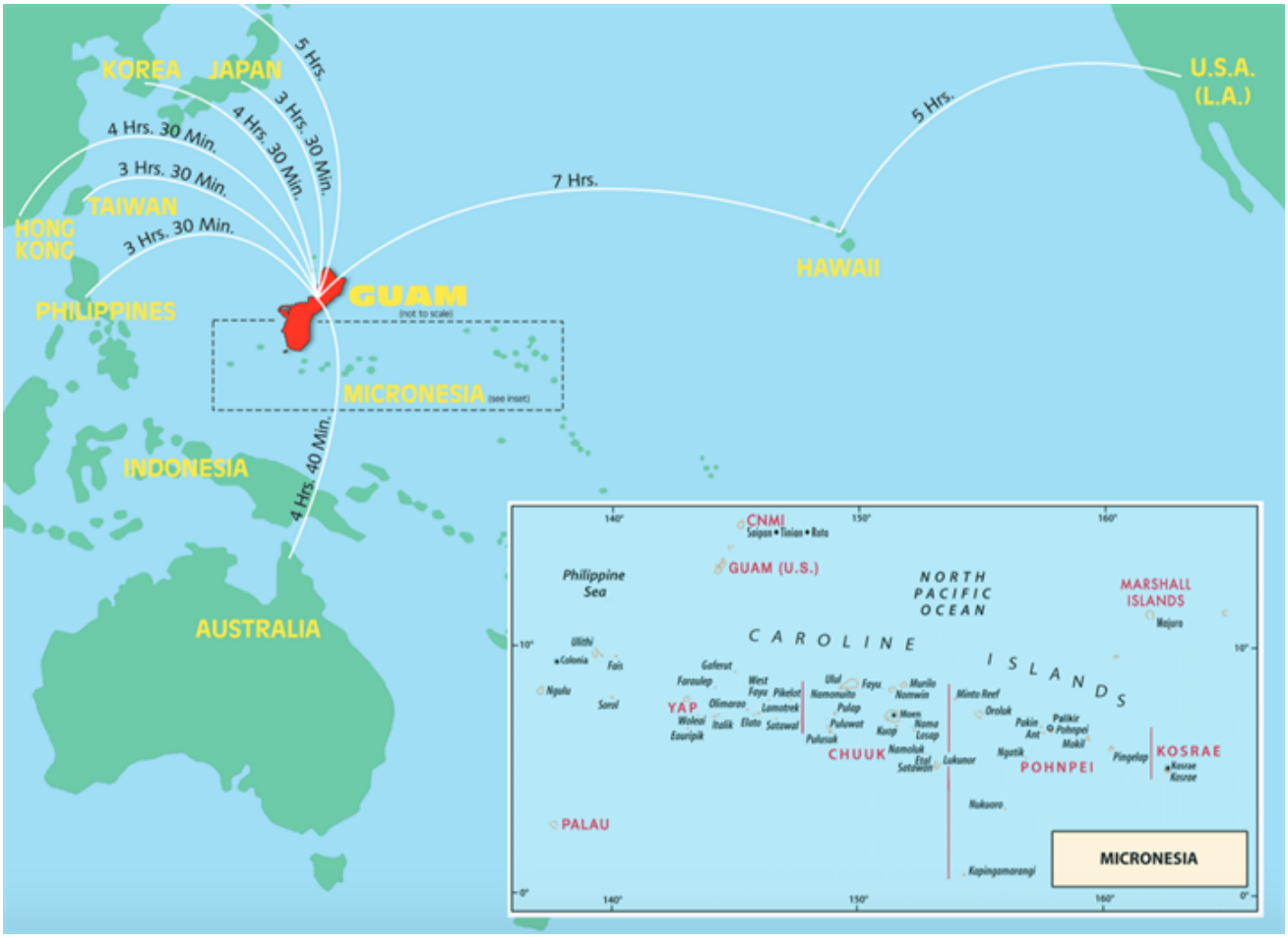
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EXHIBIT A

GUAM WATERWORKS AUTHORITY

"Better Water. Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
P.O. Box 3010, Hagatna, Guam 96932
Tel. No. (671) 300-6846/48 Fax No. (671) 648-3290



Guam Waterworks Authority

Distribution Main Metering Project

Grant Proposal

Table of Contents

Project Summary 3
Background_ About Guam Waterworks Authority 4
The Water System 5
The Wastewater System 5
The Institutional Capacity Building & Project Introduction/Background 5
Technical Project Description 7
Project Location & Unique Information 11
Evaluation Criteria 26
Evaluation Criteria A - Quantifiable Water Savings 26
Evaluation Criteria E - Department of the Interior Priorities 27
Evaluation Criteria F - Implementation and Results 27
Evaluation Criteria G - Nexus to Reclamation Project Activities 27
Evaluation Criteria H - Additional Non-Federal Funding 27
Program Questions: Environmental and Cultural Resources Compliance 28
Required Permits or Approvals 29
Letters of Project Support 29
Consolidated Commission on Utilities Official Resolution 29
Key Management 29
Budget 31
Funding Plan and Letters of Commitment 31
Budget Proposal 32
Budget Narrative 33

Appendices

Appendix A - Guam Waterworks Authority FY 2017 Financial Highlights Report (Apr. 24, 2018)

Appendix B – Letter of Endorsement – Madeleine Z. Bordallo, Congresswoman, U.S. House of Representatives (May 9, 2018)

Appendix C – Resolution – Consolidated Commission on Utilities (Forthcoming)

Appendix D – Memorandum of Understanding - GWA – GPA MOU relative to Smart Grid Network Usage (Jul. 9, 2015)

Project Summary

The Guam Waterworks Authority (GWA) is submitting this application on May 10, 2018 Guam Pacific time to be considered for the Department of Interior (DOI), Bureau of Reclamation(BOR) 2018 WaterSmart Program, catalog of federal domestic assistance (CFDA) number 15.507, funding opportunity number BOR-DO-18-F006. Total project cost is estimated at $2,000,000 and is expected to take 3 years from the time funding is approved. The GWA will contribute 50% of the total project costs estimated at $1,000,000 and will be paid out of its existing revenue bonds. The requirement of the governing board resolution funding commitment will be forthcoming within 30 days of our submittal, a meeting is scheduled later this month.

The proposed BOR project is one component of GWA's Water Loss Program, it aims to install distribution main meters within fourteen key locations within the water system. Included in the project will be the architecture and engineering design analysis of each of the fourteen sites, design & construction of concrete meter vault boxes, design & construction of power and communication infrastructure (to allow remote reading). The proposed BOR project will compliment other on-going and in-progress GWA projects that are part of the Water Loss Program. These projects are:

- Production Metering Project (60 identified deep well sites),
- Water Hydraulic Modeling Refinement Project,
- Replacement of Customer Meters Project (21,000 balance of 44,000),
- Pressure Zone Realignment and District Metering,
- Line Replacement Program Project (3rd year),
- Leak Detection & Response Unit Creation & Implementation.

The GWA's water loss rate/non-revenue water is pegged somewhere between 50-58% based solely on sales and production. Note this is still up for discussion due to questions surrounding the validity of production well data. The GWA pumps approximately 38 million gallons of water per day through its deep wells. Because the proposed project aims to install remote reading distribution meters, GWA will be alerted to specific narrowed areas of potential water distribution main breaks, therefore improving response time, thus saving vast sums of water. Note that it is the intent of this proposal to identify water savings, it also acknowledges that production meters at the deep wells have flaws which the on-going deep well project aims to correct or validate. Although GWA has a number projects currently on-going to support water loss, the proposed BOR project will immediately aid in controlling water loss by alerting GWA to specific narrowed areas where distribution main meters are located by providing metering data in real-time, thereby improving response time in leak detection and repair. An ancillary benefit of the project will be the opportunity to allow customer meters in those areas to be read remotely. Currently, the GWA reads its customer meters via Automatic Meter Read (AMR); although, they are also equipped for Advanced Metering Infrastructure (AMI). If initial cursory review assumptions are correct, the transition to AMI will have minimal costs.

The GWA, Engineering Department & Grants Planning Section, have no knowledge of any previous grant funding from the Department of Interior, Bureau of Reclamation to this date and believes this is the GWA's first application to DOI, BOR. The GWA has earned the designation of "low risk auditee" status from the independent auditor Deloitte and Touche, LLP in FY 2016 & FY 2017. Congressional endorsement has been obtained and can be found in Appendix B.

Background_ About Guam Waterworks Authority

The island of Guam is located in the western Pacific Ocean approximately 3,800 miles west-southwest of Honolulu, Hawaii, 1,550 miles south-southeast of Tokyo, Japan and 1,600 miles east of Manila, Philippines. The island, which is the western most Territory of the United States, is approximately 30 miles long and ranges from 4 to 9 miles wide with a total land area of approximately 212 square miles. The Guam Waterworks Authority (GWA) system provides water to all of the civilian population of Guam and sewer service to a large percentage of the civilian population, Andersen Air Force Base and several Navy facilities.

The GWA has over 42,000 water service connections and approximately 26,000 wastewater service connections to a civilian population of approximately 180,000 on the island including tourists and military. The GWA manages three drinking water systems across the island, producing approximately 42 million gallons per day (MGD) of drinking water from about 120 deep wells, military purchases and a surface water treatment plant. Of the 42 MGD, GWA purchases water from the U.S. Navy 4 MGD. The system includes 23 in-service storage water tanks/reservoirs, over 100 chlorination stations, 25 water booster pump stations, and over 500 miles of island-wide water distribution lines. On the wastewater side, GWA owns and operates seven wastewater treatment plants that can treat an average total flow rate of about 14 MGD of sewage, 78 wastewater pump stations and ejectors, and approximately 300 miles of sewer collection lines and conveyance lines. Additionally, there are currently two major military installations, Andersen Air Force Base and Naval Base Guam, which occupy large areas on the island. Andersen AFB has its own water system and wastewater collection system; however, it does not have a separate wastewater treatment plant; it discharges its wastewater into GWA's Northern District wastewater system.

The Guam Organic Act of 1950 is the United States federal law that designated the island of Guam as an unincorporated territory of the United States. Among other things, it created the Government of Guam and conveyed all water rights to it. The GWA operates as an Autonomous Agency of the Government of Guam, more specifically a "state-operated" Government Public Corporation. The GWA is governed by the Consolidated Commission on Utilities (CCU), a five-member non-partisan board, with members elected individually in a general election to a four-year term. The CCU is also charged with oversight of the Guam Power Authority (electrical power). The CCU makes decisions regarding policy, management, budget and finance of the Authority's operations.

Upon taking office in January 2003, the original members of the CCU were faced with more than $25 million in debt and pending federal lawsuits for violations of water quality and environmental standards that had accumulated over the previous several decades. Since 2003, a number of changes have been made to move the Authority operations towards a self-supporting economic model and environmental compliance. Currently, both the CCU and the GWA management and staff are focused on meeting the requirements of a 2011 Court Order resulting from the federal lawsuits, by refurbishing and/or upgrading facilities to improve reliability, to implement operational systems and procedures consistent with current utility practices, and to meet regulatory standards, i.e. Safe Drinking Water Act/Clean Water Act, American Water Works Association (AWWA) standards. The Authority has made great strides in improving fiscal management, and in obtaining external funding through the bond markets to fund its

Capital Improvement Program (CIP), including projects identified in the court order. To date it has borrowed and implemented approximately $500 million in infrastructure improvements mainly in water tanks, configuration of transmission lines, and wastewater treatment plants. An important accomplishment by GWA is its recent investment grade credit designations by Moody's, Standard & Poor's, and Fitch rating agencies, and also obtaining a low risk designation by auditors related to federal grants for years 2016 and 2017.

The Water System

The GWA's water supply system primarily consists of 120 wells, the Ugum Water Treatment Plant, the Tumon-Maui well(leased military deep well), 25 water booster pump stations, 23 in-service tanks/reservoirs which contain an active maximum volume of about 30 million gallons, approximately 586 miles of water distribution pipelines, and roughly 3,814 fire hydrants.

Guam's primary water source is from groundwater, with additional supplies drawn from a single surface water source and two springs, all of which are replenished by rainfall throughout the year on Guam. The largest amounts of rain for the island come during the months of June through December. The annual rainfall can average 80 inches in central to northern areas, and in the southern areas as much as 110 inches. Guam's geologic features divide the island into distinct northern and southern areas. The northern part of the island is primarily flat, limestone plateau, where the island's groundwater occurs, while the southern part of the island has a more mountainous, volcanic geology and contains the majority of rivers and surface water. The north's limestone plateau, with steep cliffs, slopes gently southwesterly from an elevation of 600 feet to less than 100 feet above mean sea level at the middle of the island. The main groundwater source is located under the plateau. Guam's rainfall percolates through the limestone and forms a freshwater "lens" that floats at sea level above dense brackish and salt water. Studies have shown that Guam's aquifer can provide a water supply of up to 80 million gallons per day.

The Wastewater System

GWA's wastewater system serves primarily all of the civilian population of Guam, as well as for Andersen Air Force Base and some U.S. Naval facilities in the northern end of the island. However, there is a significant portion of the civilian population in the north that is not served by GWA's wastewater system. The system includes wastewater treatment plants, sewage pump stations and extensive collection systems in each of its 7 districts. GWA's wastewater collection system consist of an estimated 314 miles of gravity sewers and force mains that collect sewage from the various communities served and transport it to the respective wastewater treatment plant in that district.

The Institutional Capacity Building & Project Introduction/Background

The Guam Waterworks Authority has recently undergone several key upgrades towards operating its systems. Significant efforts have been expended towards decreasing expenditures, improving leak repair times, implementing a meter replacement program, and launching a computer maintenance management system as part of a comprehensive asset management program and committing vast time and resources to develop and continuously improve its Water and Wastewater Hydraulic Models and developing a GIS. GWA continues to work diligently in

making needed improvements to both the water and wastewater systems, including upgrades required in the 2011 Court Order, projects to accommodate growth in the island's population centers, as well as normal renewals, and replacements. As part of our efforts to achieve operational improvements and readiness, GWA is implementing asset management principles and improved maintenance management practices within the four Operations divisions responsible for operating and maintaining the island's water and wastewater infrastructure.

Currently GWA has contracted with a national engineering firm to update its Water Resources Master Plan (WRMP) and is currently undergoing the comment period with the public and all interested stakeholders for the draft report. Note that the existing firm has also been responsible for completing the 2006 WRMP report. A copy of the draft WRMP report and/or 2006 WRMP report can be made available to anyone interested in receiving a digital copy. The 2018 draft WRMP report objectives were to summarize the condition of GWA's water and wastewater system facilities and outline improvements needed over the subsequent 20 years to achieve regulatory compliance and improve the reliability of GWA's infrastructure and services. Specifically, the draft WRMP currently in the public comment period assesses GWA's progress towards achieving the recommendations outlined in the 2006 WRMP and further develops a capital improvement plan for the next 20 years, through 2037, to meet acceptable levels of service and maintain compliance with drinking water standards and clean water regulations.

Both the 2006 WRMP and the 2018 draft WRMP identifies key recommendations specific to projects that the utility could do to help stem GWA's arguably water loss rate/non-revenue water pegged at 50%-59%. Although this is an astounding number given that 42 million gallons are produced daily, and which it implies we are losing approximately 50 percent; GWA is cautious when using this number. Aiding in resolving this data validity issue are steps being taken now by the GWA, demonstrated by initiating projects such as the production deep well meter project, and other projects as part of the Water Loss Program listed earlier. Difficulty in understanding the system is said to be the manner it was constructed. For the most part the water system was constructed piece mill over the decades since post World War II (WWII) Guam. GWA's water system is described as a "legacy system" originally built by the U.S. Navy during the post WWII reconstruction of Guam that went well into the 1960s and 1970s. Most of that system is still in place and used and the newer/recent improvements have mostly been extensions on top of the older legacy system. GWA Management understands the importance of resolving this long-standing issue and has plans to incrementally replace the system.

It is in addressing non-revenue water which GWA is putting forth for this grant proposal through design and construction of distribution main meters, including various AMI components to allow for real time reading. The GWA views two types of distribution main meters, 1) pressure zone meter, and 2) district meters/distribution main meter which is a subset of the pressure zone meters. The project aims mainly to meter large housing tracks or clusters of commercial buildings to obtain real time consumption data; data from these meters will provide better analysis of the quantity of water losses in real-time for a controlled specific area. Data will be used to compare to the consumption for those areas. Currently, all GWA customer meters are read via AMR, although they are AMI capable. Therefore, the project has a dual benefit in that it intends to provide residential customers meters that are currently being read through AMR technology to switch to AMI technology along with the district meter for the specified area of

study. This will allow immediate analysis and notification when there are substantial irregularities in those areas making leak detection much more efficient and effective. Other benefits of the project in include better data for non-revenue water accounting, and in refining the water system hydraulic model. Information provided by the proposed project will help in removing some of the assumptions the model may have relied on due to the absence of data.

Both the 2006WRMP and the 2018 draft WRMP reports outline key tasks to perform in order to reduce water losses including apparent and real. To date GWA has performed the following as recommended in WRMP reports:

1. Revenue enhancement- Replaced thus far 20,000 customer meters; in progress to address the balance of 42,000
2. Revenue enhancement- Line Replacement program in progress
3. Continuous testing of meters- Purchased meter test bend & constructed a Meter Test Bench facility, staffed meter testing program
4. Quantifying Production - in contract to design and construct production water well meters
5. System/Pressure Zone Meters – in contract design to reconfigure zoning according to best engineering design practices
6. Leak Detection study- performed (2) contracted whole water system sweeps
    a. Currently performing tactical leak detection tasks internally
    b. Currently in process of obtaining equipment and more staffing to accommodate 2 crews

Technical Project Description

This project proposes to design and construct complete in place including installation of distribution main meters at fourteen locations throughout the island. It will include underground vaults, valving and miscellaneous piping, excavation, backfill, restoration of pavements and connection to island power and communication grid. All work related to the proposed project will be located on government easements or utilities right of way. The proposed project will install meters within the existing water system, therefore all work will occur on previously disturbed areas, rights of way or utility easements.

The Guam Power Authority (GPA), a sister company of the GWA both report to the Consolidated Commission on Utilities Board. The GPA currently has successfully constructed a fully functional AMI network used for its power customers throughout the island. There is a memorandum of understanding to allow the GWA to utilize its network for AMI purposes eliminating a portion of upfront costs associated with the AMI infrastructure. Within the MOU the GWA & the GPA agreed to share in the cost of implementation of specific AMI components such as the expansion of the data control center, and the expansion of the routers/collectors within the network to increase coverage. It is the intent of this project to utilize the GPA AMI infrastructure either fully or partially for the use of the distribution main meters. It will depend on the conditions that will be revealed during the design phase of the project. Customer's water meters in the metered tracks although not directly related to the project could potentially be able to be able to utilize the AMI network. The initial cursory review by the GWA & GPA engineering department suggests that minimal costs will be involved, as GWA's customer meters are already AMI capable. Additions

to the AMI infrastructure may include expanding the number of routers and collectors. Once more information is obtained during the design phase and it appears to be viable to bring on its customer meters with little or no additional cost, the GWA may provide funding and/or request DOI, BOR for approval to amend project scope; provided that it will be within established budget thresholds.

The project will allow GWA to determine real water losses for a specific customer track or rather isolated areas related to the water system. Fourteen housing/customer tracks have been identified as good candidates by the GWA Water Engineering Section and the GWA Water Operation sections due to having one or two water supply lines feeding it; allowing the capability to meter water supply at entry points and/or exit point. With meters at the entry/exit point leading into the customer track, the GWA will be able to validate the quantity of supply. The GWA Operations sometimes refer to this as a closed system. Data from the distribution main meters (supply) will be compared to data coming from the customer meters (demand). Data will be reviewed and analyzed by the GWA System Control Center (SCC) unit, they are a 24-hour data call center and highly skilled in water & wastewater system operations than a typical dispatcher. Any variations from normal operations from the data comparison may prompt the SCC personnel to cut a workorder for the Leak Detection Unit to investigate for possible breaks. Any leaks identified will be reported to SCC to cut a work order for repair crews to immediately address the leak.

Below are specific projects locations for each of the fourteen identified sites where the distribution main meters will be constructed. As stated earlier in the introduction of the project, GWA's rate of non-revenue water is roughly 50-59%. This number is considered rough at this point due to the inability to obtain hard data or inability to valid data at this time. All projects in the Water Loss Program including the proposed BOR Distribution Main Metering project will aid in validating information related to non-revenue/water loss rate. Water loss/ non-revenue ranges depending on the source. The 2017 single audit describes GWA water loss at 59%, the draft WRMP (Brown & Caldwell) reported it to be 49% and the GWA Water Accountability section pegged it at 38%. Therefore, for the analysis related to water saving assumed that each of the fourteen housing track locations identified for distribution main meters construction have a 59% water loss rate. Furthermore, GWA is confident that it will be able to track and reduce this rate be at least 40%. Below you will find project location in relation to Guam, customer consumption in acre feet for those locations and water savings from the reduction of 19 percentage point for each of track housing.

The 36-month project schedule is shown in Table A, and a breakdown of major tasks is shown in Table B.

Table A. Project Schedule

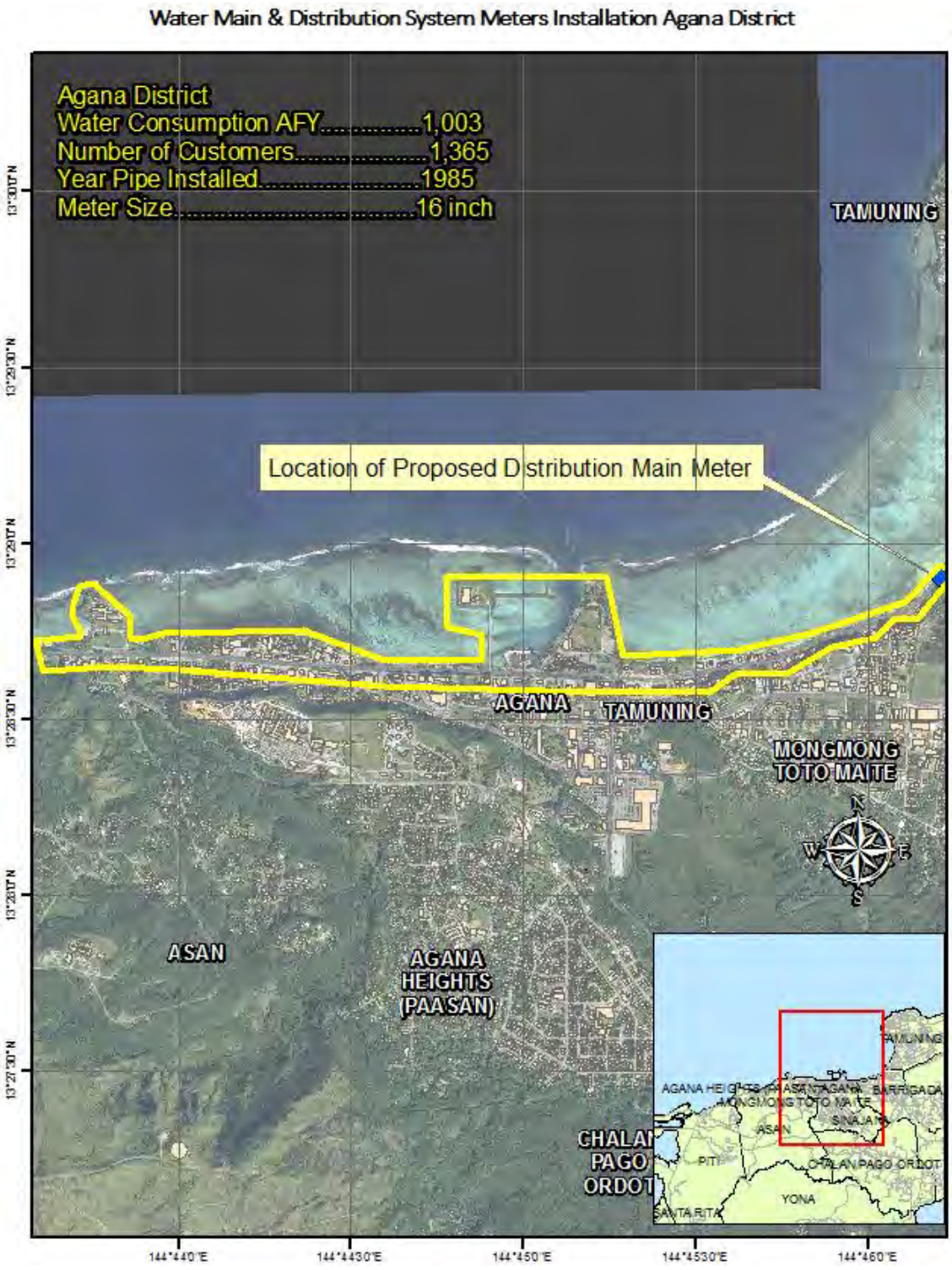
Task No.	Timeline Major Project Tasks	FY 2018 Quarters		FY 2019 Quarters				FY 2020 Quarters				FY 2021 Quarters				FY 2022 Quarters	
		3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
1	Grant Application																
2	Project Design Procurement																
3	NEPA Compliance																
4	Project Design																
5	District Meter Installation																
6	AMI Data Center Configuration																
7	Performance Monitoring																

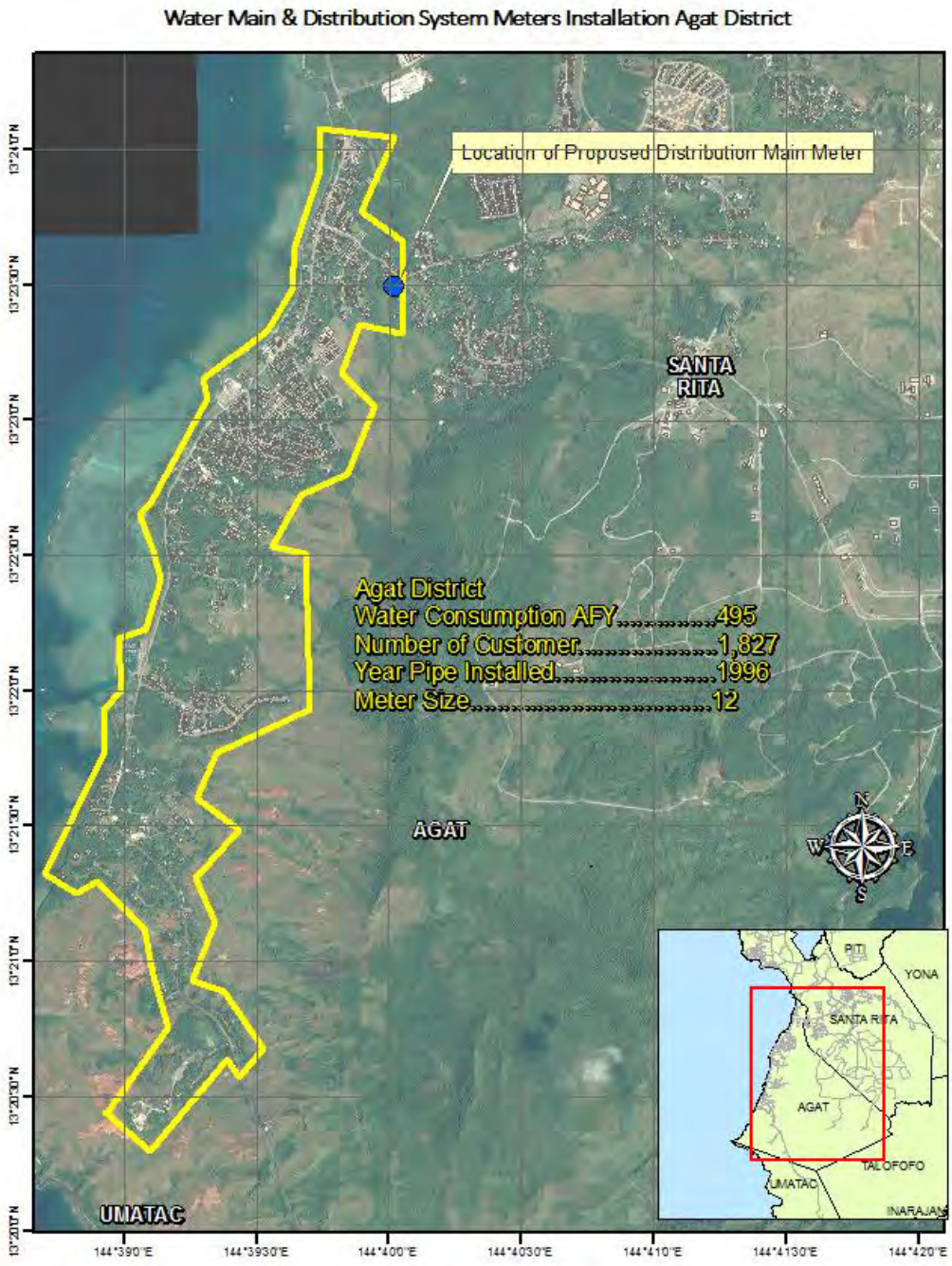
Table B. Project Task Breakdown

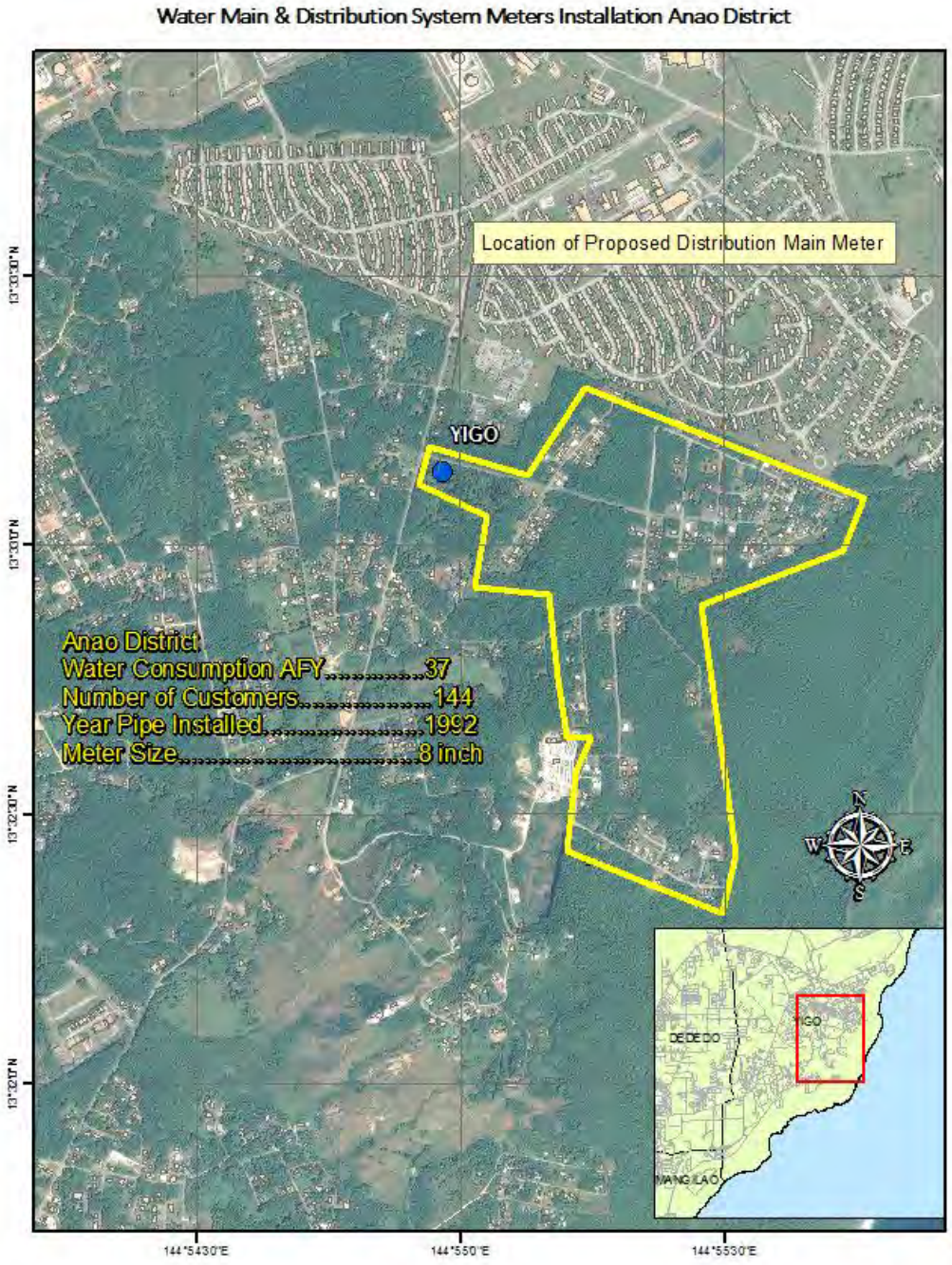
Main Task / *Subtask Description*	Date Start	Duration (Days)	Duration (Months)	Duration (Years)	Date Complete
Grant Application	**5/1/2018**	**244**	**8.1**	**0.7**	**12/31/2018**
Grant application draft and submittal					
Evaluation and selection of grant application					
Grant award and kickoff meeting					
Project Design Procurement	**1/1/2019**	**211**	**7**	**0.6**	**7/31/2019**
Document assembly for design services competitive bid					
Advertise design bid and collect packages					
Bid package opening, evaluation, short listing					
Design firm interviews					
Final evaluation and selection					
Fee negotiation					
Consolidated Commission on Utilities notification					
Contract processing					
Certification of funds					
Notice to proceed issued					
National Environmental Policy Act Compliance	**1/1/2019**	**180**	**6**	**0.5**	**6/30/2019**
Environmental consultation with local agencies					
Submit agency responses to Bureau of Reclamation					
Review of documentation					
Issuance of Categorical Exclusion					
Project Design	**8/1/2019**	**183**	**6.1**	**0.5**	**1/31/2020**
Design kickoff meeting					
Field survey of district meter sites					
Selection of meter and communication equipment					
Project plan drafting					
Design review and acceptance					
Distribution Main Meter Installation	**2/1/2020**	**699**	**23.3**	**1.9**	**12/31/2021**
Procure equipment and materials					
Acquire clearances and permits					
Meter installation and testing					
AMI Data Center Configuration	**7/1/2020**	**91**	**3**	**0.3**	**9/30/2020**
Procure data center vendor services					
Configuration and testing of existing data center to receive meter data through AMI					
Training for GWA staff					
Total Project Duration	**1/1/2019**	**1095**	**36.5**	**3.0**	**12/31/2021**

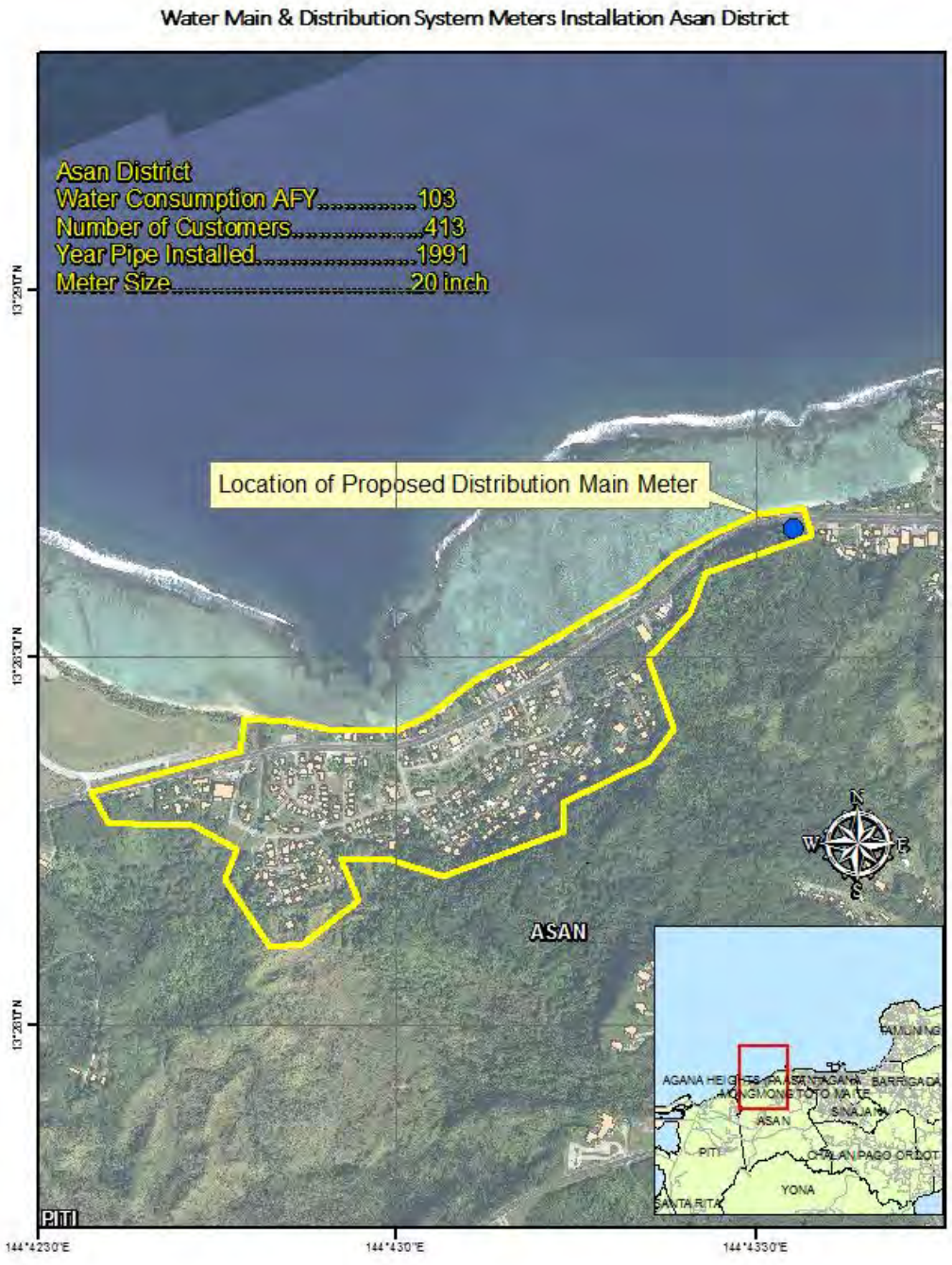
Project Location & Unique Information

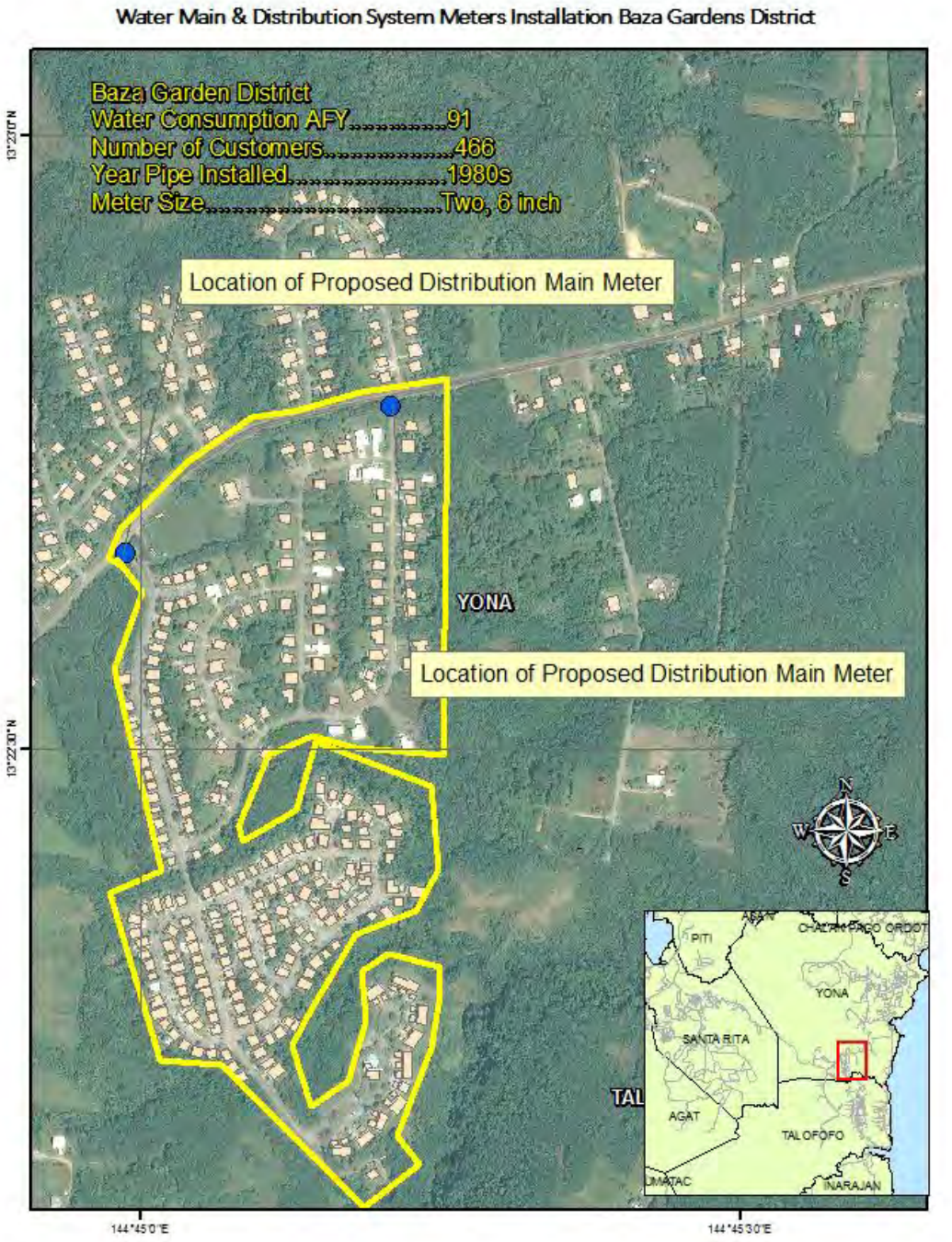
Maps are presented in the following pages.

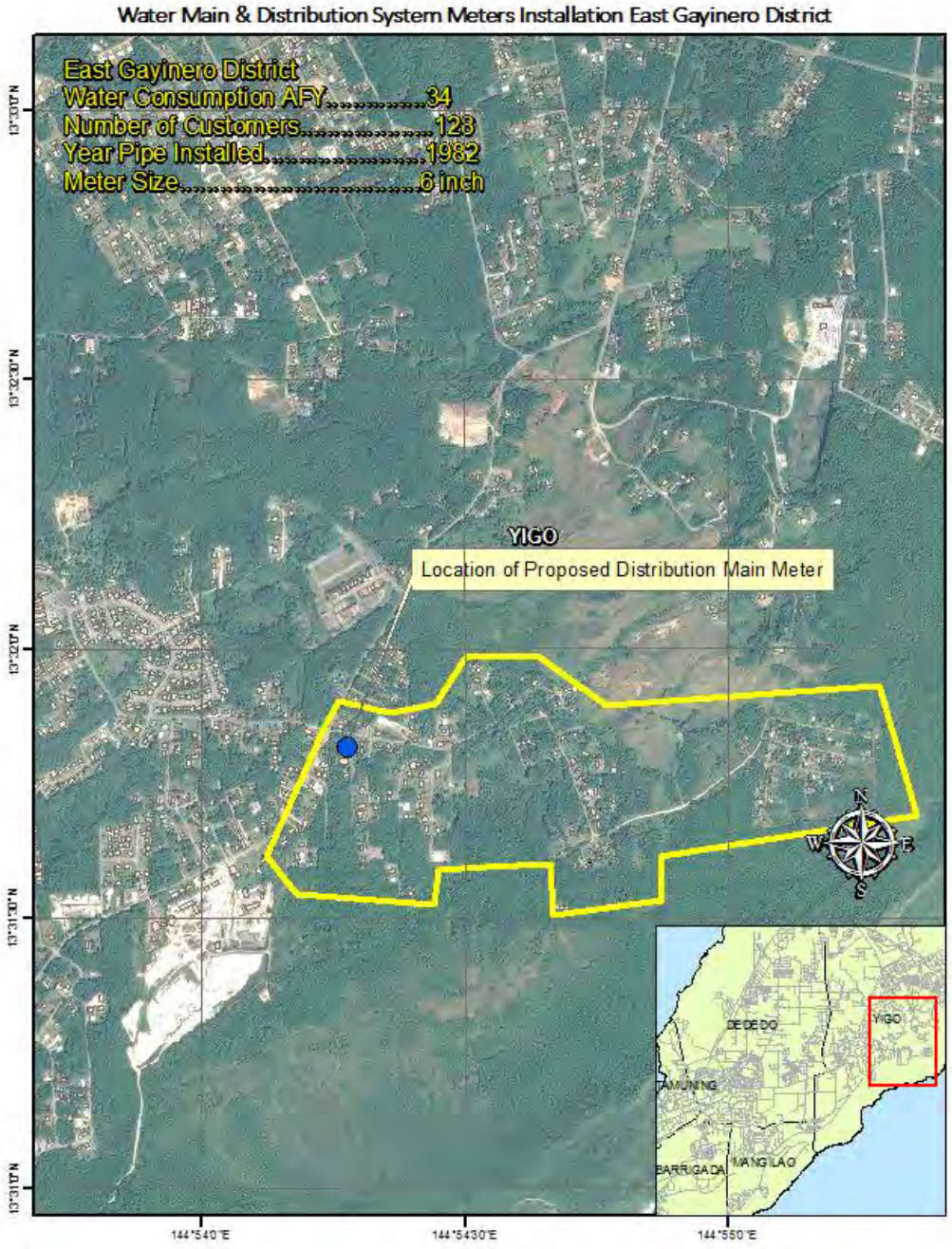

Water Main & Distribution System Meters Installation Agana District
Agana District
Water Consumption AFY.....1,003
Number of Customers.....1,365
Year Pipe Installed.....1985
Meter Size.....16 inch
Location of Proposed Distribution Main Meter
TAMUNING
AGANA
TAMUNING
MONGMONG
TOTO MAITE
ASAN
AGANA
HEIGHTS
(PAASAN)
CHALAN
PAGO
ORDOT
N
S
E
W
13°30'0"N
13°29'30"N
13°29'0"N
13°28'30"N
13°28'0"N
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144°45'30"E
144°46'0"E

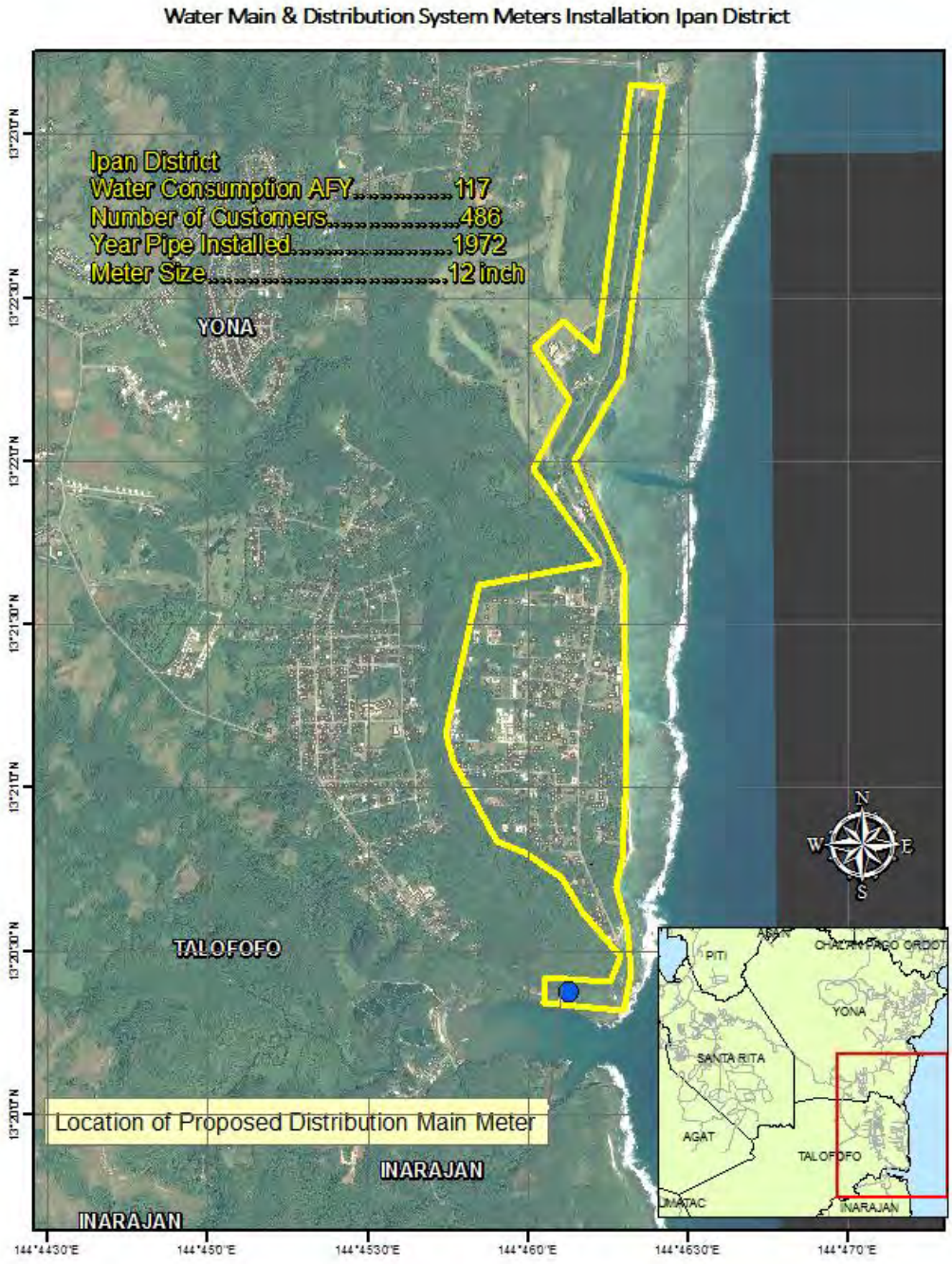

Water Main & Distribution System Meters Installation Agat District
Location of Proposed Distribution Main Meter
SANTA RITA
Agat District
Water Consumption AFY.....495
Number of Customer.....1,827
Year Pipe Installed.....1996
Meter Size.....12
AGAT
UMATAC
N
W
E
S
PITI
YONA
SANTA RITA
AGAT
TALOFOFO
UMATAC
INARAJAN
13°24'0"N
13°23'0"N
13°23'0"N
13°22'0"N
13°22'0"N
13°21'0"N
13°21'0"N
13°20'0"N
13°20'0"N
144°39'0"E
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144°41'0"E
144°41'30"E
144°42'0"E

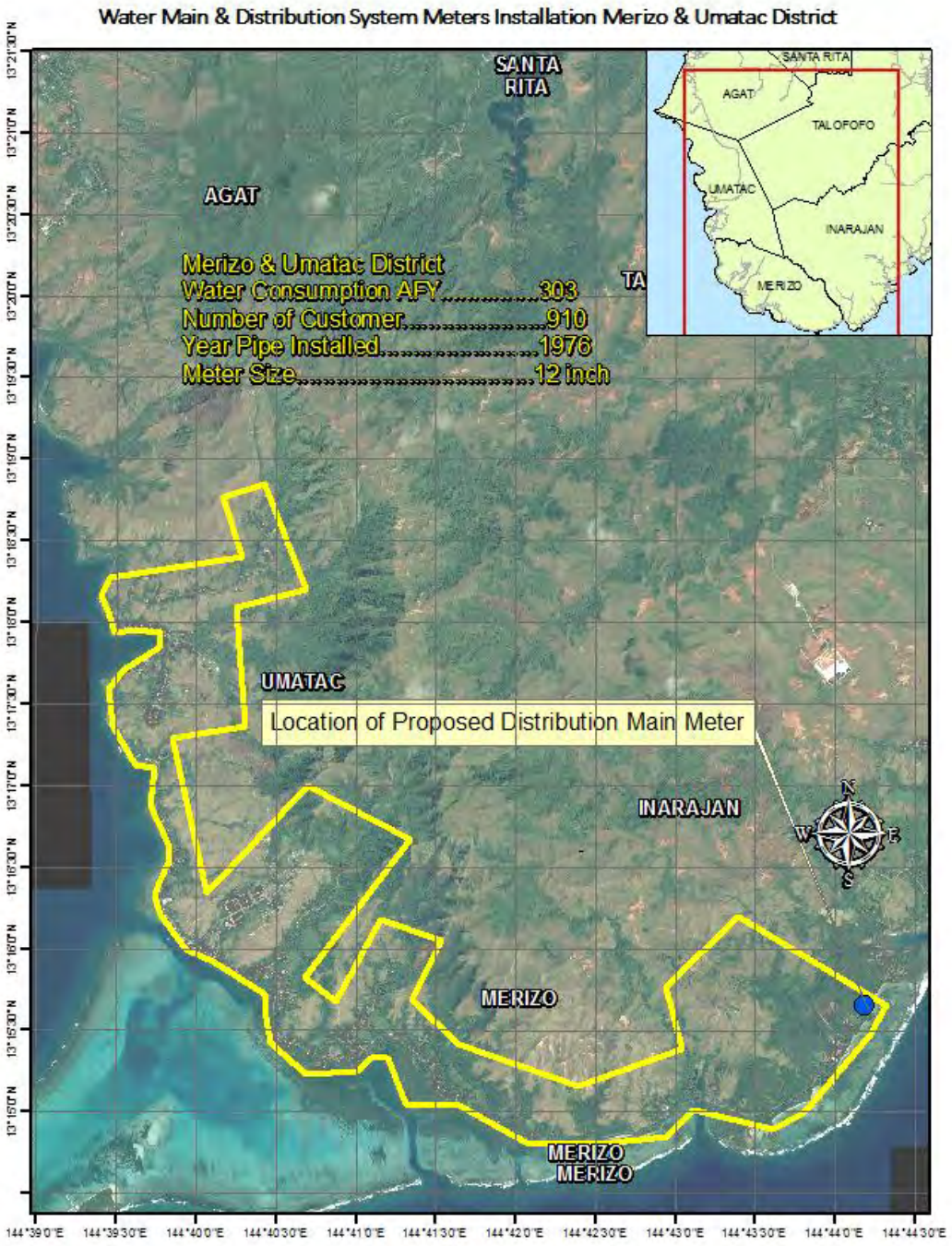

Water Main & Distribution System Meters Installation Anao District
Location of Proposed Distribution Main Meter
YIGO
Anao District
Water Consumption AFY.....37
Number of Customers.....144
Year Pipe Installed.....1992
Meter Size.....8 inch
N
W
E
S
DEDEDO
YIGO
MANGILAO
13°33'0"N
13°32'30"N
13°32'0"N
144°54'30"E
144°55'0"E
144°55'30"E

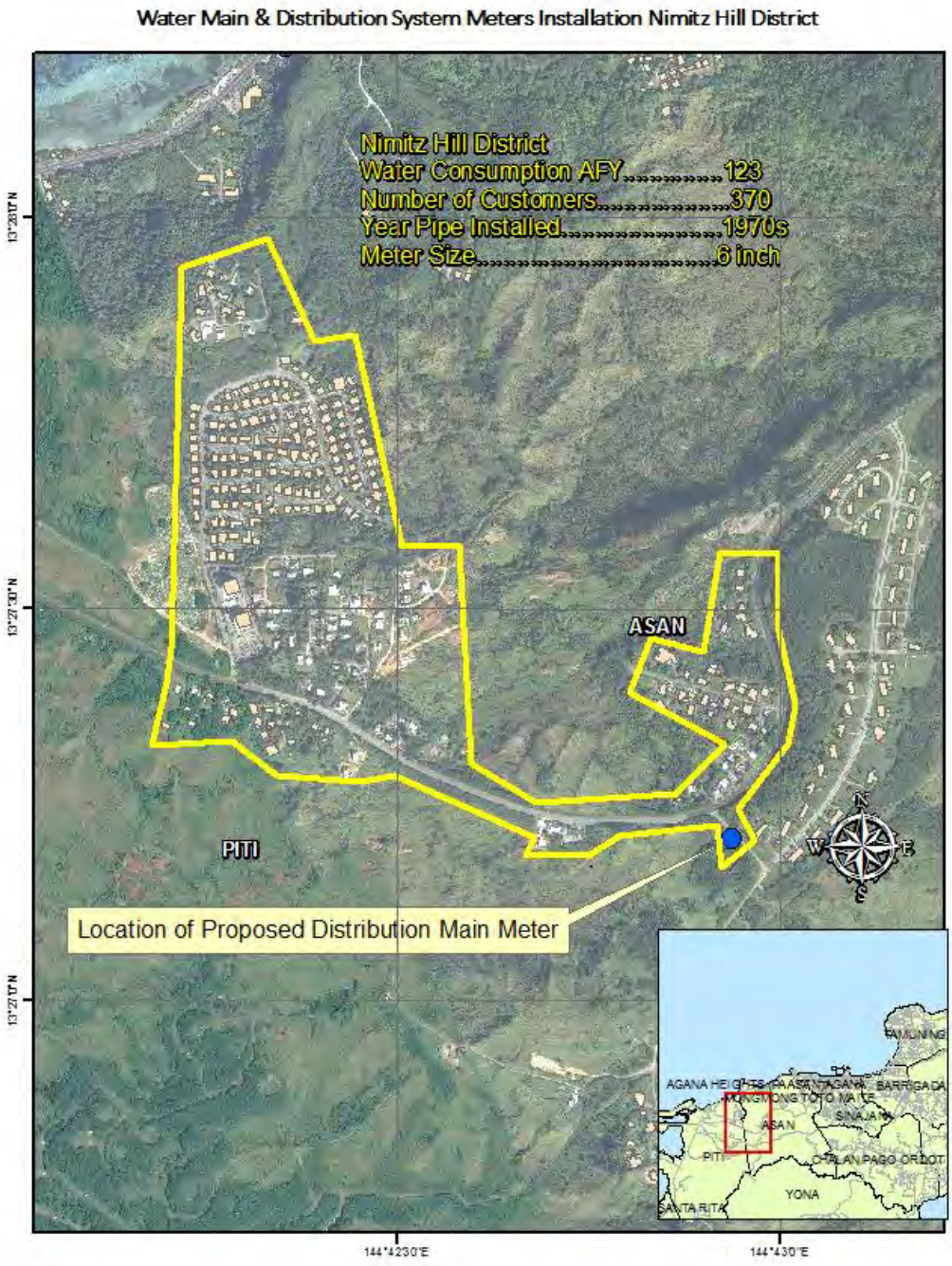

Water Main & Distribution System Meters Installation Asan District
Asan District
Water Consumption AFY.....103
Number of Customers.....413
Year Pipe Installed.....1991
Meter Size.....20 inch
Location of Proposed Distribution Main Meter
ASAN
PITI
13°29'0"N
13°28'30"N
13°28'0"N
144°42'30"E
144°43'0"E
144°43'30"E
N
W
E
S
PAMUNING
AGANA HEIGHTS
SINAJANA
ASAN
PITI
YONA
SANTA RITA

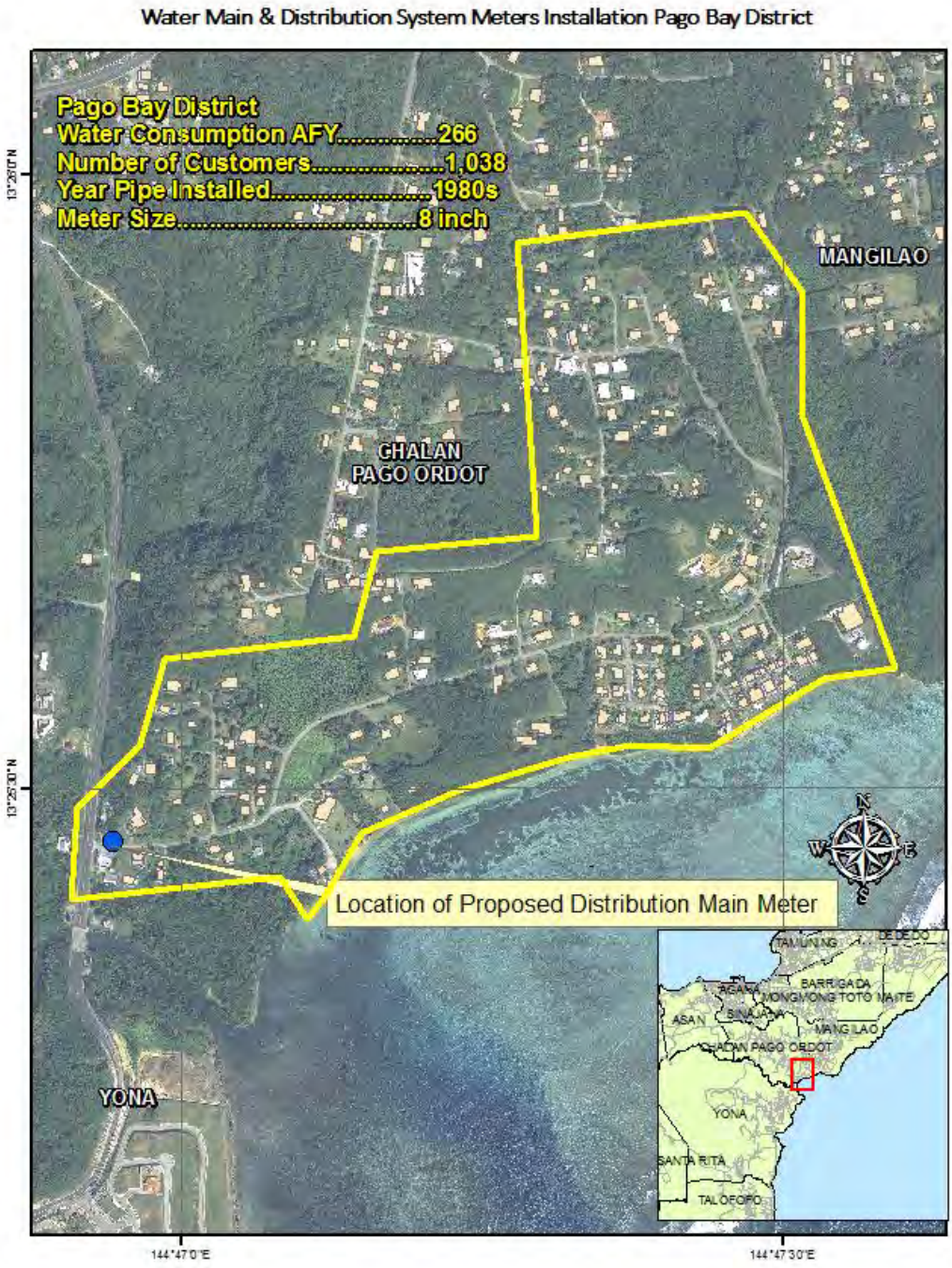

Water Main & Distribution System Meters Installation Baza Gardens District
Baza Garden District
Water Consumption AFY.....91
Number of Customers.....466
Year Pipe Installed.....1980s
Meter Size.....Two, 6 inch
Location of Proposed Distribution Main Meter
YONA
Location of Proposed Distribution Main Meter
13°23'0"N
13°22'30"N
144°45'0"E
144°45'30"E
N
W
E
S
PITI
YONA
SANTA RITA
AGAT
TALOFOFO
INARAJAN
DMATAC

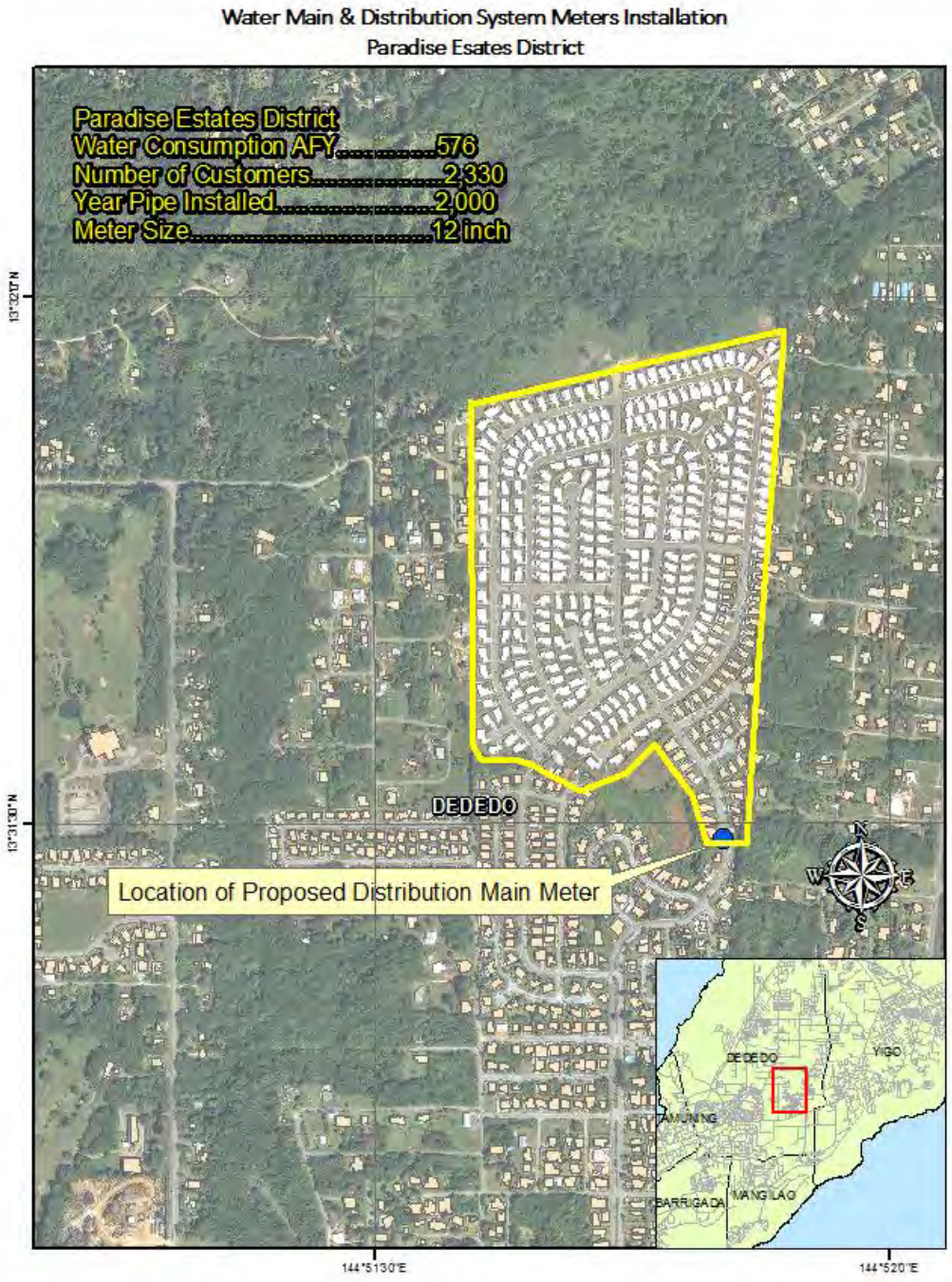

Water Main & Distribution System Meters Installation East Gayinero District
East Gayinero District
Water Consumption AFY.....34
Number of Customers.....123
Year Pipe Installed.....1982
Meter Size.....6 inch
YIGO
Location of Proposed Distribution Main Meter
N
W
E
S
DEDEDO
YIGO
MUNG
BARRIGADA
MANGILAO
13°33'0"N
13°32'30"N
13°32'0"N
13°31'30"N
13°31'0"N
144°54'0"E
144°54'30"E
144°55'0"E

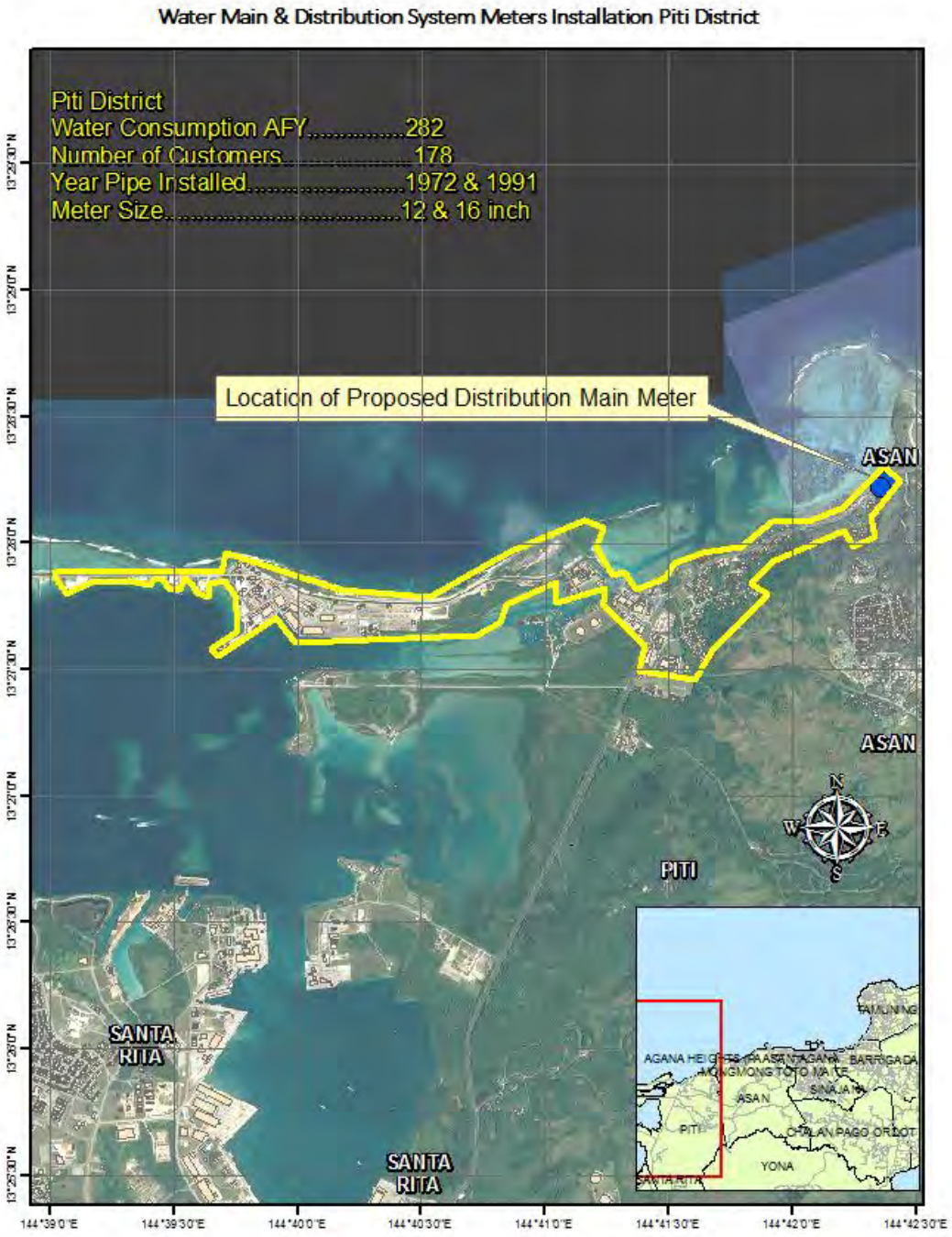

Water Main & Distribution System Meters Installation Ipan District
Ipan District
Water Consumption AFY.....117
Number of Customers.....486
Year Pipe Installed.....1972
Meter Size.....12 inch
YONA
TALOFOFO
INARAJAN
INARAJAN
Location of Proposed Distribution Main Meter
PITI
CHALAN PAGO ORDOT
YONA
SANTA RITA
AGAT
TALOFOFO
INARAJAN
JMATAC
N
W
E
S
13°23'0"N
13°22'30"N
13°22'0"N
13°21'30"N
13°21'0"N
13°20'30"N
13°20'0"N
144°44'30"E
144°45'0"E
144°45'30"E
144°46'0"E
144°46'30"E
144°47'0"E


Water Main & Distribution System Meters Installation Merizo & Umatac District
SANTA RITA
AGAT
Merizo & Umatac District
Water Consumption AFY.....303
Number of Customer.....910
Year Pipe Installed.....1976
Meter Size.....12 inch
UMATAG
Location of Proposed Distribution Main Meter
INARAJAN
MERIZO
MERIZO
MERIZO
SANTA RITA
AGAT
TALOFOFO
UMATAC
INARAJAN
MERIZO
N
W
E
S

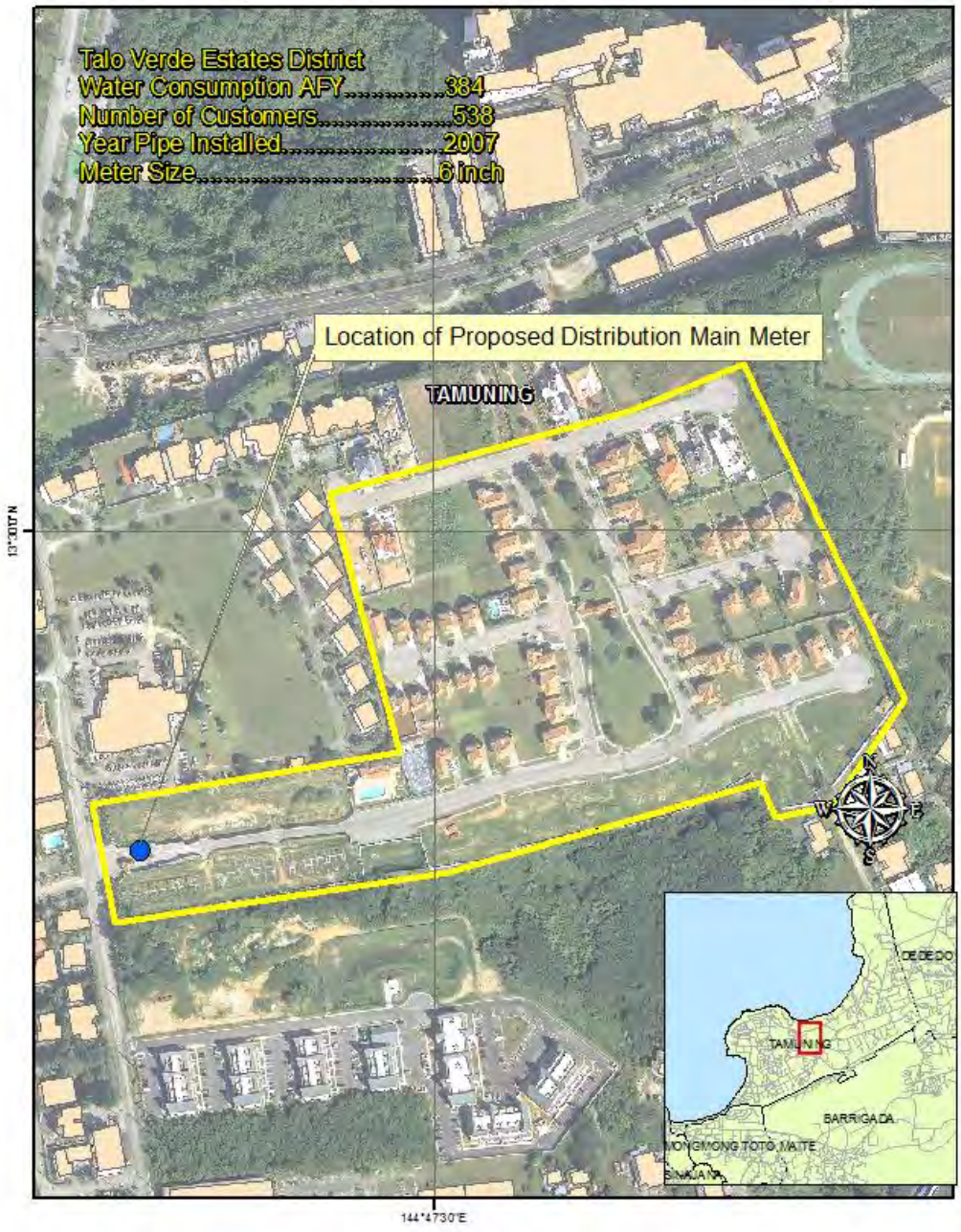

Water Main & Distribution System Meters Installation Nimitz Hill District
Nimitz Hill District
Water Consumption AFY.....123
Number of Customers.....370
Year Pipe Installed.....1970s
Meter Size.....6 inch
ASAN
PITI
Location of Proposed Distribution Main Meter
13°28'0"N
13°27'30"N
13°27'0"N
144°42'30"E
144°43'0"E
N
W
E
S
AGANA HEIGHTS
SINAJANA
ASAN
PITI
YONA
SANTA RITA

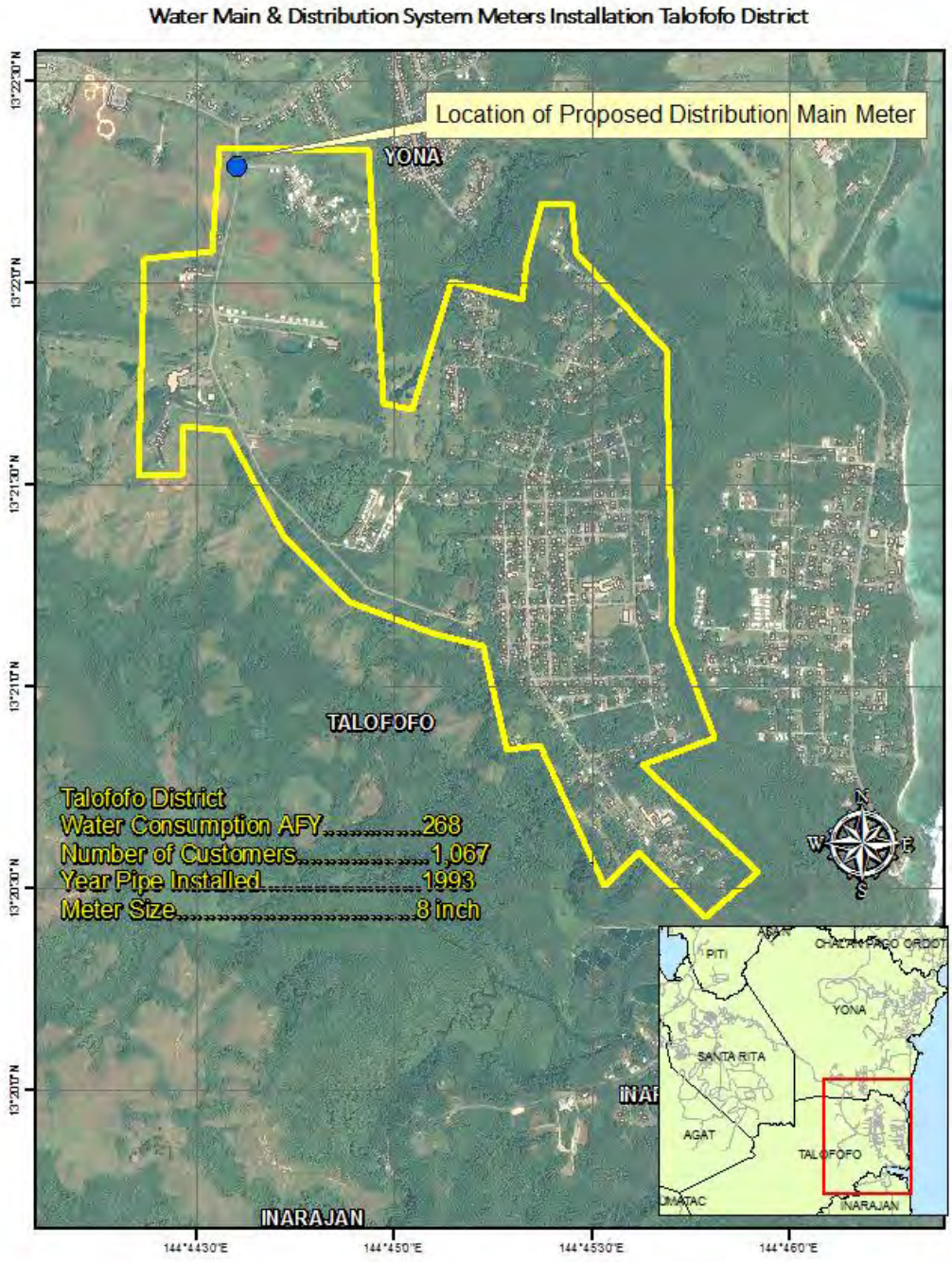

Water Main & Distribution System Meters Installation Pago Bay District
Pago Bay District
Water Consumption AFY.....266
Number of Customers.....1,038
Year Pipe Installed.....1980s
Meter Size.....8 inch
MANGILAO
GHALAN
PAGO ORDOT
YONA
Location of Proposed Distribution Main Meter
13°26'0"N
13°25'30"N
144°47'0"E
144°47'30"E
N
W
E
S
TAMUNING
DEDEDO
BARRIGADA
AGANA
MONGMONG TOTO MAITE
ASAN
SINAJANA
MANGILAO
GHALAN PAGO ORDOT
YONA
SANTA RITA
TALOFOFO


Water Main & Distribution System Meters Installation
Paradise Esates District
Paradise Estates District
Water Consumption AFY.....576
Number of Customers.....2,330
Year Pipe Installed.....2,000
Meter Size.....12 inch
DEDEDO
Location of Proposed Distribution Main Meter
144°51'30"E
144°52'0"E


Water Main & Distribution System Meters Installation Piti District
Piti District
Water Consumption AFY.....282
Number of Customers.....178
Year Pipe Installed.....1972 & 1991
Meter Size.....12 & 16 inch
Location of Proposed Distribution Main Meter
ASAN
ASAN
PITI
SANTA RITA
SANTA RITA
N
W
E
S
144°39'0"E
144°39'30"E
144°40'0"E
144°40'30"E
144°41'0"E
144°41'30"E
144°42'0"E
144°42'30"E
13°29'0"N
13°28'0"N
13°27'0"N
13°26'0"N
13°25'0"N

Water Main & Distribution System Meters Installation Talo Verde Estates District




Water Main & Distribution System Meters Installation Talofofo District
Location of Proposed Distribution Main Meter
YONA
TALOFOFO
INARAJAN
Talofofo District
Water Consumption AFY.....268
Number of Customers.....1,067
Year Pipe Installed.....1993
Meter Size.....8 inch
PITI
SANTA RITA
AGAT
YONA
TALOFOFO
INARAJAN
144°44'30"E
144°45'0"E
144°45'30"E
144°46'0"E

Evaluation Criteria

Evaluation Criteria A - Quantifiable Water Savings

MUNICIPAL METERING

A. How has the estimated average annual water savings that will result from the project been determined?

The percentage of water loss fluctuates, but it had been pegged at 59% in a recent GWA audit report. Given that GWA does not yet have any system meters in place, an assumption has to be made that the loss value is an average for all locations. An assumed district total volume received and assumed loss can be calculated by:

Assumed District Total Received = Metered Consumption / 0.41
Assumed District Loss = Assumed District Total Received – Metered Consumption

Based on this, the 14 project districts have a total assumed loss of 5,871.54 AFY. With an effort to reduce water loss to a minimum of 40% using leak detection and repair, a water savings is calculated by:

*Water Savings = Assumed District Loss – (Assumed District Total Received * 0.40)*

Thus, a total water savings of 1,890.84 AFY can be achieved.

Project District Totals	
Metered Consumption (gal/yr)	1,329,544,793.00
Metered Consumption (gal/day)	3,640,170.00
Metered Consumption (AFY)	4,080.22
Assumed District Total Received (gal/yr)	3,242,792,178.05
Assumed District Total Received (gal/day)	8,878,463.43
Assumed District Total Received (AFY)	9,951.76
Assumed Loss (gal/yr)	1,913,247,385.05
Assumed Loss (gal/day)	5,238,293.42
Assumed Loss (AFY)	5,871.54
Assumed Leak Rate (gpm)	3,637.70
Water Conserved Upon Meeting Yr1 Target Loss Goal (gal/yr)	616,130,513.83
Water Conserved Upon Meeting Yr1 Target Loss Goal (gal/day)	1,686,908.05
Water Conserved Upon Meeting Yr1 Target Loss Goal (AFY)	1,890.84
Annual Cost Savings	$ 903,740.24
Daily Cost Savings	$ 2,474.36

B. How have current distribution system losses and/or the potential for reductions in water use by individual users been determined?

The potential for reductions in water use by individual users has not yet been determined. Current distribution system losses have been determined by calculating the difference between the metered water production and metered water consumption. GWA's water system is large and it is difficult to target the locations of where the loss occurs without district and/or pressure zone meters.

C. For installing individual water user meters, refer to studies in the region or in the applicant's service area that are relevant to water use patterns and the potential for reducing such use. In the absence of such studies, please explain in detail how expected water use reductions have been estimated and the basis for the estimations.

Not applicable.

D. If installing distribution main meters will result in conserved water, please provide support for this determination (including, but not limited to leakage studies, previous leakage reduction projects, etc.). Please provide details underlying any assumptions being made in support of water savings estimates (e.g., how leakage will be reduced once identified with improved meter data).

Installation of distribution main/district meters will not directly result in conserved water. However, it will allow GWA to calculate the actual water loss for that area. Given the water loss threshold (40%) for a metered district, leak detection and repair crews can focus their work in a zone until losses meet or drop below it.

E. What types (manufacturer and model) of devices will be installed and what quantity of each?

Makes and models of meters will be determined during the design phase of the project. However, the preferred metering technologies are electromagnetic and ultrasonic, and it must be capable of transmitting data through the Badger/Orion AMI environment. A total of 16 meters will be required for the 14 project sites; five 6", three 8", five 12", two 16", and one 20".

F. How will actual water savings be verified upon completion of the project?

Data collection for metered consumption and production is ongoing on a monthly basis. As the distribution main meters go live, GWA will be able to transition the districts from assumed losses to actual, calculated losses using metered water received and metered consumption data, creating a baseline. GWA will then produce a simple monthly water audit of each district, and this report will be submitted to operations and management. It is expected that district imports will be reduced as water loss is addressed and will be reflected in successive reports.

Evaluation Criteria E - Department of the Interior Priorities

This project does not appear to fit under any of the established Department of the Interior priorities. However, Guam is under the administrative oversight of DOI as per Executive Order 10077.

Evaluation Criteria F - Implementation and Results

GWA does not have a Water Conservation Plan and/or a System Optimization Review in place.

Evaluation Criteria G - Nexus to Reclamation Project Activities

This project has no connections to any existing Reclamation project activities.

Evaluation Criteria H - Additional Non-Federal Funding

GWA's non-federal cost share of 50% meets the minimum requirement as follows:

A.	*Total Project Cost =*	*$2,000,000 (100%: B+C)*
B.	*Local Non-Federal Cost Share =*	*$1,000,000 (50%: B/A)*
C.	*BOR Grant Request =*	*$1,000,000 (50%: C/A)*

Program Questions: Environmental and Cultural Resources Compliance

Question:	Yes/Explanation	No
1. Will the proposed project impact the surrounding environment(soil,[dust], air, water [quality and quantity], animal habitat)?	Earthmoving will be limited to previously disturbed areas on existing right of way.	
2. Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?		X
3. Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "waters of the United States?" If so, please describe and estimate any impacts the project may have.		X
4. When was the water delivery system constructed?	Much of the water system was constructed between 1970 through 1990. The newest project site was constructed in 2007.	
5. Will the project result in any modification of or effects to, individual features of an irrigation system (e.g. head gates, canals, or flumes)?		X
6. Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?		X
7. Are there any known archeological sites in the proposed project area?		X
8. Will the project have a disproportionately high and adverse effect on low income or minority populations?		X
9. Will the project limit access to a ceremonial use of Indian scared sites or result in other impacts on tribal lands?		X
10. Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?		X

The project involves work that will be accomplished on exiting and disturbed land, specifically on the government rights of way; therefore, minimal environmental impact is expected. It is anticipated that the project will be eligible for a categorical exclusion. The GWA will consult environmental and historic agencies (below) concerning the project, although a letter authorizing the GWA to initiate the National Environmental Policy Act (NEPA) and Section 106 process on behalf of the Bureau of Reclamation is required. The GWA expects to be able to forward

consultations with no significant affects to the Bureau of Reclamation, the Planning and Grants section has performed dozens of consultations for its EPA Safe Drinking & Clean water programs.

Agencies that will be consulted for a record of environmental consideration as applicable:

- Guam Department of Agriculture, Fish and Wildlife Division
- Guam Department of Agriculture, Forestry Division
- Guam Environmental Agency, Water Quality Division
- U.S. Fish & Wildlife
- Parks & Recreation, Guam Historic Preservation Office

Required Permits or Approvals

All work will be competitively procured abiding by the Government of Guam Procurement Code. Architectural and Engineering contracts awarded will follow the standard contracting documents established by the Engineers Joint Contract Documents Committee (EJCDC) and as an addendum pertinent grant requirement included. Engineering firms and construction firms doing business with the GWA is contractually required to obtain all required municipal building permits. All building permits require that it runs through a process similar to NEPA & section 106. Having performed NEPA prior to the project start date will ensure a smooth municipal building permitting review and approval. All construction work will be on contract. The GWA will intervene in the process in special cases where it is beyond the control of the firm or construction contractor; and it deems it is in the best interest of GWA and the project to do so.

Letters of Project Support

Guam Congress Delegate, the Honorable Madeline Z. Bordallo's endorsement letter can be found in Appendix B.

Consolidated Commission on Utilities Official Resolution

The GWA is unable to submit an official board resolution with this application, because of the timing of meeting. Later this month on May 22, 2018 a meeting is scheduled and GWA expects the resolution to pass in approving this project and obligating the GWA to cover the cost of its share of the match of $1,000,000 or 50 percent of total project costs.

Key Management

Miguel C. Bordallo P.E., General Manager was selected by the CCU effective January 4, 2016. Mr. Bordallo has over 25 years of experience in environmental/mechanical engineering and construction in California, Guam and Micronesia. Prior to joining GWA, Mr. Bordallo was a consulting engineer providing design and design-build services for water and wastewater infrastructure projects and was also vice-president of a large construction company on Guam. Mr. Bordallo holds a B.S. in Mechanical Engineering with honors from Marquette University in Milwaukee, Wisconsin, and is a licensed professional engineer on Guam.

Greg P. Cruz, CPA has served as Chief Financial Officer for GWA since his appointment in July 2007. He has over 25 years of experience in the accounting profession, including 15 years in management capacity. He has held positions in the telecommunications industry, public

accounting and various Government of Guam agencies. Mr. Cruz earned a B.A. in accounting from Western Washington University in Bellingham, Washington, and is a Certified Public Accountant and licensed to practice in Guam.

Paul J. Kemp, Assistant General Manager, Compliance and Safety has 56 years of experience in management related to water quality and chemistry for natural waters, drinking water, water for industrial applications, ultra-high purity water, wastewater treatment, water recovery for reuse, and environmental and safety compliance and training. Prior to joining GWA in 2003, he has held engineering and management positions in private laboratories, research and manufacturing companies as well as teaching and research positions in higher education. Mr. Kemp was trained as an analytical chemist specializing in spectroscopic methods and water analysis and received a B.S. in chemistry from Iowa State University and an M.S. in Analytical Chemistry from Oregon State University.

Budget

Funding Plan and Letters of Commitment

1. How you will make your contribution to the cost-share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant (e.g., reserve account, tax revenue, and/or assessments).

The entire project cost is $2,000,000. We respectfully request funding from the BOR in the amount of one million dollars. GWA's cost share towards the project is $1 million in cash from GWA's Revenue Bond funds. The local cost share of the project is 50% and the BOR funding is 50%. Funding from BOR will support the entire three-year project period.

2. Describe any donations or in-kind costs incurred before the anticipated Project start date that you seek to include as project costs.

There are no costs incurred before the project start date that are included as project costs.

3. Describe any funding requested or received from other Federal partners.

The proposed project does not include Federal partners. See Table C.

Table C. Summary of Non-Federal and Federal Funding Sources

Funding Sources	Amount
Non-Federal Entities	
Guam Waterworks Authority	$ 1,000,000.00
Other Federal Entities	
None	$ -
Requested Reclamation Funding	$ 1,000,000.00
Total Project Cost	**$ 2,000,000.00**

4. Describe any pending funding requests that have not yet been approved, and explain how the project will be affected if such funding is denied.

There are no pending funding requests.

Budget Proposal

Table D. GWA Distribution Main Metering Project Budget Proposal

Budget Item Description	Computation			Total Cost
	Qty	Unit	Unit Cost	
Salaries and Wages				
Personnel costs are not included in the scope of the grant application.				$ -
Fringe Benefits				
Not Applicable				$ -
Travel				
Not Applicable				$ -
Equipment				
Not Applicable				$ -
Supplies and Materials				
Meter Field Verification Device	1	EA	$ 4,000.00	$ 4,000.00
Contractual/Construction				
Project Design	1	LS	$ 500,000.00	$ 500,000.00
Installation of 6" Distribution Main Meter	5	EA	$ 30,840.00	$ 154,200.00
Installation of 8" Distribution Main Meter	3	EA	$ 40,000.00	$ 120,000.00
Installation of 12" Distribution Main Meter	5	EA	$ 60,000.00	$ 300,000.00
Installation of 16" Distribution Main Meter	2	EA	$ 121,000.00	$ 242,000.00
Installation of 20" Distribution Main Meter	1	EA	$ 193,000.00	$ 193,000.00
Site Electrical and Communications Installation	14	EA	$ 31,200.00	$ 436,800.00
Orion Data Center Software Configuration	1	LS	$ 10,000.00	$ 10,000.00
Environmental Review				
Equal to approximately 2% of total project cost	1	LS	$ 40,000.00	$ 40,000.00
Other				
Not Applicable				$ -
Indirect				
Not Applicable				$ -
Total Estimated Project Costs				**$ 2,000,000.00**

Budget Narrative

1. Salaries and Wages

Total BOR Request: $0

Personnel costs (salaries and wages) for the project are not included in the project budget to facilitate ease of GWA's reporting to BOR. Personnel costs will be provided by GWA outside of the grant scope. Design, construction, and installation components of this project will be procured through competitive bids.

2. Fringe Benefits

Not applicable.

3. Travel

Not applicable.

4. Equipment

Not applicable.

5. Materials and Supplies

Total BOR Request: $0

The costs for the materials and supplies portion of the project will go towards a meter verification device. It will allow the distribution main meters to be verified on site without interruption of water service. This tool is necessary to ensure that meter readings are accurate within the manufacturer's specified tolerances.

6. Contractual

Total BOR Request: $960,000

This grant request includes the costs of the materials and installation of the distribution main flow meters. The make and models of meters and isolation valves are to be determined during the design phase of the project. It is anticipated and recommended that the distribution main meters will be compatible with the Badger/Orion automated metering infrastructure (AMI) environment as all current GWA service meters are AMI-capable. Work to be conducted at each site includes equipment mobilization, erosion control, traffic control, pavement removal and restoration, excavation, vault installation, pipe work, meter installation, backfilling, and testing and inspection of the distribution main meter.

GWA will be responsible for the costs of all the remaining project activities in the Contractual category, and these include:

- Project design
- Electrical site improvements
- Communications installation and setup
- Data Center application configuration

Upon completion of the project, the customer meters within the established districts may be migrated over to a fixed network operation mode which would allow GWA the ability to perform a district water audit at a moment's notice. This task is outside the scope of the project and costs will be incurred by GWA.

Costs for the Contractual category were based on past GWA projects with similar scope.

7. Environmental and Regulatory Compliance Costs

Total BOR Request: $40,000

The project will be evaluated for NEPA compliance during Year 1 of the project, and it is expected that the project will be designated a Categorical Exclusion for NEPA because the it will result in minor construction activities and will utilize existing facilities. Therefore, the total project budget includes costs of approximately 2% ($40,000) of the total project cost to cover GWA's staff time to prepare, submit, and coordinate environmental documents, and Reclamation's cost to review the documents.

8. Other Expenses

Not applicable.

9. Indirect Costs

Not applicable.

10. Total Costs

The cost of the entire distribution main metering project is $2,000,000, of which $1,000,000 is requested from the Bureau of Reclamation, and $1,000,000 is Guam Waterworks Authority's cost share. Project costs stated herein are estimates and may be adjusted upon work contracting. A breakdown of costs is shown in Table E.

Table E. Budget Cost Breakdown

Budget Item Description	Computation			Total Cost
	Qty	Unit	Unit Cost	
Project Design	1	LS	$500,000.00	$ 500,000.00
6" Electromagnetic Flow Meter	5	EA	$ 4,000.00	$ 20,000.00
6" Isolation Valve	10	EA	$ 1,500.00	$ 15,000.00
Vault for 6" Meter	5	EA	$ 4,000.00	$ 20,000.00
Site Work for 6" Meter	5	EA	$ 19,840.00	$ 99,200.00
8" Electromagnetic Flow Meter	3	EA	$ 5,000.00	$ 15,000.00
8" Isolation Valve	6	EA	$ 2,500.00	$ 15,000.00
Vault for 8" Meter	3	EA	$ 7,000.00	$ 21,000.00
Site Work for 8" Meter	3	EA	$ 23,000.00	$ 69,000.00
12" Electromagnetic Flow Meter	5	EA	$ 10,000.00	$ 50,000.00
12" Isolation Valve	10	EA	$ 5,000.00	$ 50,000.00
Vault for 12" Meter	5	EA	$ 8,000.00	$ 40,000.00
Site Work for 12" Meter	5	EA	$ 32,000.00	$ 160,000.00
16" Electromagnetic Flow Meter	2	EA	$ 15,000.00	$ 30,000.00
16" Isolation Valve	4	EA	$ 14,000.00	$ 56,000.00
Vault for 16" Meter	2	EA	$ 13,000.00	$ 26,000.00
Site Work for 16" Meter	2	EA	$ 65,000.00	$ 130,000.00
20" Electromagnetic Flow Meter	1	EA	$ 25,000.00	$ 25,000.00
20" Isolation Valve	2	EA	$ 24,000.00	$ 48,000.00
Vault for 20" Meter	1	EA	$ 20,000.00	$ 20,000.00
Site Work for 20" Meter	1	EA	$ 100,000.00	$ 100,000.00
AMI Data Collector/Network Gateway	14	EA	$ 6,000.00	$ 84,000.00
Outdoor Broadband Wireless Mesh Router	14	EA	$ 6,000.00	$ 84,000.00
AMI Fixed Network Endpoint	14	EA	$ 200.00	$ 2,800.00
Pressure Transmitter	14	EA	$ 2,000.00	$ 28,000.00
Communications Setup and Testing	14	EA	$ 2,000.00	$ 28,000.00
Electrical Site Improvements	14	EA	$ 15,000.00	$ 210,000.00
Environmental Review	1	LS	$ 40,000.00	$ 40,000.00
Meter Field Verification Device	1	EA	$ 4,000.00	$ 4,000.00
Orion Data Center Software Configuration	1	EA	$ 10,000.00	$ 10,000.00
			Grand Total	**$ 2,000,000.00**

Appendix A

Guam Waterworks Authority FY 2017 Financial Highlights Report

April 24, 2018

Guam Waterworks Authority
FY 2017 Financial Highlights

April 24, 2018

For the second consecutive year, the Guam Waterworks Authority (GWA) qualified as a low-risk auditee. No findings pertaining to federal funds were identified in fiscal year (FY) 2017. Independent auditors Deloitte and Touche, LLP rendered an unmodified "clean" opinion on GWA's financial statements and compliance over major federal programs. GWA closed FY 2017 with a significant increase in net position (net income) of $40.4 million (M), primarily due to the $21.8M in federal capital grants, compared to the 27.2M in net income the prior year. The 2016 financial statements were restated due to the implementation of the Governmental Accounting Standards Board (GASB) Statement No. 73.

GWA Capital Improvement Plan, Debt Service, and Future Borrowings
In FY 2017, capital assets increased by $72.0M. The increase is attributable to on-going major capital improvement projects associated with the 2011 Federal Court Order and GWA's five-year Capital Improvement Plan (CIP). CIP project costs were estimated at $450M-$500M. On-going construction projects included replacement of wastewater treatment plant, transmission lines, booster pump upgrades, sewer line rehabilitation or replacements, deep well rehabilitations, acquisition of mechanical and electrical equipment, and general plant improvements. GWA is currently working with Guam contractors on the H-2B visa issue due to the industry's decreasing availability of foreign workers. This poses a conundrum for the local construction industry and has already led to construction delays, escalating costs, and fewer bidders for GWA projects due to the size and complex nature of GWA's project.

In fall 2016, GWA was awarded $55.3M in grants from the U.S. Department of Defense Office of Economic Adjustment. This was to initiate projects associated with the design and construction of improvements needed to bring the Northern District Wastewater Treatment Plant (NDWWTP) to full secondary treatment capability as required by the new National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency. GWA is on schedule to complete the NDWWTP upgrades by December 2021. In late 2017, GWA received an additional grant totaling $117.9M for construction of wastewater improvements related to the build-up.

GWA had a long-term debt outstanding of $515.0M in FY 2017. This is a $7.9M decrease from the $522.9M in FY 2016. In December 2017, GWA refinanced the 2010 revenue bond series.

Decrease in Operating Revenues and Increase in Operating Expenses
GWA's total net position (net income) increased by $40.4M from $182.5M in FY 2016 to $222.9M in FY 2017.

Operating revenues totaled $104.4M or a 1% decrease compared to $105.4M in the prior year. The decline was primarily due to a 2% or $645 thousand (K) decrease in water and wastewater revenues. Of GWA's $104.4M operating revenues (net of bad debts expense), water revenues ($66.6M) accounted for 64% and wastewater revenues ($38.7M) accounted for 37%. The residential (48%), commercial (21%), and hotel (20%) sectors continue to account for 89% of water revenues. While hotel water revenues increased by $383K, residential water revenues decreased by $650K.

Operating and maintenance expenses increased by $3.5M from $68.8M in FY 2016 to $72.4M in FY 2017. The top two contributing factors were increases in depreciation expenses and water purchases. Navy water purchases increased due to a combination of approximately 17.6K additional kgals of water purchases and a 15% increase in the Navy's tariff. As a result, operating income was $32.0M compared to $36.5M, a decline of $4.5M.

Unaccounted Water
Historically, one of GWA's most challenging problems is the amount of unaccounted for (non-revenue) water. In FY 2017, approximately 59% of water produced annually is not consumed or contributing to GWA's revenue due to water losses (leaks or breaks) and unauthorized or unbilled consumption. Leaks, for the most part, account for the largest source of unaccounted for water. GWA has engaged in a water loss prevention program that includes leak detection to help reduce non-revenue water.

FY 2016 Financial Statements Restatement
In FY 2017, GWA implemented GASB No. 73, which aligns the reporting of pensions, ad hoc cost-of-living adjustments (COLA) and supplemental annuity payments. The implementation of this statement had a material effect on GWA resulting in the restatement of its FY 2016 financial statements. GWA's FY 2016 salaries, wages, and benefits increased by $1.4M and beginning net position was reduced by $9.8M. This resulted in an $11.2M decrease in total net position from $193.7M to $182.5M for FY 2016 and corresponding increase in net pension liability by $12.7M to $50.9M.

As of FY 2017, GWA's net pension liability of $49.2M includes its proportionate share of the Government of Guam's (GovGuam) pension, ad hoc COLA, and supplemental annuity payments. Of the $49.2M, $8.9M was for the ad hoc COLA/supplemental annuity plan for Defined Benefit retirees and $1.6M was for ad hoc COLA plan for Defined Contribution Retiree System retirees. Pension expense amounted to $4.6M in FY 2017 and $5.8M in FY 2016.

Other Post-Employment Benefits (OPEB)
GASB No. 75 (Post-Employment Benefits Other than Pensions) is effective and will be recorded in GWA's FY 2018 financial statements. This pertains to post-employment medical, dental, and life insurance benefits to retirees, spouses, children, and survivors. Upon implementation, it is anticipated that GWA will record an additional $36.4M liability as of FY 2017 arising from other post-employment benefits.

Reports on Compliance and on Internal Control and Major Federal Programs
GWA received an unmodified "clean" opinion on the Report on Compliance and Internal Controls and on major federal programs. The auditors did not identify any findings in FY 2017. In addition, the Management Letter identified seven deficiencies pertaining to internal control over information technology environment.

The Letter to Those Charged with Governance identified two deficiencies pertaining to: 1) Construction in Progress projects not timely transferred to the fixed assets account, and 2) Inactive Accounts Receivable balance increased due to failure to timely disconnect meters and terminate accounts for non-payment.

For more details, refer to the Management Discussion and Analysis in the audit report at www.opaguam.org and at www.guamwaterworks.org.

Appendix B

Letter of Endorsement

Madeleine Z. Bordallo, Congresswoman, U.S. House of Representatives

May 9, 2018

MADELEINE Z. BORDALLO
GUAM
ARMED SERVICES COMMITTEE
RANKING MEMBER, SUBCOMMITTEE ON READINESS
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES
NATURAL RESOURCES COMMITTEE
SUBCOMMITTEE ON INDIAN, INSULAR, AND ALASKA NATIVE AFFAIRS
SUBCOMMITTEE ON WATER, POWER AND OCEANS

Congress of the United States
House of Representatives

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http://www.house.gov/bordallo

May 9, 2018

The Honorable Brenda Burman, Commissioner
Bureau of Reclamation
U.S. Department of the Interior
1849 C Street NW, Mail Code #91-00000
Washington, DC 20240

RE: Guam Waterworks Authority's Application for WaterSMART Grant

Dear Commissioner Burman:

I write in strong support of the Guam Waterworks Authority's grant application under the Bureau's WaterSMART Program. In 1986, Congress made Guam and the other Insular Area territories eligible "Reclamation states" (Public Law 99-396). To date, Guam has never received, or to my knowledge applied for, Reclamation grant funding. I therefore urge you to give all due consideration to the Guam Waterworks Authority's application and, ultimately, approve this critical grant funding for our island's *only* public water utility.

As noted in the application, the Guam Waterworks Authority intends to use this WaterSMART grant, if approved, to install remote-reading district meters (also called "system" or "pressure-zone" meters) to address unaccounted for water loss, estimated at an alarming 58 percent. This will allow the Guam Waterworks Authority to better detect leaks, focus waterline repairs where they are needed most, and capture lost revenue. This would complement the Guam Waterworks Authority's very substantial investment in our public water system, which serves both civilian households *and* U.S. military bases on island, financed by a recent revenue-bond offering.

The Administration has committed publicly to supporting economic development in the U.S. territories and making federal investments to modernize our infrastructure. I hope that the Bureau will do its part to meet that commitment, in full, by approving the Guam Waterworks Authority's application for this WaterSMART grant. Given legacy systems and limited territorial resources, much-needed upgrades like installing meters to account for significant water loss across our waterlines are unlikely to happen without federal support.

Please do not hesitate to contact me to discuss further the importance of the Guam Waterworks Authority's continued modernization efforts and the need for this Reclamation funding. For additional information, your staff may contact my Legislative Assistant, Iain Hart. Thank you for your leadership and for considering my views in support of this application under the WaterSMART Program.

Sincerely,

Madeleine Z. Bordallo

MADELEINE Z. BORDALLO
Member of Congress

Appendix C

Resolution

Consolidated Commission on Utilities

(Forthcoming)

Appendix D

Memorandum of Understanding

GWA-GPA MOU relative to Smart Grid Network Usage

July 9, 2015

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

Guam Waterworks Authority
GM's Office
Received By: Silma B Kus
Date: 7/9/15
Time: 2:45 pm

Date: July 9, 2015

To: Samuel Taylor, Acting Interim General Manager
Guam Waterworks Authority

John M. Benavente, Interim General Manager
Guam Power Authority

From: Thomas F. Cruz, P.E., Chief Engineer, GWA

Cc: Mark Miller, Interim General Manager, GWA
Greg Cruz, Chief Financial Officer, GWA
Victor Torres, IT Manager, GWA
Barbara Cruz, P.E., Senior Engineer Supervisor, GWA

GUAM WATERWORKS AUTHORITY
BUDGET OFFICE
JOCEPHINE D. EVANGELISTA, PMBA
BUDGET OFFICER
ACTING MA IV
DATE: 07.10.15 TIME 4:57 PM

Subject: GWA - GPA MOU relative to Smart Grid Network Usage

Engineering requests your approval for GWA to enter into an agreement with GPA to allow GWA to have joint use of GPA's Smart Grid Network for GWA SCADA system, Standby Generator Control, AMI, CCTV and other future applications.

A MOU agreement between GPA and GWA, re-executed on June 2009, covers any type of work to be performed by GWA for GPA or vice versa, and remains in effect indefinitely. Enclosed are the specific terms and conditions relating to the GWA-GPA consolidated usage of the Smart Grid Network for your review and approval.

GWA's Estimated Budget Amount:

Estimated budget amount for GWA to carry out this agreement is provided in the table below. The estimated budget is based on estimated costs provided in the GWA SCADA Master Plan.

However, the estimated budget only includes GWA SCADA System and Standby Generator Control. The estimated budget for other applications is not available at this time.

PHASE	BUDGET AMOUNT
Phase A-1	$ 200,000
Phase A-2	347,000
Phase A-3	347,000
Phase B	332,000
Phase C	35,100
TOTAL	1,261,100

OFFICE GWA FINANCE & ACCOUNTING ADMINISTRATIVE
RECEIVED BY:
JUL 10 2015
BY:

GWA is only ready to certify funding for Phase A-1 in the amount of $200,000 using 2013 Bond Funds under CIP EE 09-08. Other requests will follow when funding is available.

Source of Funds:

Source of funds for Phase A-1 will be 2013 Bond Funds under CIP EE 09-08 in the amount of $200,000.

Recommend Approval by:

Thomas F. Cruz, P.E. Chief Engineer, GWA — Date: 7/9/15

Budget Review:

Greg Cruz, Chief Financial Officer, GWA — Date: 7.20.15

Approved by:

Samuel Taylor, Acting Interim General Manager, GWA — Date: 7/10/15

John M. Benavente, Interim General Manager, ~~GWA~~ GPA — Date: 7/23/15

Attachments:
1. Memorandum of Understanding between the Guam Waterworks Authority and the Guam Power Authority for Services Rendered, June 23, 2009
2. Terms and Conditions |Relative to Joint Usage of the Smart Grid Communications and Network Infrastructure

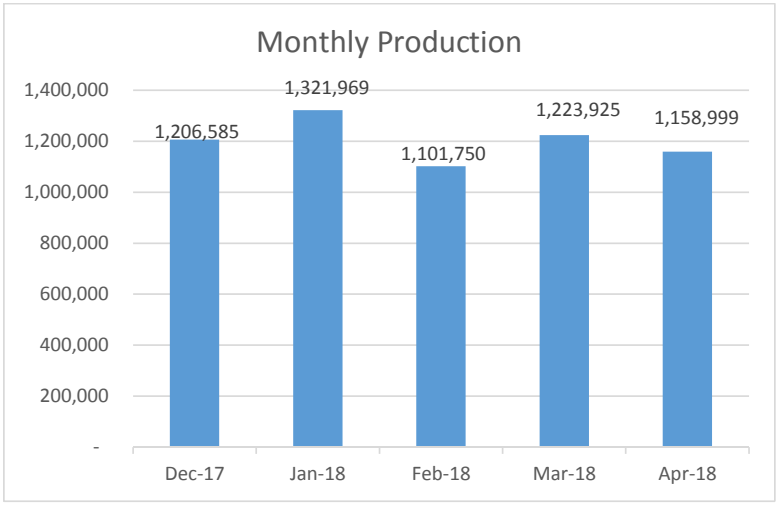
GUAM WATERWORKS AUTHORITY

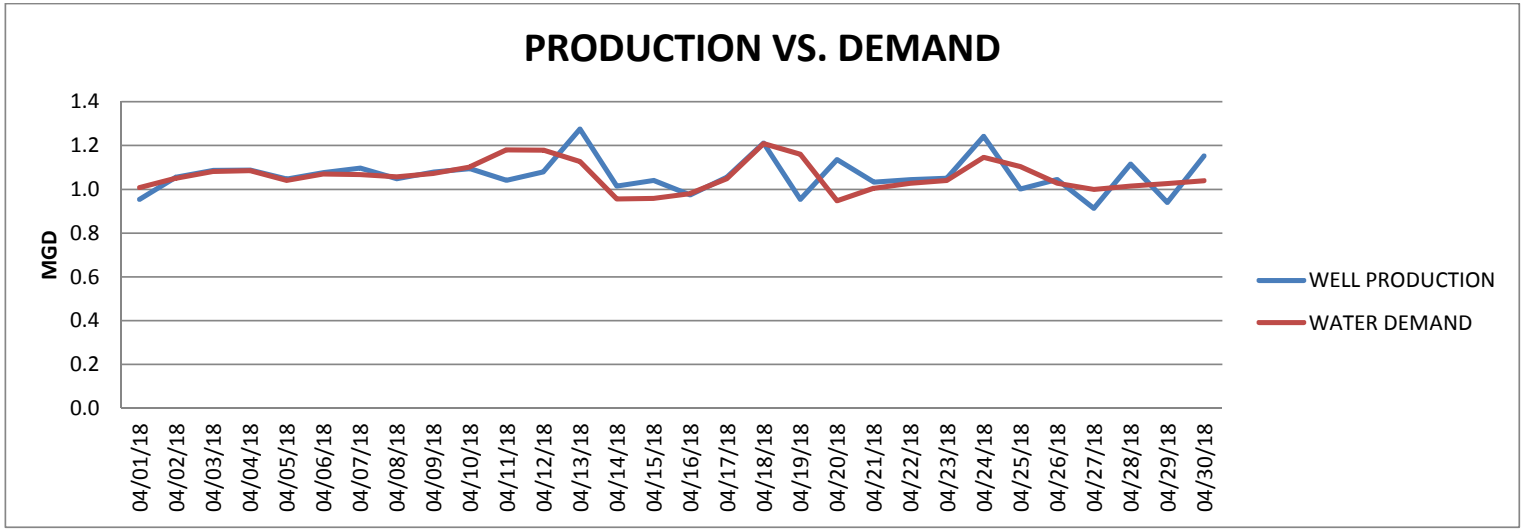
General Manager's Report
GWA Work Session, May 15, 2018

Operations Update

Production

Monthly Production Summary - April 2018					
Deep Wells				35.4	MGD
	Active wells =	95	of 120		
	Avg days in operation =	30.00	days		
	Total Production =	1,063,306	Kgals		
Springs				0.00	MGD
	Avg days in operation =	0	days	*placed on standby	
	Total Production =	0	Kgals		
Ugum Surface Water Plant				2.1	MGD
	Avg days in operation =	30	days		
	Total Production =	63,763	Kgals		
Tumon Maui Well				1.03	MGD
	Avg days in operation =	30	days		
	Total Production =	31,930	Kgals		
		1,158,999	Kgals	38.6	MGD





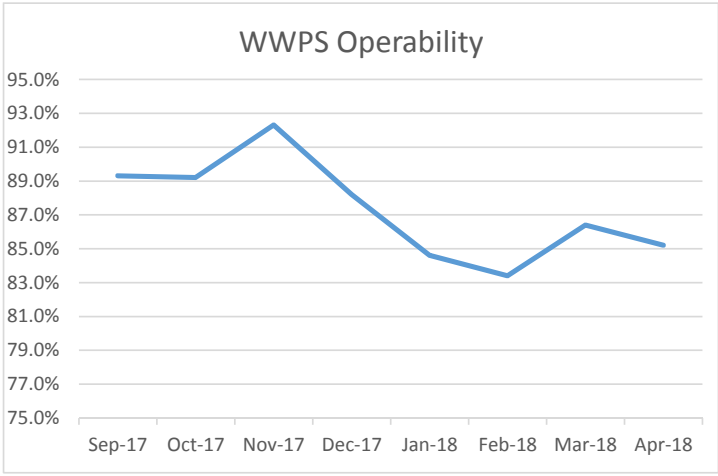
Distribution

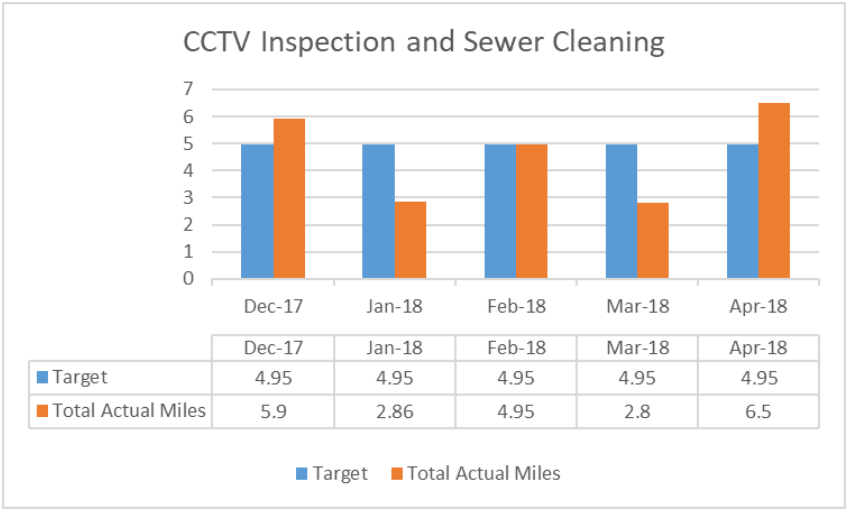
Monthly Distribution Summary - April 2018					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	21	20	95.2%
	Central	7	15	13	86.7%
	Southern	7	15	14	93.3%
		25	51	47	92.2%



Wastewater Collections

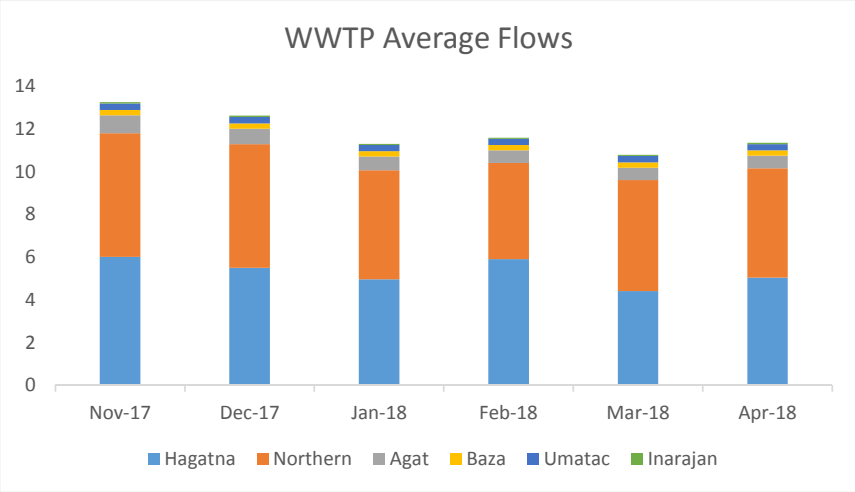
Monthly Collections Summary - April 2018					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	46	88.5%
	Central	29	63	55	87.3%
	Southern	27	54	43	79.6%
		78	169	144	85.2%



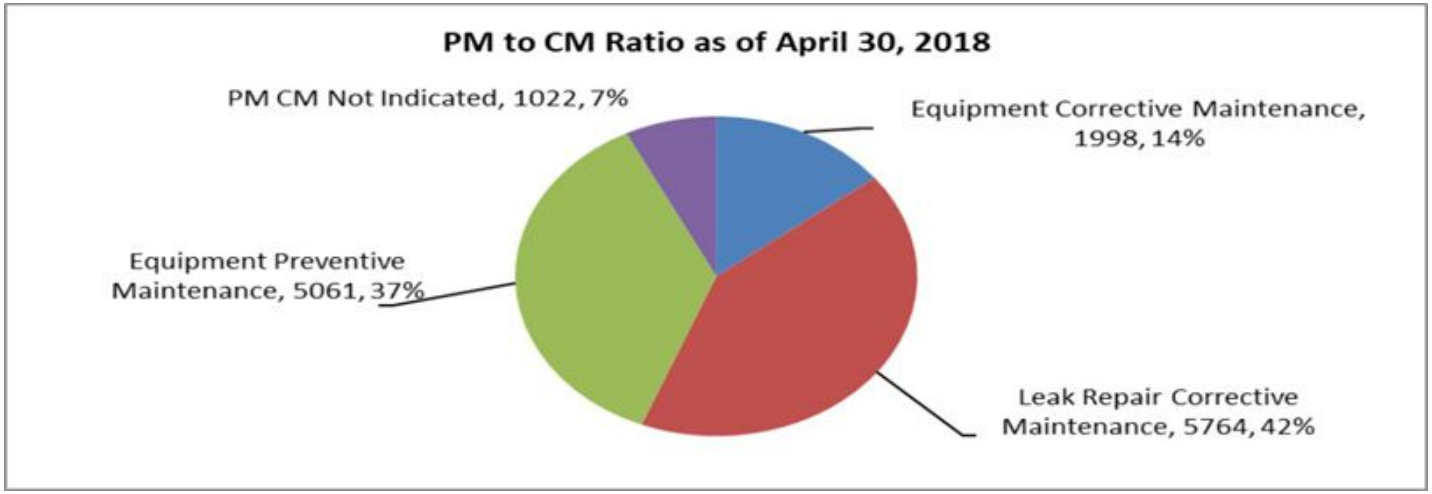


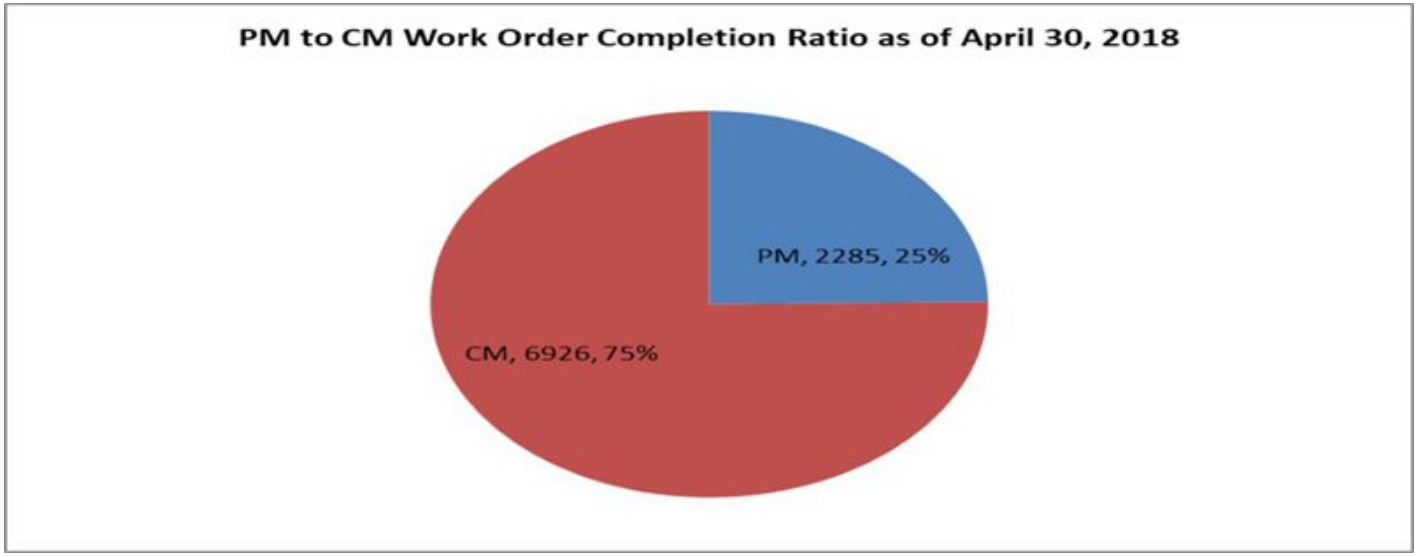
Wastewater Treatment

Monthly Wastewater Treatment Summary - April 2018				
WW Treatment Plants - Flows				
	Facility	**Avg. Daily Flows**	**Sludge (lbs)**	**Sludge Disp. ($)**
	Hagatna	5.03	527,980	$ 47,518
	Northern	5.12	934,500	$ 84,105
	Agat	0.59		
	Baza	0.25		
	Umatac	0.30		
	Inarajan	0.06		
		11.35	1,462,480	$ 131,623



Asset Management





Operational Issues

Production & Distribution

- Leak repair
  - Crews maintaining performance - less than 60 pending repairs, less than 20 backhoe required repairs
  - pending IFB for leak repair services
  - pending for advanced remote leak detection services
- Ugum WTP – scope of SCADA improvements finalized – pending pricing adjustments and change order.
- 2018 Pump/Motor order – released on February 16, 2018; delivery pending.
- GWA Crane Repair –repairs have been made and unit is finally working; last error code found to be software issue that the factory rep is still working to resolve.

Wastewater Collection & Treatment

- O&M Manager retired suddenly – Management is evaluating options and temporary detail appointment has been made
- CCTV:
  - Crews completed approximately 2.8 miles in March
- Pump station facility maintenance efforts still underway
- FOG Program
  - Program Manual revisions completed
  - 2nd Residential Collection Program was very successful - 840 gallons collected
- All issues related to USEPA inspection at Hagatna WWTP have been addressed with two items pending.
  - Effluent pump was down – repair on one pump completed, critical spare motor in procurement
  - Digester mixer was down – pending gearbox repair
  - Floc chamber mixers down – repairs have been completed, four in operation, one pending electrical connection
  - Centrifuge was down – both units now operational
  - Safety issue – motor guards have been reinstalled.

Meters

COMPLETED FIELD ACTIVITY JAN 2017 THRU APRIL 2018 (POSTED IN CIS)	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	TOTAL:	COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Test Meter	30	9	9	371	745	87	393	743	1000	1007	434	378	750	969	1213	1429	9567	224
GWA - Meter Exchange	393	179	220	276	482	353	501	807	1526	1039	452	259	239	1086	2120	121	10053	0
GWA - Verify Zero Report	30	124	114	94	96	402	261	199	550	89	82	169	356	106	117	69	2858	3
GWA - Verify Low Usage	0	0	0	2	37	36	196	488	657	202	127	612	858	1122	1055	463	5855	21
TOTAL:	453	312	343	743	1360	878	1351	2237	###	###	1095	1418	###	3283	4505	2082	28333	248

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	345	350	144	252	305	210	302	397	1013	1130	927	704	721	1041	1347	815	10003	
# OF BACKBILLINGS APPLIED AS PER FINANCE REPORTS:	0	0	0	20	122	84	29	111	219	80	77	4	136	23	323	48	1276	$ 869,123.79

# OF FIELD CREW PERFORMING CHANGE OUTS:	19	10	13	9	21	21	14	24	35	28	28 *	28 *	5	13	2
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS:	7	4	5	6	9	9	10	13	15	15	13	13	8	11	5
# OF SUPPLY STAFF TO ISSUE MATERIALS AND PROGRAM NEW METERS:	2	2	2	2	2	2	2	2	2	2	2	2	2	4	0
# OF TEST FACILITY PERSONNEL TESTING METERS:	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2
# OF ACCOUNTANTS CALCULATING BACK BILLS:	0	0	0	2	3	2	2	3	3	2	2	2	2	2	2
TOTAL:	30	18	22	22	38	37	31	45	58	50	48	48	20	32	11

*Project overtime on hold Nov 18, 2017 thru Dec 16, 2017. During this period, 4 personnel performed work on this project during the regular work day with a majority of the work completed during Nov and Dec month occuring before and after the OT moratorium.

NOTE: MARCH 18, 2018 - PROJECT ON HOLD PENDING ARRIVAL OF METERS

REMAINING ACTIVE BADGER LP MODELS AS OF APRIL 30, 2018:

ACTIVE LP MODELS - PURCHASE MO & YEAR	COUNT	
2012	8904	WARRANTY EXPIRED
Jan-13	2161	
Feb-13	764	
Mar-13	628	
May-13	1445	ACTIVE WARRANTY
Aug-13	2595	
Sep-13	1	
Nov-13	1	
Jan-14	1	
Feb-14	650	
Apr-14	2446	
Jun-14	71	
Aug-14	1405	
TOTAL :	21072	

12457	WARRANTY EXPIRED
8615	ACTIVE WARRANTY

Marbo (Andy-South) Wells – Status

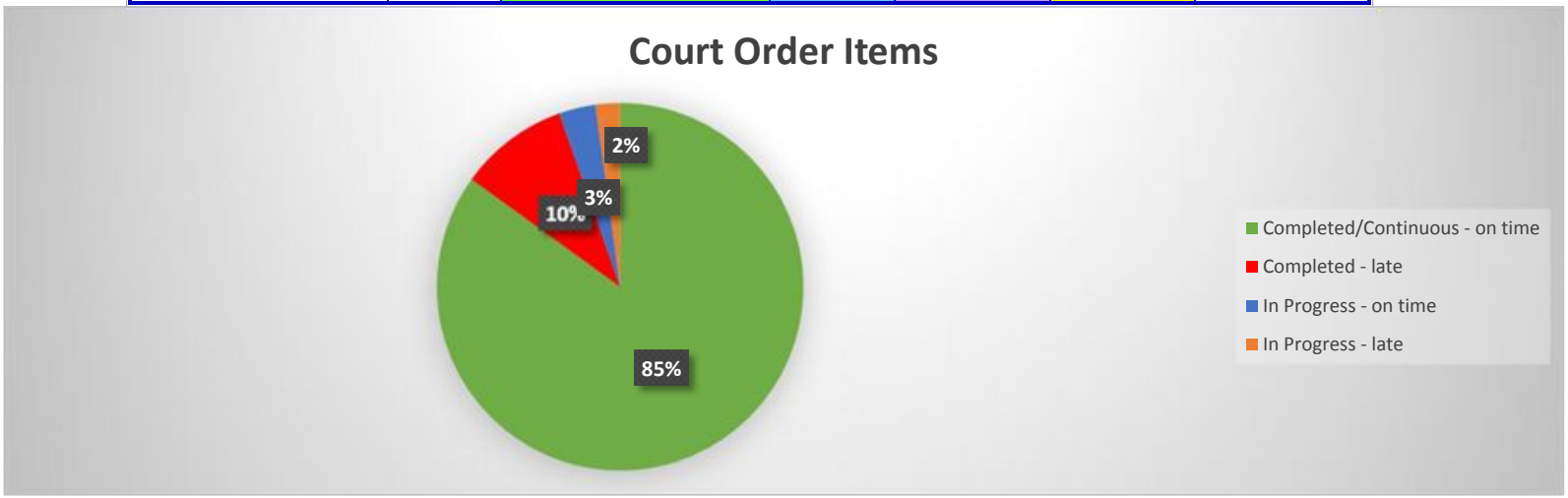
- Involuntary reversion appears imminent; GWA Counsel transmitted draft easement documents to GSA for consideration with DoD
- GM and General Counsel attempted to meet with GSA Counsel in SFO this month, but meeting had to be rescheduled
- No information on timing, but Management remains hopeful that parceling of lots as 'easements' will be accomplished

One Guam Update

- Tumon Maui Well:
  - For the vent shaft leaks, GWA's Consultant B&C needs a work authorization so they will draft a proposal. Initial water flow from the vent shaft was caused by a failure of the level indicator which allowed the tank to overflow. A new level indicator will be employed to avoid the problem in the future.
- Captain Jones' last day will be June 22, 2018. Her replacement, Captain Dan Turner will participate in the One Guam meetings.
- Santa Rosa Tank:
  - GWA and DOD are finalizing the design of the Intertie. All the property maps will be completed and submitted to DOD.
  - Once the maps are completed, the letter to General Cox will be finalized for the temporary easement.
  - The After-Action Report format is being reviewed.
  - The Standard Operation Procedure (SOP) and MOU are being reviewed by DOD.
  - Captain Jones would like to wrap this up before she leaves.
- Agat-Santa Rita WWTP
  - Compensation for the Agat-Santa Rita easement is still under discussion.
- DOD Distribution Lines
  - Southern High, Leon Guerrero property and Murray road wastewater and water lines are resolved, including how the customers will be charged for the service.
- Date Sharing MOU is being drafted
  - This MOU will outline the standards for GIS, hydraulic and other data to be shared between DOD and GWA. Review expected in May.

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	79	2	9	3	97.8%



Status Information

- 2 items delayed
  - Meters
  - Baza Gardens Sewer Line
- Final Date to complete all Court Order items is December 31, 2020.
- Overflow or Bypass events reported to USEPA:
  - 04/08/2018 - Redondo Luchan, Dededo – Manhole overflow. Combination of mostly rocks and some grease. Probable damaged sewer line;
  - 05/09/2018 – Aga Drive, Santa Rita – Sewer Overflow to wetland. Under investigation as a possible sewer refurbishment contractor problem.

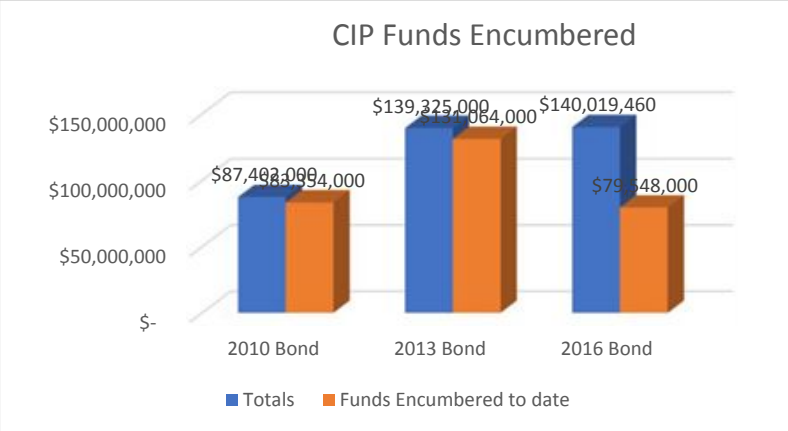
CIP Summary

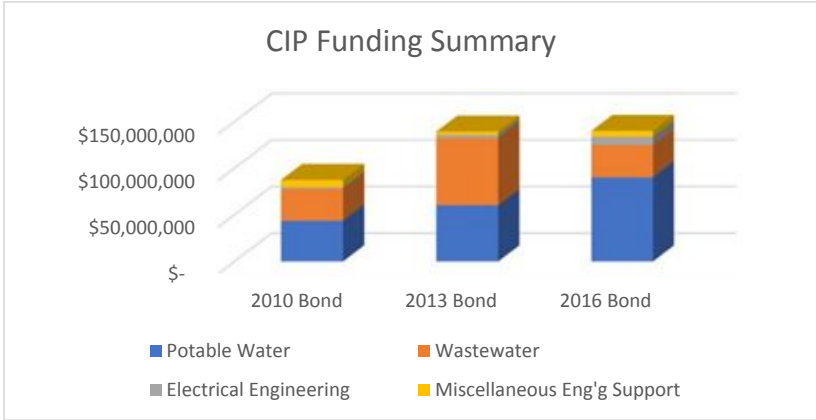
CIP Summary - Project Encumbrance

	2010 Bond		2013 Bond		2016 Bond			
	Funded	Complete	Funded	Complete	Funded	Complete	Total CIP Projects	%
Potable Water	28	17	21	7	20	0	35	49%
Wastewater	16	13	7	3	8	1	22	31%
Electrical Engineering	5	5	6	1	5	0	10	14%
Miscellaneous Eng'g Support	2	0	3	1	4	1	4	6%
Totals	51	35	37	12	37	2	71	100%
% of Total CIP by Fund Source	72%		52%		52%			

CIP Summary - Project Amounts

	2010 Bond		2013 Bond		2016 Bond			
	Funded	%	Funded	%	Funded	%	Total CIP Projects	%
Potable Water	$ 41,903,305	48%	$ 58,317,117	42%	$ 64,647,830	46%	$ 164,868,252	45%
Wastewater	$ 36,009,577	41%	$ 73,837,883	53%	$ 60,227,170	43%	$ 170,074,630	46%
Electrical Engineering	$ 1,748,118	2%	$ 3,395,000	2%	$ 8,750,000	6%	$ 13,893,118	4%
Miscellaneous Eng'g Support	$ 7,741,000	9%	$ 3,775,000	3%	$ 6,394,460	5%	$ 17,910,460	5%
Totals	$ 87,402,000	100%	$ 139,325,000	100%	$ 140,019,460	100%	$ 366,746,460	100%
Funds Encumbered to date	$ 83,354,000	95%	$ 131,064,000	94%	$ 79,548,000	57%		
% of Total CIP Funding	23.8%		38.0%		38.2%			

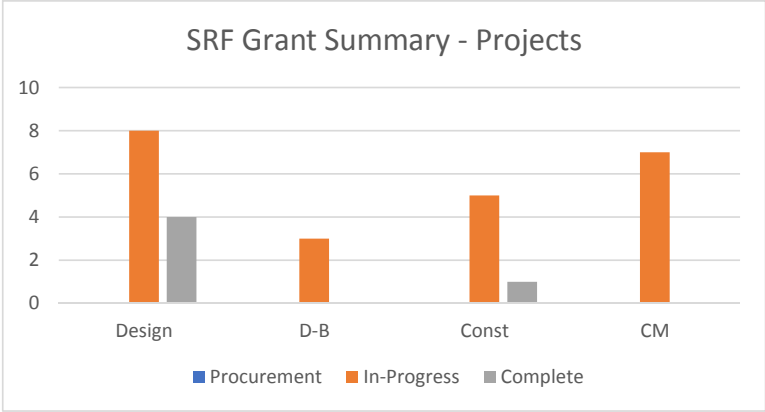




SRF Grant Summary

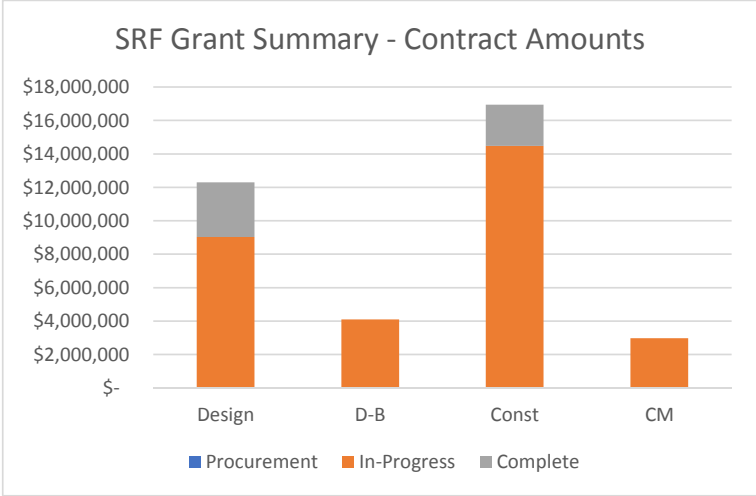
SRF Grant Summary - Projects

	Procurement	In-Progress	Complete	Totals	%
Design	0	8	4	12	43%
D-B	0	3	0	3	11%
Const	0	5	1	6	21%
CM	0	7	0	7	25%
Totals	0	23	5	28	
%	0%	82%	18%		



SRF Grant Summary - Contract Amounts

	Procurement	In-Progress	Complete	Totals	%
Design	$ -	$ 9,025,796	$ 3,279,629	$ 12,305,425	34%
D-B	$ -	$ 4,096,694		$ 4,096,694	11%
Const	$ -	$ 14,480,091	$ 2,470,658	$ 16,950,749	47%
CM	$ -	$ 2,977,793	$ -	$ 2,977,793	8%
Totals	$ -	$ 30,580,374	$ 5,750,287	$ 36,330,661	
%	0%	84%	16%		



OEA Grant Summary

- NDWWTP Upgrades
  - 30% design submittal is in internal QC review; GWA expects receipt in Mid-May.
  - USEPA reported recently that two potential but likely insignificant cultural resources may have been found, waiting on more detail
- Outfall Diffuser:
  - Post-bid Input from bidders received
  - Bid package being revised based on comments; re-design of anchors being evaluated;
  - GWA expects review set in a few weeks.
- Sewer Line Interceptor Design-Build
  - Multi-Step IFB has been issued.
  - Technical Proposal received and Qualified Bidder List established – 3 bidders qualified.
  - Price Proposal extended to 4/26/18.
- NGLA Observation wells – Design work on-going
  - Workshop for 30% design scheduled for this month.

Action Item	Date (Target)	Date (Actual)	Status	Remarks
Project Funds Available	July-16	AUG-30-16	Completed	
Land Acquisition	Jan-17	Jan-17 (Compensation Pending)	Pending	Survey complete, appraisals complete – under review
Procure PM/CM Firm	Jan-17	Jan-17 (NTP Issued Feb 10th)	Completed	
Procure Design Firm	Jul-17		Completed	Contract issued; kickoff pending
Design -- 30/60/90/Final -- Review	Jun-18		On-target	Project design schedule under review by PM/CM
NEPA Analysis and Determination	Feb-17		Delayed	USEPA work on-going; procurement of contractor completed
Procure Construction Firm	Dec-18		On-target	
Construction Complete/Commence Operations	Nov-21		On-target	
Sewer line connection from MCB to GWA infrastructure	Jul-19		On-target	
MCB Initial Operating Capability	Jul-22		On-target	

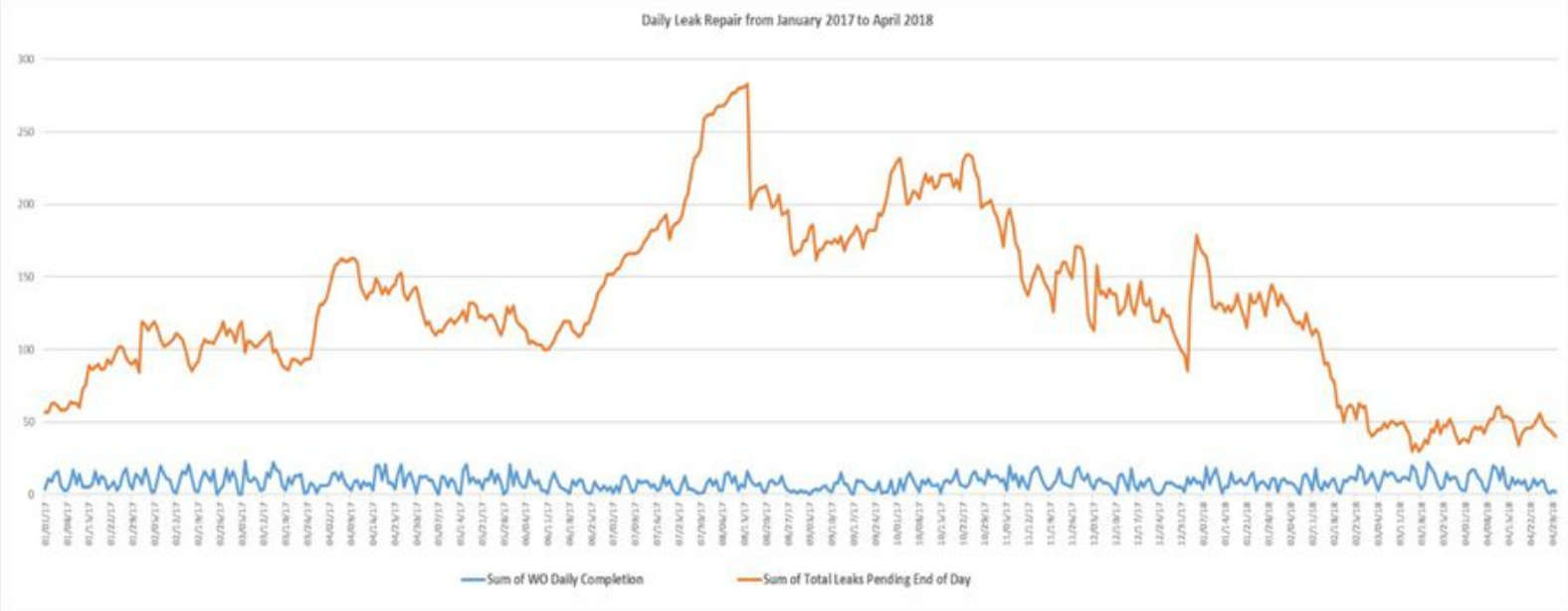
Land Acquisition Summary

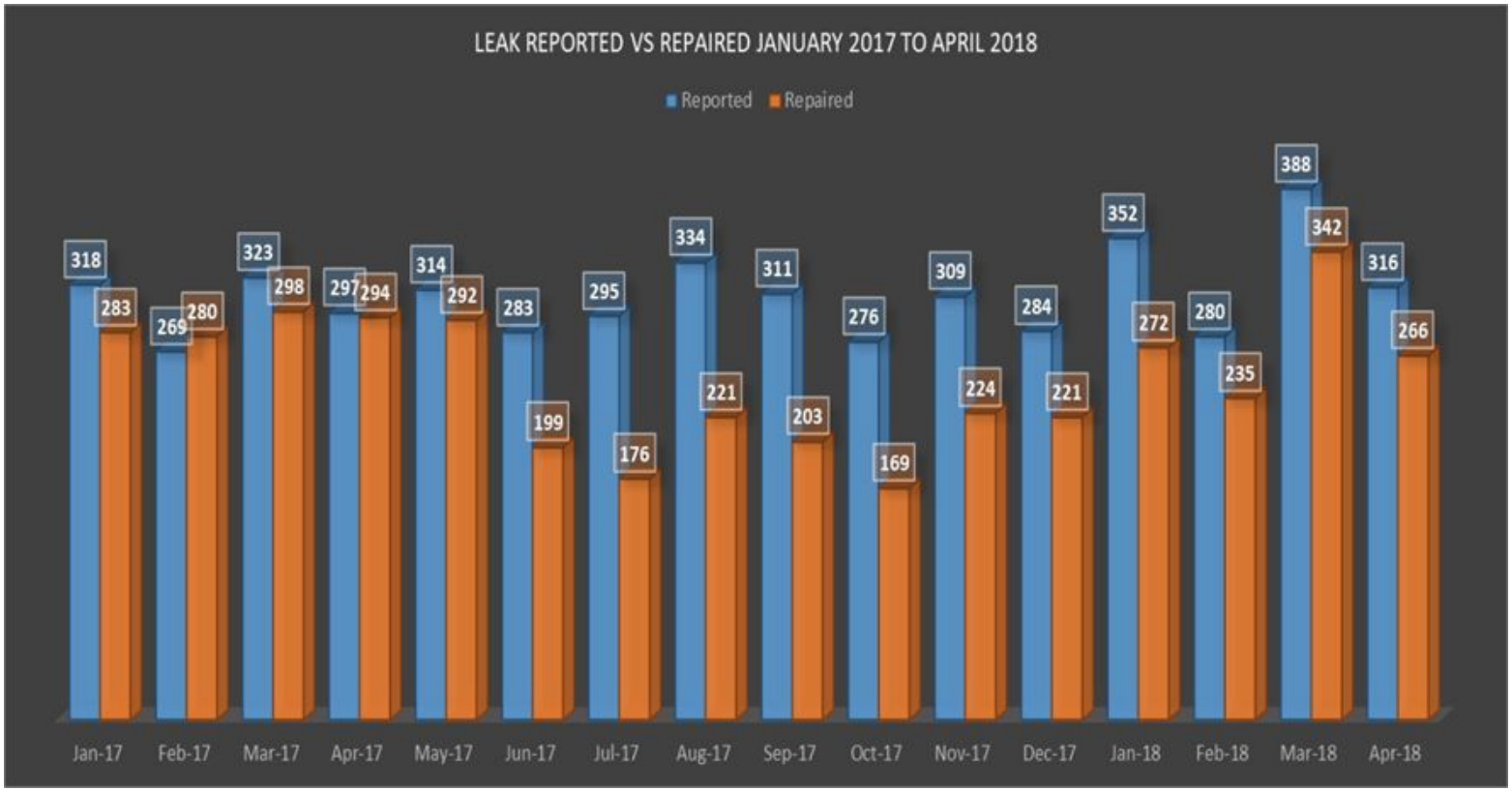
GWA Facility	Location	Gov't./Private/Other	Land Acquisition Status
Tanks	Ugum	Private	Appraisal Services completed 05/09/18.
	Astumbo	Gov't./CLTC	GWA and DoLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DoLM.
	Piti	Private	Preliminary geotechnical investigation and archaeological investigation in the process 05/01/18.
Expansion of the Northern District Wastewater Treatment Plant (NDWWTP)	Dededo	Gov't./GALC	Pending Grant Deed from DoLM 05/02/18.
Deep Well	A-12	Private	Property ownership vested in GWA 10/16/17.
	AG-12	Dept. of Agriculture/Manhita Farms	DCA is still verifying suspected buildings/concrete houses encroachments along the northerly and southerly boundaries 04/02/18.
	Y-8	Gov't./CLTC	Deed of Dedication drafted for legal counsel approval 05/01/18.
Booster Pump Station	Agfayan	Private	No response from private property owner as of 05/11/18. TGE will conduct physical visit for response letter received 05/11/18.
Sewer Pump Stations	Property adjacent to Southern Link	Private	GWA started acquisition process on 12/23/2016. Property ownership vested in GWA 08/11/2017.
Asan Springs	Asan	Gov't./Private	Pending meeting confirmation from GHURA regarding property ownership 05/11/18.

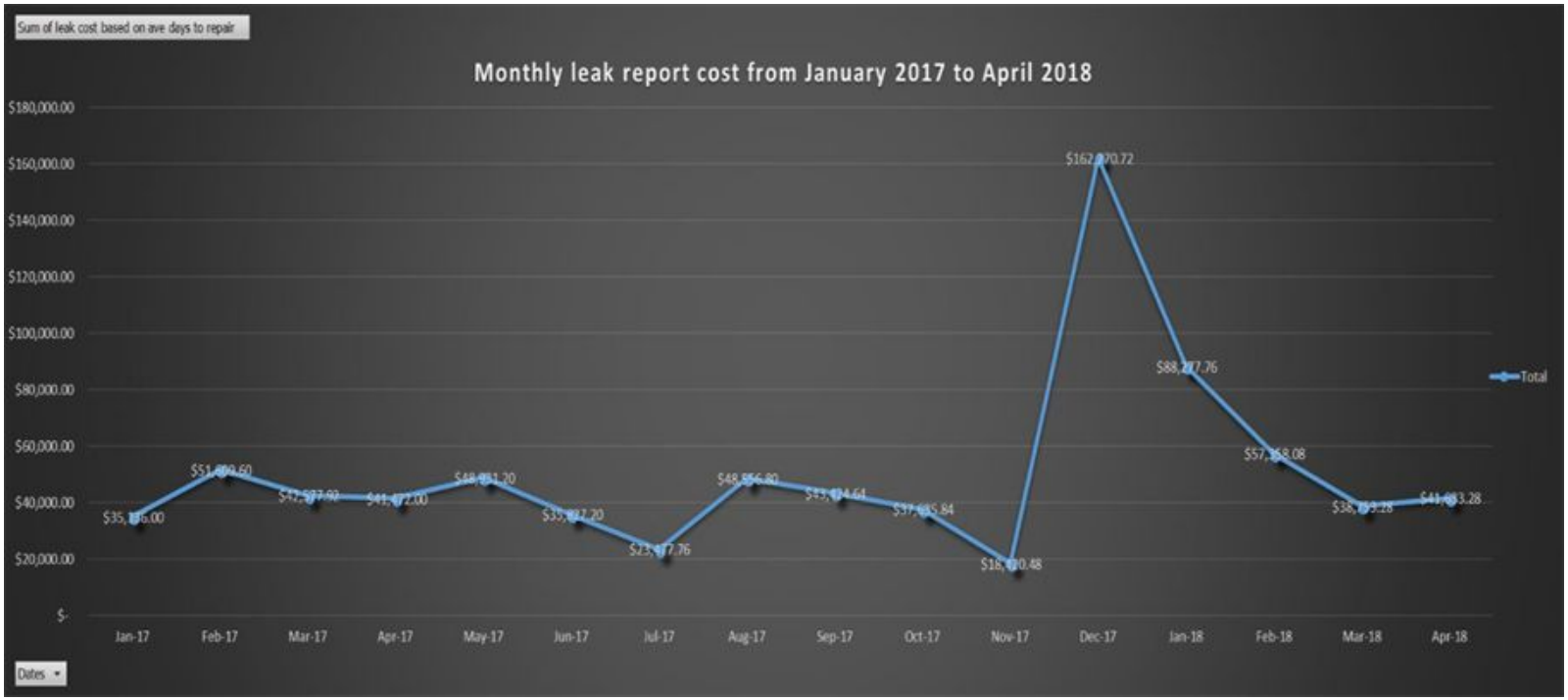
NRW – Update

- Water Audit update on-going
  - Production rates are being reviewed for accuracy and refined
  - Unmetered, Authorized uses are being quantified
  - Meter and billing inaccuracies are being reviewed and refined

Leak Repair Summary

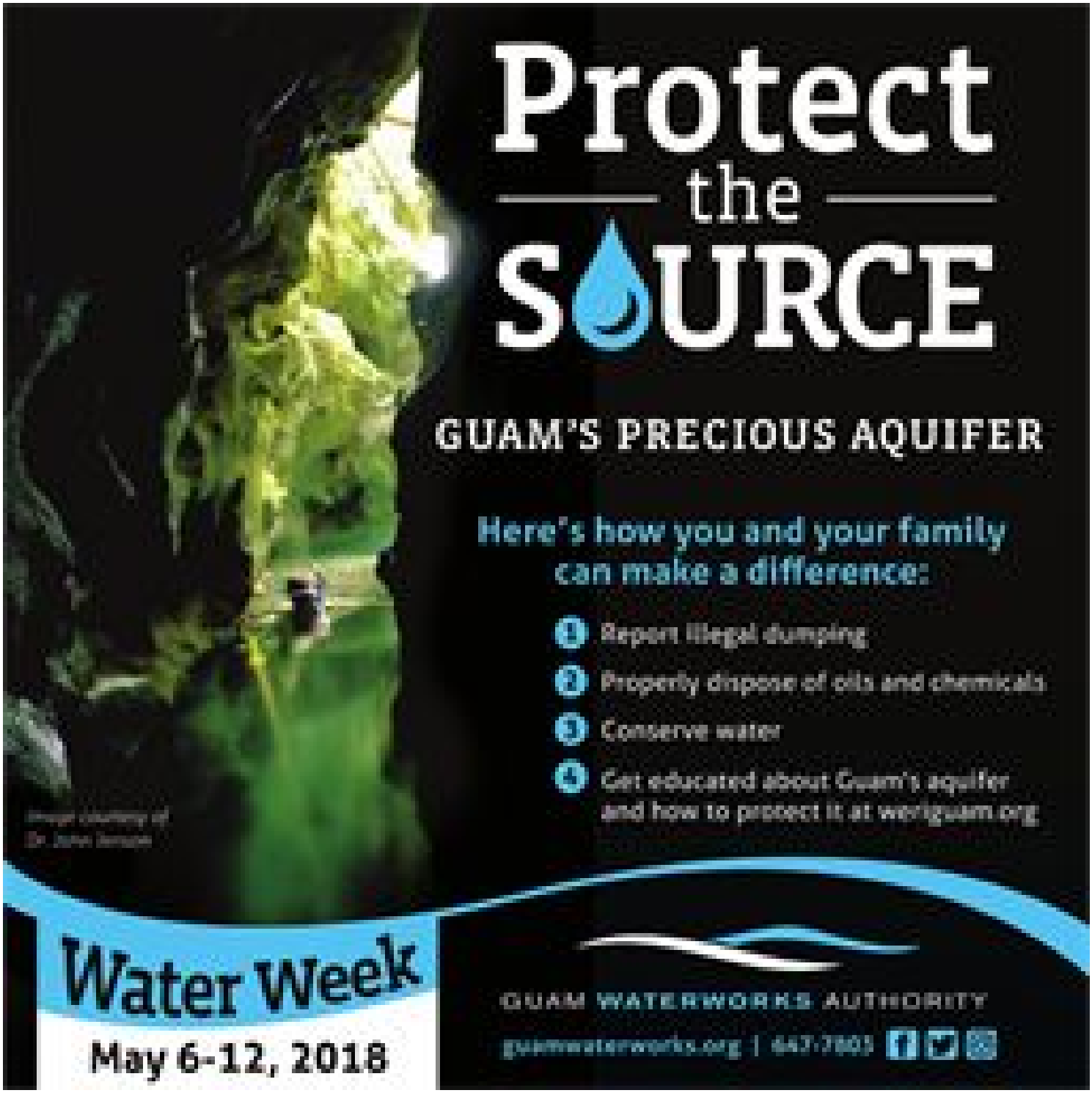



LEAK REPORTED VS REPAIRED JANUARY 2017 TO APRIL 2018
Reported
Repaired
318
283
269
280
323
298
297
294
314
292
283
199
295
176
334
221
311
203
276
169
309
224
284
221
352
272
280
235
388
342
316
266
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18



Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00


Protect
the
SOURCE
GUAM'S PRECIOUS AQUIFER
Here's how you and your family
can make a difference:
1 Report illegal dumping
2 Properly dispose of oils and chemicals
3 Conserve water
4 Get educated about Guam's aquifer
and how to protect it at weriguam.org
Water Week
May 6-12, 2018
GUAM WATERWORKS AUTHORITY
guamwaterworks.org | 647-7803

2011 Court Order Performance Report Card / Dashboard as of 04/30/2018

GUAM WATERWORKS AUTHORITY

Court Order Performance Report Card

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	79	2	9	3	97.8%

Legend in detail section below.

Fill Color	Meaning
Lime green	Done/Completed
Yellow	On Schedule
Blue	Behind Schedule
Violet	Completed Behind Schedule
Yellow Green	Ongoing and Continuous

2011 Court Order Performance Report Card / Dashboard as of 04/30/2018

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	Status
Northern District WWTP Primary Treatment Upgrades.	2	1	Interim Primary Treatment Improvements Complete	09/30/2012	@EPA	**Done** Construction completed 12/13/2012
	3(a)	2	Interim Effluent to meet Table 1	09/30/2012 monitoring started	@EPA	**Done** Table 1 compliance beginning January 9, 2013.
	3(a)(1)	3	PE Review (Application for 7.5 MGD pending)	3 months after compliance with 3(a)	@EPA	3(a)(1) Application to increase to 7.5 MGD Approved 08/13/2017
	3(a)(2)	4	(Application for 9 MGD)	3 months after compliance with 3(a)(1)	TBD	Not considered necessary because of OEA Upgrade of NDWWTP
	3(c)	5	Effluent monitoring (calendar-year quarter)	**Completed**	@EPA	**Done. Full year completed 01/08/2012**
	4(a)	6	Sludge & Biosolids Management Plan	12/31/2011	@EPA	**Done.** Biosolids to Landfill EPA Approval 08/17/2014
	4(a)	7	Adequate stabilization and dewatering	9/30/2012	@EPA	**Done.** By Design-Build contract.
	4(b)	8	Biosolids Management, Quarterly Report	Quarterly Report	@EPA	Routine Monitoring Report, **Repeats Quarterly**
	4(c)	9	Biosolids Management, repair & replace facilities	09/30/2012	@EPA	**Done** Construction Complete 12/13/2012. Biosolids to Landfill
	4(d)	10	Biosolids Management, implement plan	9/30/2012	@EPA	**Done** - Biosolids to Landfill
Agaña WWTP Interim Measures.	5	11	Primary Treatment Plant Upgrades	06/30/2013	@EPA	**Done.** CEPT is operational and in final tune-up stages.
	5(a)	12	Scope and schedule	09/30/2011	@EPA	
	5(b)	13	Septage Handling Complete	06/30/2013	@EPA	**Done.** Septage Receiving is completed at the NDWWTP (location option) reported 06/26/2013.
	5(b) 1	14	Septage handling design contract signed	12/31/2011	@EPA	
	5(b) 2	15	Septage handling construction notice to proceed	06/30/2012	@EPA	
	5(c)	16	Grit and FOG Complete	06/30/2013	@EPA	Phase III CEPT is in operations.)
	5(c) 1	17	Grit and FOG design contract signed	12/31/2011	@EPA	**Done** Grit and FOG reported 06/06/2013
	5(c) 2	18	Grit and FOG construction notice to proceed	06/30/2012	@EPA	**Done** Submitted 11/17/2011
	5(d)	19	Repair Solids handling	11/17/2011	@EPA	**Done** O & M Plan reported 05/31/2012
	5(e)	20	O & M Plan	05/31/2013	@EPA	
	5(f)	21	Effluent monitoring (calendar-year quarter)	**Completed**	@EPA	**Done. Full year completed 01/08/2012**
	6	22	Prevent Effluent Back Surge	06/30/2013	@EPA	**Done** Old outfall decommissioned (plugged) 06/25/2013 **Done** Old outfall
	6	23	Effluent Back Surge Plan	12/30/2011	@EPA	decommissioned (plugged) 06/25/2013
I&I SSES	7	24	Collection System SSES and I/I evaluation	**Done**.	@EPA	**Done**.
SSES Work Plan	8	25	Work Plan	180 days	@EPA	**Done** Reported 08/13/2012
	8(a)	26	Flow and rainfall data	N/A	@EPA	**Done** Reported 04/25/2013
	8(b)	27	I/I Southern	540 days	@EPA	**Done** Reported 04/25/2013
	8(c)	28	I/I Central	900 days	@EPA	**Done** Reported 04/28/2014
	8(d)	29	SSES Southern	540 days	@EPA	**Done** Reported 04/30/2013 – update 04/29.2016
	8(e)	30	SSES Central	900 days 09/15/2015 EPA Disap. Ltr.	@EPA	**Done** – Completed June 2, 2017
	8(e) 2	31	SSES Central Report	09/15/2015 EPA Disapproval Letter	@EPA	**Done** – Completed June 2, 2017
Agat / Santa Rita,	9(a)	32	By Pass Report	60 days	@EPA	**Done** Reported 01/04/2012
	9(b)	33	Flow Meter	180 days	@EPA	**Done** Reported 07/26/2012
	9(c)1,2,3	34	Report evaluating near term measures	180 days response sent 09/29/2014	@EPA	**Done** Reported 05/07/2012 GWA response 09/292014.
	9(d)	35	Implement near term measures d - Disinfection	03/23/2016	@EPA	**EPA specifications of 9(c), 9(d) and 9(f) on 09/24/2015.**
	9(e)	36	Implement near term measures e – sludge mgmt.	03/23/2016	@EPA	
	9(f)	37	Implement near term measures f – 75% Bypass Red.	03/23/2016	@EPA	
	10	38	System Evaluation	12/31/2013 response sent 09/29/2014	@EPA	CO **Done** Reported 12/28/2013 GWA response 09/29/2014.- update 04/29/2016
	11	39	System Upgrades	03/14/2017 Plant became operational.	@EPA	New Agat WWTP on line 03/14/2017
	11(a)	40	System Upgrades design	06/30/2014-NTP 10/13/2014	@EPA	CCU approval 08/26/2014. NTP was issued on 10/13/2014
	11(b)	41	System Upgrades notice to proceed	06/30/2015-NTP 10/02/2015	@EPA	NTP Ph.1 issued 10/02/2015 - NTP Ph.2 due 01/04/2016
Baza Gardens	12(a)	42	Interim Measures Evaluation (Independent PE)	180 days	@EPA	**Done** Reported 05/07/2012, PMO task
	12(b)	43	Interim Measures Complete	540 days	@EPA	**Done** Reported 05/01/2013 PMO task
	12(c)	44	Evaluation Bio Solids Report	180 days	@EPA	**Done**-EPA Approval 08/28/2014
	12(d)	45	Complete Bio Solids	360 days	@EPA	**Done** Reported 03/21/2013
	13	46	System Evaluation	04/30/2014	@EPA	**Done** Reported 04/30/2014 GWA response 10/02/2014
	14	47	System Upgrades	04/31/2018	@EPA	Critical path, need to complete I&I/SSES
	14(a)	48	System Upgrades, Design Starts	10/31/2015 NTP DCA 02/05/2016	@EPA	Linked to new Agat WWTP NTP DCA 02/05/2016
	14(b)	49	System Upgrades, Construction Starts	10/31/2016	@EPA	US Fish and Wildlife Permitting Delays will make completion late.

2011 Court Order Performance Report Card / Dashboard as of 04/30/2018

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	Status
Umatac-Merizo	15	50	Complete Evaluation	12/31/2013	@EPA	CO 15 **Done** Reported 12/31/2013 -- Critical path, completed I&I/SSES
	16	51	System Upgrades	12/31/2018	@EPA	Design Build contract executed 06/29/2017
	16(a)	52	System Upgrades, Design Starts	06/30/2016	@EPA	Design Build contract executed 06/29/2017
	16(b)	53	System Upgrades, Notice to Proceed	06/30/2017	@EPA	NTP Issued 06/30/2017
Sewer Cleaning	17	54	Sewer Cleaning (in annual and quarterly reports)	2017-2022 Preliminary Goal set.	@EPA	2017-2022 Preliminary Goal set.
Hot Spot Plan	18	55	Hot Spot Plan	EPA Revision letter o9/08/2015	@EPA	Last Revision submitted 10/23/2015 GWA WW Ops
CCTV	19	56	CCTV (in annual and quarterly reports)	2017-2022 Preliminary Goal set.--- Entire System Every5 years	@EPA	2017-2022 Preliminary Goal set.--- Entire System Every5 years
Sewer Hook-Up	20	57	Sewer Hook-Up	In Operation	@EPA	**Done –** available on GWA web site or at GWA Customer Service
Groundwater Chlorination	21	58	Groundwater Chlorination	540 days	@EPA	**Done** Reported 04/29/2013
Chlorine Residual Monitors	22	59	Plan	180 days	@EPA	**Done** Reported 09/94/2012
	22(a)	60	High Risk Wells	540 days	@EPA	**Done** Reported 05/02/2013
	22(b)	61	Moderate Risk Wells	2 years	@EPA	**Done** Reported 07/31/2013
	22(c)	62	All Other Wells	Completed 07/31/2017	@EPA	Completed 07/31/2017
Water Metering	23(a)	63	Plan & schedule	180 days	@EPA	**Done** Reported 05/08/2012
	23(a)	64	All connections are metered and mapped	2 years	@EPA	10/31/2016 Substantially complete-- **1** Sensus, **0** Metron left
	23(b)	65	Plan repair & maintain	180 days	@EPA	**Done** GWA Test facility operational 06/28/2013
Ugum Surface Water Treatment Plant	24	66	Construction complete	One year	@EPA	**Done** Reported 11/09/2012
	24	67	PE Inspection	60 days before start-up	@EPA	**Done** EPA Approval 08/26/2014
	25	68	PE Performance Operation Assessment	60 days before start-up	@EPA	**Done** EPA Approval 08/26/2014
	26	69	O&M Plan and Procedures	90 days before start-up	@EPA	**Done** Reported 08/10/2012 EPA Approval 08/17/2014
	27	70	Plant compliance	365 days	@EPA	**Done** Reported 02/07/2013
Sinajana Water Transmission Line	28(a)	71	Existing Construction Complete	180 days	@EPA	**Done** Reported 12/23/2011
	28(b)	72	Hydraulic Evaluation	180 days	@EPA	**Done** EPA No Further Comment 08/26/2014
	28(c)	73	Construction Complete (2 tanks)	540 days from 11/21/2013	@EPA	**GEPA Delays** Tank Constr. Completed August 2015: **In Service July 2016.**
	28(d) 1	74	Monitoring Plan	90 days prior	@EPA	**Done** Reported 09/07/2012
	28(d) 1	75	Implement- Monitoring Plan	For one year after start up	@EPA	GWA Compliance
	28(d) 2	76	Monitoring Plan	180 days prior	@EPA	**Done** EPA Approval 08/26/2014
	28(e)	77	Implement- Monitoring Plan	For one year after start up	@EPA	**Start 09/01/2015 – end 08/31/2016**
Storage Tank/Reservoir Rehabilitation and Replacement Program.	29(a) 1	78	Plan hydraulic analysis	90 days	@EPA	**Done** Reported 11/09/2012
	29(a) 2	79	Hydraulic analysis	540 days	@EPA	**Done** EPA No Further Comment 08/26/2014
	29(b) 1	80	Plan minimize service interruptions	90 days after approval	@EPA	**Done** EPA approval 08/26/2014
	29(b) 2	81	Tank inspection schedule	540 days	@EPA	**Done** EPA approval 08/26/2014
	29(b) 3	82	Complete Barrigada (1 @ 2 MG tank)	540 days	@EPA	**Done**
	29(b) 4	83	Assess additional 7 tanks	5 years (11/10/2016)	@EPA	**Done** DCA contract task
	29(b) 5	84	RRRR 7 additional tanks	5 years (11/10/2016)	@EPA	**Done** PMO executed procurement
	29(b) 6 i	85	RRRR 10 additional tanks	7 years (11/10/3018)	@EPA	**Ongoing** - Completed the hydraulic analysis
	29(b) 6 ii	86	RRRR remaining	12/31/2020	@EPA	
	29(c)	87	In Quarterly / Annual Report	Quarterly / Annual Report	@EPA	GWA Compliance **Repeats Quarterly**
Section III REPORTING REQUIREMENTS	31(a)(1)	88	Quarterly Report	Jan., April, July, Sept. Continuous	@EPA	Due by the 30th of the specified months
	31(a)(2)	89	Reports on Non Compliance	Within 30 days from determination of delay	@EPA	As determined by GWA
	31(b)	90	SSO and Bypass Report	Jan., April, July, Sept. Continuous	@EPA	Due by the 30th of the specified months
	31(c)	91	Annual Report	January each year	@EPA	Included with 31(a) each Year
Section IV NOTICES	35	92	CO contacts		@EPA	GWA Compliance report 06/29/2016
	36	93	Formal notices of change in CO contacts	Whenever specified staffing changes	@EPA	GWA Compliance report 06/29/2016

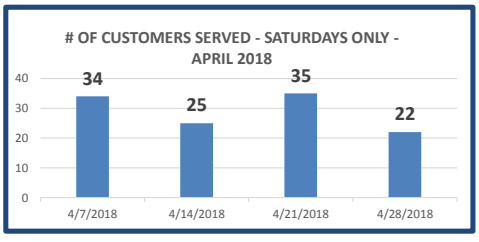
GWA Utility Services Division
Monthly Status Report
Month ending April 28, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE MARCH 2018	MARCH 2018 MONTHLY TOTAL	WEEK ENDING: 4/7/2018	WEEK ENDING: 4/14/2018	WEEK ENDING: 4/21/2018	WEEK ENDING: 4/28/2018	WEEKLY AVERAGE APRIL 2018	APRIL 2018 MONTHLY TOTAL
Collections Unit								
I. Number of accounts cut for nonpayment:	79	314	263	260	265	166	239	954
II. Number of accounts restored for nonpayment:	56	223	184	140	227	126	169	677
III. Number of No water reports responded to:	3	13	0	0	0	0	0	0
IV. Number of Secure/Unsecure valve reports responded to:	1	3	0	0	0	0	0	0
V. Number of Verify reads responded to:	0	0	0	0	0	0	0	0
VI. Number of new pay plans negotiated for **active** accounts :	199	797	243	289	228	240	250	1000
VII. Number of active pay plans negotiated and ongoing :	2031		2184	2383	2519	2660	2437	
VIII. Number of **inactive** accounts with a payment arrangement:	14		9	9	9	9	9	
IX. Number of broken payment plans:	79	315	90	90	92	99	93	371
Customer Service Unit								
I. Service Delivery Points:								
a. GBN Public Service Building – Fadian								
i. Total Customers Assisted :	261	1043	333	303	311	295	311	1242
ii. Total Abandoned Requests :	19	74	47	17	38	27	32	129
iii. Average Wait Time:	8 minutes		6 minutes	9 minutes	11 minutes	13 minutes	10 minutes	
iv. Average Service Time:	13 minutes		9 minutes	12 minutes	13 minutes	13 minutes	12 minutes	
v. Breakdown by request type:								
1. Apply for water	63	253	76	62	56	70	66	264
2. Restore water cut for non payment	11	45	36	39	45	33	38	153
3. Terminate Water	17	67	27	23	11	19	20	80
4. Copy of Bill	34	134	37	34	35	25	33	131
5. Billing Dispute	59	237	71	60	79	66	69	276
6. Billing Dispute follow up	5	19	5	2	2	7	4	16
7. General Questions & Other	34	134	47	48	51	35	45	181
8. Report a water leak	2	8	1	1	2	1	1	5
9. Report water theft	0	1	0	0	0	1	0	1
10. Payment Arrangement	36	144	36	40	35	40	38	151
b. Julale Satellite Office – Hagatna								
i. Total Customers Assisted :	249	997	376	302	244	384	327	1306
ii. Total Abandoned Requests :	15	61	22	16	7	13	15	58
iii. Average Wait Time:	6 minutes		14 minutes	12 minutes	9 minutes	10 minutes	11 minutes	
iv. Average Service Time:	9 minutes		10 minutes	10 minutes	11 minutes	11 minutes	11 minutes	
v. Breakdown by request type:								
1. Apply for water	47	188	64	48	49	44	51	205
2. Restore water cut for non payment	7	29	24	35	15	24	25	98
3. Terminate Water	18	71	36	21	23	27	27	107
4. Copy of Bill	56	222	65	65	43	49	56	222
5. Billing Dispute	61	243	97	69	62	68	74	296
6. Billing Dispute follow up	4	16	5	1	1	1	2	8
7. General Questions & Other	23	93	43	36	20	37	34	136
8. Report a water leak	2	8	3	1	1	1	2	6
9. Report water theft	0	0	0	0	1	0	0	1
10. Payment Arrangement	36	143	57	32	32	39	40	160
c. Upper Tumon Satellite Office – Upper Tumon								
i. Total Customers Assisted :	327	1306	462	341	493	370	417	1666
ii. Total Abandoned Requests :	13	50	16	12	32	10	18	70
iii. Average Wait Time:	9 minutes		9 minutes	6 minutes	13 minutes	6 minutes	9 minutes	
iv. Average Service Time:	11 minutes		10 minutes	9 minutes	9 minutes	10 minutes	10 minutes	
v. Breakdown by request type:								
1. Apply for water	73	292	97	52	73	84	77	306
2. Restore water cut for non payment	22	86	54	54	104	28	60	240
3. Terminate Water	24	94	58	23	34	18	33	133
4. Copy of Bill	58	233	59	74	87	69	72	289
5. Billing Dispute	73	292	100	64	117	98	95	379
6. Billing Dispute follow up	2	8	1	6	5	3	4	15
7. General Questions & Other	38	150	39	23	30	36	32	128
8. Report a water leak	3	13	4	4	4	3	4	15
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	39	156	54	49	51	33	47	187

GWA Utility Services Division
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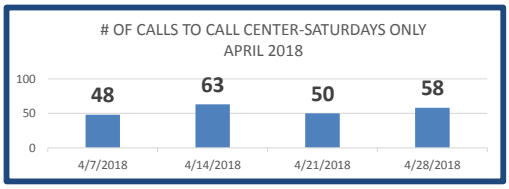
UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE MARCH 2018	MARCH 2018 MONTHLY TOTAL	WEEK ENDING: 4/7/2018	WEEK ENDING: 4/14/2018	WEEK ENDING: 4/21/2018	WEEK ENDING: 4/28/2018	WEEKLY AVERAGE APRIL 2018	APRIL 2018 MONTHLY TOTAL
d. Customer Call Center								
i. Calls Recieved :	1223	4893	1400	1710	1849	1728	1672	6687
ii. Calls Immediately Answered :	764	3056	880	967	989	1039	969	3875
iii. Calls Abandoned	46	182	65	68	66	85	71	284
iv. Calls Handled by Voice mail:	413	1653	455	674	794	604	632	2527
v. Average duration of calls answered	4 minutes		4 minutes	4 minutes	6 minutes	6 minutes	5 minutes	
vi. Breakdown by request type:								
1. Apply/Terminate info.	22	88	26	42	38	42	37	148
2. Automated Telphone Call	23	92	29	30	44	37	35	140
3. Balance Inquiry	0	0	118	174	163	170	156	625
4. Call Back	0	0	22	31	28	42	31	123
5. Dispatch	48	191	33	42	23	47	36	145
6. Dispute	14	55	26	16	31	25	25	98
7. Follow up	22	88	44	51	150	92	84	337
8. General Questions & Other	288	1153	151	102	144	170	142	567
9. GWA Staff	90	360	166	140	127	143	144	576
10. No Water	26	105	37	21	17	42	29	117
11. Online/Phone App Help	36	144	23	47	28	47	36	145
12. Pay by Phone	118	470	113	104	112	175	126	504
13. Pay Plan	87	348	62	110	72	73	79	317
14. Restore Non-payment	22	86	83	126	93	35	84	337
15. Secure/Unsecure Valve	25	98	10	15	3	4	8	32
16. Voice Mail	0	0	43	71	74	56	61	244
17. Water leak	12	45	12	7	15	17	13	51
e. Customer Emails:								
i. Emails Recieved :								
1. customers@guamwaterworks.org	79	317	48	57	83	29	54	217
Breakdown by request type (email):								
a. Apply for water	2	6	6	2	6	2	4	16
b. Terminate Water	3	10	0	2	1	1	1	4
c. Copy of Bill	1	5	3	0	0	0	1	3
d. Billing Dispute & follow up	13	51	7	19	33	5	16	64
e. General Questions & Other	20	78	20	20	22	15	19	77
f. Report a water leak	4	14	2	5	5	2	4	14
g. Report water theft	0	0	0	0	0	0	0	0
h. Online services inquiry	8	33	10	9	16	4	10	39
2. gwaservesme@guamwaterworks.org (realtors and prop	2	9	0	0	1	0	0	1
ii. Emails Replied (both):	28	111	28	22	62	21	33	133

	AVERAGE	4/7/2018	4/14/2018	4/21/2018	4/28/2018	AVERAGE
f. Saturday Services: 9AM TO 1PM ONLY	29	34	25	35	22	29
i. VISITS: Breakdown by request type:						
1. Apply for water	6	4	3	2	6	4
2. Restore water cut for non payment	1	5	1	4	1	3
3. Terminate Water	1	3	2	2	1	2
4. Copy of Bill	7	7	4	5	3	5
5. Billing Dispute	7	6	8	11	4	7
6. Billing Dispute follow up	0	1	0	0	0	0
7. General Questions & Other	3	1	5	6	2	4
8. Report a water leak	0	0	0	0	0	0
9. Report water theft	0	0	0	0	0	0
10. Payment Arrangement	5	7	2	5	5	5



GWA Utility Services Division
Monthly Status Report
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ii. CALLS TO CALL CENTER (Saturday services only):			4/7/2018	4/14/2018	4/21/2018	4/28/2018		
			48	63	50	58		



Dispute Resolution & Document Control

I. Dispute Resolution:			4/7/2018	4/14/2018	4/21/2018	4/28/2018		
a. Number of disputed accounts resolved:	6	23	11	12	12	12	12	47
b. Number of disputed accounts under review:	179	716	179	178	178	178	178	713
II. Document Control:								
a. Number of field activities posted :	486	1945	499	386	599	475	490	1959
b. Number of field activities pending:	549	2194	715	643	172	137	417	1667

Disconnect/Reconnect Unit

I. Number of field activities received:	251	1003	438	222	234	223	279	1117
II. Number of field activities completed:	269	1077	399	257	242	210	277	1108
III.Number of field activities pending field action:	3	12	3	4	8	4	5	19

Meter Reading Unit

I. Number of meters read:			4/7/2018	4/14/2018	4/21/2018	4/28/2018		
a. Electronically Read Meters:	9365	37461	7940	10747	10401	10186	9819	39274
b. Manually Read Meters:	39	155	22	40	36	38	34	136
i. Unread meters (Meters scheduled to be read but not read):	41	164	38	40	37	60	44	175
ii. Number of data logs received:	32	128	26	32	37	27	31	122
iii. Number of data logs retrieved:	34	136	30	32	25	24	28	111
iv. Number of data logs pending field action:	17	69	5	5	18	21	12	49
v. Communication Errors/Reprogramming requests:	6	25	2	0	1	1	1	4
vi. Number of estimated readings (for the week):	33	132	28	30	10	35	26	103
vii. Reasons for Estimations:								
1. Cant locate meter:	1	5	0	7	8	7	6	22
2. Temporary Obstruction	1	4	0	0	2	5	2	7
3. Vicious Dog	0	1	0	0	1	0	0	1
4. Flooded meter	1	3	0	1	2	2	1	5
5. Corrective action requested (database corrections needed)	4	17	1	0	4	2	2	7
6. Possible changed out meter:	8	32	2	2	28	4	9	36
7. Communication/Programming error (code 92's):	6	22	2	8	6	4	5	20
8. Other:	4	17	0	1	10	20	8	31
1. Leaks detected on customer's private line:	1079	4315	1019	1444	1293	1136	1223	4892
2. Reverse Flow Detected	30	119	22	48	24	57	38	151
3. No Usage Detected	266	1064	243	310	377	366	324	1296
4. Tamper Code	15	60	7	21	14	17	15	59
c. Electronic Read Percentage:	99%		98%	98%	99%	98%	98%	

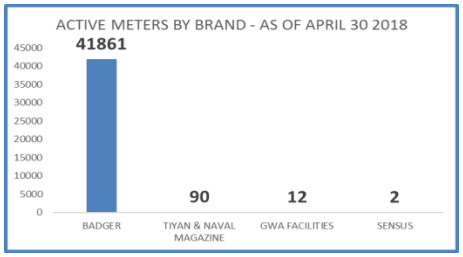
Revenue Protection Unit

I. Number of Inactive Still Consuming Reports rec'd & investigated:	2	6	1	1	1	0	1	3
II.Number of Illegal Connection reports rec'd & investigated:	0	1	1	0	1	3	1	5

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report :

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



GUAM WATERWORKS AUTHORITY

Engineering Monthly Report
May 2018

Prepared By:
Thomas Cruz, P.E. Chief Engineer

Table of Contents

Section	Description	Page
A	Summary Table of 2010, 2013 and 2016 Bond	3
B	Projects Procurement	5
C	CIP Water Section	8
D	CIP Wastewater Section	12
E	CIP Engineering Support	15
F	GIS Section	16
G	Permits Section	17
H	SRF Project Status Report	18

A. Summary Table of 2010, 2013 and 2016 Bond

Potable Water

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
PW 05-01	Ground Water Disinfection	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	N/A	N/A	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A
PW-05-05	"A Series Well Transmission Line	$ 518,143.96	100.00%	0.00%	$ 400,000.00	92.46%	7.54%	$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	$ 500,000.00	100.00%	0.00%	$ 1,861,000.00	99.09%	0.91%	$ 4,139,000.00	0.00%	100.00%
PW 05-07	Meter Replacement Program	$ 10,300,000.00	99.84%	0.16%	$ 999,000.00	99.75%	0.25%	$ 4,501,000.00	3.33%	96.67%
PW 05-08	Barrigada Tank Repair/Replacement	$ 5,450,000.00	99.92%	0.08%	$ 4,987,000.00	99.32%	0.68%	$ 1,013,000.00	0.00%	100.00%
PW 05-09	Leak Detection	$ 200,000.00	100.06%	-0.06%	$ 20,000.00	84.58%	15.42%	$ 1,180,000.00	0.00%	100.00%
PW 05-10	Potable Water System Planning	$ 200,000.00	100.00%	0.00%	$ 624,000.00	100.00%	0.00%	$ 2,276,000.00	38.50%	61.50%
PW 05-11	Implement Ground Water Rule	$ 1,700,000.00	100.00%	0.00%	$ 1,000,000.00	100.00%	0.00%	$ -	N/A	N/A
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	$ 1,700,000.00	18.03%	81.97%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-13	Deep Well Rehabilitation	$ 548,000.00	100.00%	0.00%	$ 200,000.00	100.00%	0.00%	$ 250,000.00	44.01%	55.99%
PW 05-14	New Deep Wells at Dow n Hard	$ 638,252.85	76.11%	23.89%	$ 810,000.00	0.00%	100.00%	$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	$ 900,000.00	37.87%	62.13%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-16	Master Meters	$ 1,600,000.00	99.44%	0.56%	$ 784,000.00	99.88%	0.12%	$ 3,616,000.00	4.19%	95.81%
PW 09-01	Ugum Water Treatment Plant Intake	$ 700,000.00	99.47%	0.53%	$ 982,000.00	100.00%	0.00%	$ 18,000.00	0.00%	100.00%
PW 09-02	Water Wells	$ -	N/A	N/A	$ 4,200,000.00	46.77%	53.23%	$ 2,500,000.00	0.00%	100.00%
PW 09-03	Water Distribution System	$ 3,174,748.00	100.00%	0.00%	$ 11,151,000.00	87.97%	4.85%	$ 49,000.00	0.00%	100.00%
PW 09-04	Pressure Zone Realignment	$ -	N/A	N/A	$ 431,000.00	99.95%	0.05%	$ 1,141,000.00	58.58%	35.06%
PW 09-06	Central Water Distribution System 2005	$ 900,000.00	91.67%	8.33%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	$ 1,200,000.00	100.00%	0.00%	$ 430,000.00	99.60%	0.40%	$ 100,000.00	0.00%	100.00%
PW 09-09	Water Reservoir Internal/External	$ 2,000,000.00	73.20%	24.53%	$ -	N/A	N/A	$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	$ -	N/A	N/A	$ -	N/A	N/A	$ 800,000.00	0.00%	100.00%
PW 09-11	Water System Reservoirs 2005 Improvements	$ 1,050,000.00	100.00%	0.00%	$ 13,878,000.00	99.99%	0.01%	$ 28,350,000.00	48.33%	49.98%
PW 11-01	Distribution System Upgrades	$ 474,159.85	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 11-02	Ugum Water Treatment Plant Reservoir	$ -	N/A	N/A	$ 90,000.00	0.00%	100.00%	$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	$ 100,000.00	78.46%	21.54%	$ -	N/A	N/A	$ 1,000,000.00	0.00%	95.00%
PW 12-02	Production Plan / Reduce Navy Purchases	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-03	Hydraulic Assessment of Tanks	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-04	Agana Heights & Chaot Tanks	$ 4,700,000.00	100.00%	0.00%	$ 3,280,000.00	40.52%	59.48%	$ 1,220,000.00	40.98%	59.02%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	$ 1,900,000.00	95.16%	4.84%	$ 11,605,000.00	99.99%	0.01%	$ 1,895,000.00	96.15%	3.85%
PW 12-06	Tank Replacement Piti & Hyundai	$ -	N/A	N/A	$ -	N/A	N/A	$ 7,409,830.00	98.52%	1.48%
PW 12-07	Assessment of Malojloj Elevated & Yigo Elevated	$ 200,000.00	100.00%	0.00%	$ 485,117.00	100.00%	0.00%	$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	$ 50,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	$ -	N/A	N/A	$ -	N/A	N/A	$ 2,000,000.00	0.00%	100.00%
		$ 41,903,304.66			$ 58,317,117.00			$ 64,647,830.00		

Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastew ater System Planning	$ 1,500,000.00	100.00%	0.00%	$ 651,000.00	100.00%	0.00%	$ 349,000.00	89.68%	10.32%
WW 05-05	Wastew ater Vehicles	$ 235,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-01	Lift station upgrades	$ -	N/A	N/A	$ 946,000.00	70.40%	29.60%	$ 2,404,000.00	12.21%	87.79%
WW 09-06	Wastew ater Collection System Repl/ Rehabilitation	$ 1,105,000.00	99.93%	0.07%	$ 780,000.00	97.11%	2.89%	$ 2,920,000.00	19.02%	80.98%
WW 09-08	Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-10	Facilities Plan/Design for Agat-Santa Rita WWTP	$ 899,630.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 11-03	Baza Gardens STP Replacement	$ 1,301,947.00	24.27%	11.57%	$ 3,114,883.00	100.00%	0.00%	$ 29,400,170.00	98.99%	1.01%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	$ 900,000.00	100.00%	0.00%	$ 473,000.00	100.00%	0.00%	$ 527,000.00	47.44%	52.16%
WW 11-08	Agat/Santa Rita STP Replacement	$ 2,218,000.00	99.91%	0.09%	$ 67,200,000.00	99.43%	0.57%	$ 3,000,000.00	37.32%	62.68%
WW 12-01	Northern District WWTP Primary Treatment Upgrade	$ 11,750,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-02	Biosolids Management Plan	$ 200,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-03	Agana WWTP Interim Measures	$ 11,500,000.00	100.00%	0.00%	$ 673,000.00	100.00%	0.00%	$ 827,000.00	0.00%	100.00%
WW 12-04	I&I SSES Southern	$ 800,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-05	I&I SSES Central	$ 850,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-06	I&I SSES Northern	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12 -07	Umatac Merizo Replacement	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ 20,800,000.00	99.06%	0.94%
WW 12-08	Wastew ater System GIS & Mapping	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-09	Wastew ater Facility Back Up Pow er	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-10	Wastew ater System Asset Inventory	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 17-01	Wastew ater Sew er System Expansion									
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	$ 1,000,000.00	0.00%	100.00%						
		$ 36,009,577.00			$ 73,837,883.00			$ 60,227,170.00		

Electrical Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
EE 05-02	SCADA Pilot Project	$ 61,950.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-01	Wastew ater Pumping Station Electrical Upgrade	$ -	N/A	N/A	$ 620,000.00	16.13%	83.87%	$ 100,000.00	0.00%	100.00%
EE 09-02	Electrical Upgrade - Water Wells	$ 354,226.63	100.00%	0.00%	$ 1,500,000.00	100.00%	0.00%	$ 650,000.00	0.00%	100.00%
EE 09-03	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 2,000.00	0.00%	100.00%	$ 323,000.00	0.00%	100.00%
EE 09-04	Electrical Upgrade - Water Booster	$ -	N/A	N/A	$ 200,000.00	0.49%	99.51%	$ -	N/A	N/A
EE 09-05	Electrical Upgrade - Other Water	$ -	N/A	N/A	$ 150,000.00	40.47%	59.53%	$ -	N/A	N/A
EE 09-06	SCADA Improvements - Phase I	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-07	SCADA Improvements - Phase 2	$ 1,056,986.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-08	SCADA Improvements - Phase 3	$ 24,955.71	100.00%	0.00%	$ 923,000.00	78.26%	21.74%	$ 1,177,000.00	52.46%	47.54%
EE 09-09	SCADA Improvements - Phase 4	$ -	N/A	N/A	$ -	N/A	N/A	$ 6,500,000.00	0.00%	80.66%
		$ 1,748,118.34			$ 3,395,000.00			$ 8,750,000.00		

Miscellaneous Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
MC 05-01	Laboratory Modernization	$ -	N/A	N/A	$ 1,173,000.00	100.00%	0.00%	$ 1,127,000.00	100.00%	0.00%
MC 05-02	Land Survey	$ 500,000.00	99.94%	0.06%	$ 2,000.00	0.00%	100.00%	$ 1,998,000.00	63.09%	36.91%
MC 09-01	General Plant Improvements	$ 7,241,000.00	99.58%	0.42%	$ 2,600,000.00	82.00%	18.00%	$ 2,769,460.00	53.83%	45.89%
MC 15-01	Information Technology Intergration Improvements							$ 500,000.00	48.81%	51.19%
		$ 7,741,000.00			$ 3,775,000.00			$ 6,394,460.00		

	2010 Bond Allotment	2013 Bond Allotment	2016 Bond Allotment
CIP Water	$ 41,903,304.66	$ 58,317,117.00	$ 64,647,830.00
CIP Wastewater	$ 36,009,577.00	$ 73,837,883.00	$ 60,227,170.00
CIP Electrical	$ 1,748,118.34	$ 3,395,000.00	$ 8,750,000.00
CIP Miscellaneous	$ 7,741,000.00	$ 3,775,000.00	$ 6,394,460.00
	$ 87,402,000.00	$ 139,325,000.00	$ 140,019,460.00

Bond Fund	Construction Fund Amount ($M)	Estimated # of months fund available for use		Total Funds encumbered to date ($M)	% of fund used	Rate of Spending: ($M) per year
2005	$82.930	82	*	$82.930	100.00%	12.14
2010	$87.402	88	**	$83.354	95.37%	11.37
2013	$139.325	51	**	$132.278	94.94%	31.12
2015	$140.019	21		$82.226	58.72%	46.99
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of April 2018					

B. Projects Procurement

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.

BOX KEY FOR PROCUREMENT:

(Type of Procurement) (Relevant CIP NO. or Funding Source)	**(Project Title)**	
(Percentage complete for procurement)	**Activities/Notes:** (see percentage key above)	**Consultant** (listed when selected)
Project Description	Summary of project description	

BID PACKAGE PW 09-02	**New Well Construction**	
<50% Complete	**Activities/Notes:** GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-12. Internal GWA discussions underway for survey and appraisal services as well as continuing services form Designer.	
Project Description:	The project is to construct three new production wells for GWA as well as installation of a water main to connect the new production wells to the Ysengsong Reservoirs.	

RFP PW 09-02	**New Well Construction (Construction Management)**	
<50% Complete	**Activities/Notes:** SOW being developed	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of up to three (3) new production wells for GWA. GWA plans to increase source water production to improve system redundancy that allows for operating the water production wells more effectively. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

BID PACKAGE PW 14-01	**Fire Hydrant Replacement Phase I**	
<50% Complete	**Activities/Notes:** Bid package being prepared.	
Project Description:	The work performed under this project consist of replacing all know dry barrel fire hydrants down to the lateral as well as any defective wet barrel fire hydrant. Where necessary the gate valve for the fire hydrant may also be replaced.	

RFP WW 09-01	**Yigo SPS Flood Protection and Rehabilitation Design**	
90% Complete	**Activities/Notes:** GWA in negotiation with AECOM on SOW and fee proposal.	
Project Description:	The work performed under this project procurement shall consist of a design services to implement storm water mitigation measures to protect the facility during extreme weather as well as rehabilitate the facility to provide better redundancy and operate efficiently.	

BID PACKAGE PW 09-03, PW 09-04 AND PW 09-11	**Northern Tank Phase I (Santa Rosa) Construction**	
<50% Complete	**Activities/Notes:** GWA will issue only a bid for Santa Rosa Tank and off-site improvements first.	
Project Description:	The work performed under this project procurement shall consist of Construction of a 1MG Santa Rosa reservoir and booster pump station. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

BID PACKAGE EE 09-08, EE 09-09	**SCADA Phase A1 Construction**	
95% Complete	**Activities/Notes:** GWA management seeking CCU approval of contract with lowest bidder.	
Project Description:	The work performed under this project procurement shall consist of Construction of SCADA ready instrumentation at several water and waste water facilities throughout he island.	

RFP EE 09-08, EE 09-09	**SCADA Phase A1 Construction Management**	
90% Complete	**Activities/Notes:** GWA and CM firm currently in scope and fee negotiations.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of all SCADA ready instrumentation at the various facilities through Guam. The overall goal of the Construction Manager (CM) is to	

	manage the entire construction process so that the project can be delivered efficiently and professionally.

RFP PW 09-04, PW 09-11	**Design Services for the Project Pressure Zone Realignment and Tank Repair/Replacement**	
90% Complete	**Activities/Notes:** GWA and design firm currently in scope and fee negotiations.	
Project Description:	The work performed under this project procurement shall consist of design services for the remaining GWA reservoirs that required major repairs or replacement. The design will also address the required pressure zone realignment throughout the island so as to improve the distribution system functionality. .	

BOX KEY FOR PROJECT:

(Type of Project) (Relevant CIP NO.)	**(Project Title)** **(Contractor or consultant)**	**Start Date:** (month and year)
(Percentage complete for project)	**Activities/Notes:** (brief description of activity)	**Completion Date:** (month and year)
(Court Order Paragraph No.)	(Project type)	
Project Description	Project Description Narrative	

C. CIP Water Section

INSPECTION CIP PW 05-02	**Inspection & Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)**	**Start Date:** April 2010
80% Complete	**Activities/Notes:** GWA needs to modify design for Toguan BPS. Still working on plan for Kaiser, Windward. Quote for Agat #1 take down with contractor. GWA working to get quotes for by-pass for Malojloj tank.	**Completion Date:** Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

DESIGN CIP PW 05-12	**Brigade II BPS Upgrade (EM Chen)**	**Start Date:** April 2012
100% complete (Basis of Design) 60% (Design)	**Activities/Notes:** 60% design submittal received and under review.	**Completion Date:** Due to property acquisition issues GWA anticipate May 2018
N/A	Engineering design services	
Project Description:	The design project is intended to assess system water supply feed from the north as well as Ugum WTP and the water demands downstream from the Brigade BPS so as to reconfigure the piping into the BPS and resize the pumps to me system head requirements.	

DESIGN CIP PW 12-05	**Yigo and Astumbo 2MG Tank Design Project (Lyons)**	**Start Date:** September 2013
99% complete	**Activities/Notes:** Design firm to provide RFI support during the construction.	**Completion Date:** January 2016
CO 9 (b)(4)	Engineering design services	
Project Description:	Develop the construction documents for two (2) 2.0 million-gallon (MG) nominal capacity concrete reservoirs in the Yigo service zones and one (1) 2.0 MG reservoir in the Astumbo service area. The design services will consist of preparation of plans, specifications, and estimates (PS&E), including Basis of Design, design calculations, construction	

	schedule, topographical survey, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD (latest version), and relevant permits. Other services will include construction bid support service, meetings, and response to request for interpretation/information during construction. The consultant is required to incorporate and modify existing GWA concrete reservoir specifications to meet the project objective.

DESIGN PW 09-11	**Northern and Southern Guam Reservoir Design** **(TG Engineers)**	**Start Date:** May 2015
60% Complete	**Activities/Notes:** Santa Rosa – 100% design in hand. Santa Rita – 100% design in hand. Inarajan – Land procurement second site related to new BPS's still on-going. Sinifa – 100% design in hand. Ugum – GWA still in discussion with re-evaluation and discussion with property owner of alternative property on-going.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.	

DESIGN PW 12-04	**Central Guam Reservoirs Design** **(GHD Inc.)**	**Start Date:** May 2015
65% Complete	**Activities/Notes:** Chaot #2 – Chaot off-site work part of base bid. Chaot Tank work expected to be Change Order in once funding available. Tumon #2 – tank under construction. Hyundai – tank under construction. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon –70% design near complete. Tumon #1 – GWA working on land issues.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto	

	CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti and Tumon #1.

CONSTRUCTION PW 09-03	**Line Replacement Phase IV (Giant Construction)**	**Start Date:** 02/14/16
80% Complete	**Activities/Notes:** Contractor continuing pipe installation at Asumption Drive and Agafa Gumas. GWA working on property and archeological issue with contractor.	**Completion Date:** 12/30/18 per Change Order.
	Construction Services	
Project Description:	The project is intended for a contractor to replace existing water lines that have been found by operations to be leaking and/or are causing service delivery to less than what GWA is required to provide. The project will replace water mains and ten known locations throughout the island and there is a component within the bid where line replacement work for unknown locations is accounted for.	

DESIGN PW 05-15	**Asan Spring Rehabilitation Design (HDR)**	**Start Date:** August 24, 2016
60% Complete	**Activities/Notes:** 60% design submittal received and under review.	**Completion Date:** Due to delays from the Park Services related to property access the anticipated completion of the design is May 2018.
	Engineering design services	
Project Description:	- Perform site visits and condition assessment for site conditions to determine demolition and rehabilitation requirement, process equipment condition, structural condition, and electrical system. Site condition assessment shall include all disciplines to execute the project. - Review and validate the current property boundary information to confirm the available space for the project development. - Perform an environmental impact study and prepare all required permits as needed. - Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed. - Coordinate with Guam Historic Resources Division State Historic Preservation Office (SHPO) on historical resources study. Prepare all necessary reports and documents as required by SHPO. - Coordinate with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on vegetation clearance. Prepare all necessary reports and documents required by DAWR. - Identify the existing and projected service area, period of design. - Identify and recommend conceptual water treatment system. - Perform a Class 4 engineering cost estimate according to the American Association of Cost Engineers (AACE) International Cost Estimate Classification System for construction fee. Cost must	

	include all disciplines, permit, construction and administration that are necessary to execute the project. All costs will be in current dollars and escalated to the estimated midpoint of construction.

CONSTRUCTION PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction (Pernix)**	**Start Date:** 12/1/16
80% Complete	**Activities/Notes:** Contractor working to fill Yigo #1. Yigo #2 concrete roof near complete and prestressing to start soon. Yigo pump station also near complete. Astumbo #1 tank structure complete, working on finishes. On-site pipe work at both sites on-going.	**Completion Date:** 07/31/18
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

CONSTRUCTION MANAGEMENT PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction Management (GHD)**	**Start Date:** December 2016
75% complete	**Activities/Notes:** Processing submittals and on-site inspection	**Completion Date:** July 2018
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the demolition of existing steel elevate and ground tanks as well as the construction of the 2MG concrete tanks at the Yigo tank location and Astumbo tank location. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION MANAGEMENT PW 12-04-11, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management (TG Engineers, PC)**	**Start Date:** December 2017
5% complete	**Activities/Notes:** Reviewing submittals from contractor.	**Completion Date:** February 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

CONSTRUCTION PW 12-04, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction (AIC)**	**Start Date:** 02/8/18
5% Complete	**Activities/Notes:** Clearing at Nissan on-going, waiting for DPW to issue final permit.	**Completion Date:** 02/31/19
	Construction Services	
Project Description:	The work performed under this project procurement shall consist of Construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

CONSTRUCTION MANAGEMENT PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management (GHD)**	**Start Date:** April 2018
0% complete	**Activities/Notes:** Providing constructability review for Santa Rosa Tank.	**Completion Date:** June 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

D. CIP Wastewater Section

DESIGN WW 11-08	**Agat-Santa Rita WWTP Replacement (DCA)**	**Start Date:** October 2014
99% Complete	**Activities/Notes:** Change Order to extend design services during construction executed.	**Completion Date:** Nov. 2015 (design); June 2018 (construction)
CO 11	Engineering design services	
Project Description:	The engineering design consultant is required to design a new wastewater treatment facility that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility	

CONSTRUCTION MANAGEMENT WW 11-08	**Agat Santa Rita WWTP CM (GHD)**	**Start Date:** November 2014
100% (PH 1) 100% Complete (PH 2, Part 1) 93% Complete (PH 2, Part B)	**Activities/Notes:** Typical CM inspections on-going. Change order required to continue services through April 2018.	**Completion Date:** December 2017, projected through April 2018
CO 11	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of	

	Construction Management and Inspection Services for the construction of the Agat Santa Rita WWTP Phase II project. GWA plans to replace the existing wastewater treatment plant for a new plant that can meets permit limits. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.

CONSTRUCTION WW 11-08	**Agat Santa Rita WWTP Phase II (Sumitomo Construction)**	**Start Date:** January 2016
Part 1 of Phase II- 100% Complete Part 2 of Phase II- 93% complete	**Activities/Notes:** Contractor still working on headworks, aerobic digester, equalization basin, admin and maintenance buildings.	**Completion Date:** Phase A: 03/15/17 Phase B: 12/31/17 will not be met, August 2018 projected
CO 11	Construction services	
Project Description:	This project includes construction of the head works, clarifier, oxidation ditches and UV disinfection and administration facilities. Rehabilitation work at the existing WWTP will also occur to ensure the wastewater can be pumped to the new plant. The new plant will also tie into the Tipalao SPS.	

DESIGN WW 09-08, WW11-03	**Baza Gardens Cross Island Sewer Design (DCA)**	**Start Date:** 02/05/16
99% Complete	**Activities/Notes:** DCA providing engineering services during construction.	**Completion Date:** 04/30/18(this completion date will have to be extended.)
CO 11	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification for a sewer conveyance from the Baza Garden WWTP to the new Agat Santa-Rite WWTP. The design will take into account growth in the Baza Gardens/Talofofo areas as wells as new connection along the Route 17 route.	

DESIGN WW 09-06	**Bayside SPS Improvements Design (EMPSCO)**	**Start Date:** July 29, 2016
99% Complete	**Activities/Notes:** Due to change in design Army Corp of Engineers permit viewed as not necessary. GWA received 100% design and under review. GWA working on Change order to address snail and archeological report that was not part of original scope.	**Completion Date:** Due to issue with ACOE anticipate December 2017 for design only.
	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification to upgrade the Bayside Sewer Pump Station given the facility is in major disrepair and the adjacent river is eroding away the access road to the facility which is causing maintenance challenges.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)**	**Start Date:** October 2016
70% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase I: 03/01/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

CONSTRUCTION MANAGEMENT WW 09-08 WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)**	**Start Date:** December 5, 2016
55% Complete	**Activities/Notes:** Field inspection, project coordination and invoice review on-gong.	**Completion Date:** April 2018 (this completion date will have to be extended.)
	Construction Management services	
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)**	**Start Date:** March 2017
80% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going.	**Completion Date:** Phase II: 03/16/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	
CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)**	**Start Date:** June 2017
25% Complete	**Activities/Notes:** Contractor continuing pipeline and SPS construction work on Route 17 along with work at wet well at Baza Gardens WWTP.	**Completion Date:** Phase III: 03/16/18 (this completion date will have to be extended.)
	Construction services	

Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.

CONSTRUCTION WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (CoreTech)**	**Start Date:** June 2017
90% design 10% construction	**Activities/Notes:** CHL has finished clearing and smoothing the North Overland Flow System (OFS). Berming South OFS channel to help dry North Terrace channel (water has been seeping through the center road).	**Completion Date:** December 31, 2018
	Construction services	
Project Description:	The project is intended to improve the aeration basin, construct a new sewer pump station, regrade the overland field, construct a new effluent storage tank and disinfection facility. The overland percolation basin will undergo regarding work to ensure appropriate distribution of effluent through the whole basin.	

CONSTRUCTION MANAGEMENT WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)**	**Start Date:** September 7, 2017
15%	**Activities/Notes:** Continuing on-site inspection of field activities.	**Completion Date:** December 31, 2018
	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

E. CIP Engineering Support

DESIGN EE 09-08	**SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)**	**Start Date:** June 2015
100% complete (design) 0% Services during construction	**Activities/Notes:** Final design in hand. AECOM to provide assistance during bidding process.	**Completion Date:** November 2017 - Design January 2019 - (Bid and Construction Support)
N/A	Engineering design services	
Project Description:	The A/E firm will design an integrated, robust and secure Supervisory Control and Data Acquisition (SCADA) system for GWA's water and wastewater systems, and to provide support services during bid and construction. The 22 sites will consist of a combination of water facilities	

	such as production wells, reservoirs, booster pump station and wastewater sites include sewer treatment plants and sewer pump stations. Executed by approved change orders, number of sites in original design scope has changed from 22 sites to 19 sites and design of High Water Alarm for 20 critical sewer pump stations has been added. Scope also includes bid and construction support of the design-build project of GPWA SCADA EMS project.

CONSTRUCTION MC 05-01	**New GWA Lab Construction (Mega United Construction)**	**Start Date:** NTP issued August 18, 2016
100% Complete	**Activities/Notes:** O&M manuals and as-build plans received. Final payment being processed. Project complete.	**Completion Date:** Early March 2018.
	Construction services	
Project Description:	The project will involve construction of a new building at the GWA Upper Tumon compound to house the laboratory section. The facility will include office, laboratory and storage space for the lab employees. The facility will also include a back-up generator.	

F. GIS Section

MAPPING MC 05-02	**Island Wide Survey-** **(Duenas, Camacho & Ass.)**	**Start Date:** December 2007
94% complete	**Activities/Notes:** Task #13 NTP issued, work near compete. Task #14 work on-going.	**Completion Date:** New anticipated complete is April 2018.
	Survey services	
Project Description:	The contracted land surveyor is required to conduct title research, property valuation and mapping of property boundaries where GWA facilities are located but the lot is not registered under GWA's name.	

MAPPING MC 05-02	**Island Wide Survey PH II -** **(Duenas, Camacho & Ass.)**	**Start Date:** August 30, 2017
35% complete	**Activities/Notes:** Surveyor continuing field work for 20 additional parcels.	**Completion Date:** December 2018
	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	

G. Permits Section

PERMITS
MONTHLY REPORT 2017

	2018						
Description	Jan	Feb	Mar	April	May		
Building Permit	11	9	1	13	11		
Occupancy Permit	3	10	18	16	18		
New Installation	14	8	7	9	3		
Sewer Application	15	14	7	6	3		
Sewer Inspection	0	1	3	0	0		
Private Utility Acceptance	0	0	0	0	0		
Relocation of Water Meter	0	0	0	0	0		
Tapping-Water	1	1	0	0	3		
Tapping-Sewer	0	1	0	0	0		
Clearance-Water	3	2	7	10	20		
Clearance-Sewer	3	2	7	10	20		
Highway Encroachment	0	4	41	22	25		
Verification of Utilities	4	4	5	4	1		
Fire Flow Test	0	0	1	0	0		
Schedule Water Outage	0	1	0	0	0		

H. SRF Project Status Report

- Projects listed below that are noted to be in the procurement phase will follow the "Percentage Key" below.

  Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.
- Cells highlighted in green indicate contract amount certified and project active.

	Project	Project Description	Project Manager	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 05/15/18
1	Northern District SSES & I/I Study	Sanitary sewer system evaluation study (SSES) and inflow and infiltration (I/I) study designed to evaluate high I/I areas within the Northern sewer basin with the goal of identifying projects to eliminate them.	J. Davis	Design	1	10/10/2014	2/29/2016	$ 792,979.97	Stanley	100% Complete.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
2	Southern SSES Rehabilitation (Agat-Santa Rita-Umatac-Merizo)	Rehabilitation of segments of sewer lines in Umatac, Merizo, Agat, and Santa Rita where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	1	10/30/2015	2/28/2017	$ 1,170,583.82	Reliable Builders	RBI working on repairs in Merizo.
				Const. Mgmt	1	11/10/2015	3/30/2017	$ 226,980.23	TG Engineers	CM Services complete.
3	Asan-Adelup-Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	Design	2	12/11/2015	3/30/2017 for Design requirements	$ 1,780,210.00	HDR	Route 1 rebid: HDR to provide services during bid process. .
				Construction		10/16/2016	6/30/2019			Procurement 75%. GWA advertise rebid 05/04/18. Bid opening 06/15/18.
				Const. Mgmt		6/30/2017	6/30/2019			Procurement 95%. Recommendation letter received from B&C. GWA to present resolution for board aproval in May CCU meeting.

4	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	Design	3	11/17/2015	3/30/2017 for Design requirements	$ 316,681.00	SSFM	SSFM providing services during bidding process as well as construction phase.
				Construction	6	8/31/2017	10/1/2018	$ 4,554,451.00		• Per BC/CM request and specs requirement, PPBC is now starting work at downstream end (near MH #2, connection point to Ga'an Pump Station). • PPBC encountering issues with shallow groundwater, small trash pump is inadequate, but may be procuring submersible pump. • PPBC's trench box (6' x 6') is smaller than recommended -- CM expressed concerns about how safe and proper manhole installation will be done. • PPBC conducting exploratory excavations as needed to help resolve manhole relocation issue due to existing utilities. CM/BC working with PPBC to determine the final alignment determination. • Existing concrete-encased utilities are preventing contractor from installing some manholes (especially MH#8B, MH#9 and MH#10) per the original design. CM coordinating between contractor, designer (SSFM), and BC to relocate these manholes as needed. BC/GWA (and maybe SSFM) would make the final call. • SSFM requesting additional funds for design services during construction.
				Const. Mgmt	8	9/19/2017	10/1/2018	$ 584,725.00		• PCO #1: 52 calendar day extension request, due to permitting delays. CM negotiating contractor's CO request.
5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	$ 1,819,850.00	B&C	Project underway.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	Design	5	7/6/2015	01/30/2018 (revised due to financial workshop)	$ 2,623,300.00	B&C	• CCU approved Master Plan release at special work session on 4/10. Master Plan is out for Public review. • Currently only providing assistance for Public Meetings. • Meetings are currently planned going into June so final completion may be July/August? • Budget is expended - additional work for the public meetings and SFO Presentation ~$52,000.
				Construction				*The project does not involve construction.*		
				Const. Mgmt						

7	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells to be rehabilitated are A-2, A-7, A 12, D-5, & F-3.	Brown & Caldwell	Design	6	5/27/2016	2/28/2018 (for design only)	$ 1,758,247.00	AECOM	• AECOM submitted final design package on 3/19. • Approved final design invoice #13.
				Construction		9/30/2018	9/30/2019			SRF grant funds specific to project pending FY18 grant approvals and award.
				Const. Mgmt		9/30/2018	9/30/2019			· Draft CM scope submitted to GWA.
8	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where sewer overflows are known to occur in Tumon San Vitores.	Brown & Caldwell	Design	7	6/24/2016	10/30/2017 for design only	$ 572,089.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		3/23/2017	3/22/2018			Procurement 50%; bid pacakge being prepared. Expect to advertised mid-May.
				Const. Mgmt		3/23/2017	3/22/2018			Procurement 50%: RFP package beiing preapred.
9	Critical Sewer Pump Stations (7 stations)	Rehabilitation of various components of 7 pump stations that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita, Santa Ana, Southern Link, and Route 1.	CDM	Design				*The design will be incorporated into the design/build package.*		
			J. Davis	Design/Build	1	8/8/2016	3/30/2018	$ 1,531,456.33	ProPacific	-Route 16 Pump Stations- Structural Evaluation done. Waiting for the report from the Structural Engineer. Additional cost and time extension is anticipated. Change Order #5 with finace for fund cert. - Fujita Pump Station- all work complete, - Macheche PS- all work complete - Santa Ana PS- all work complete, - Southern Link Pump Station - Pending Change ORder for Roll up door. - Ypaopao : all worl complete - Astumbo : all wrk complete
				Const. Mgmt	2	9/9/2016	3/30/2018	$ 299,519.00	Stanley	CM work ongoing. GWA working on Change Order proposal to extend contract to match constructions activities.
10	Sewer Pump Station High Water Alarm Systems (20 stations)	This project will design and installed telemetry equipment/SCADA type alarms that will alert when pump station failure occurs.	C. Yam	Design				*The design will be incorporated into the design/build package.*		
				Design	8	8/12/2016	02/30/2017	$ 183,171.00	AECOM	Design complete
				Construction	5	4/5/2017	9/30/2017	$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	3	02/30/2017	9/30/2017	$ 195,269.00	EMSPCO	CM work complete

11	Sewer Pump Station Backup Power (2 stations)	Construction of the housing and installation of new generators for the Casimero pump station (Mongmong) and the Namo pump station (Yona central).	B. Cruz	Design				*The design will be incorporated into the design/build package.*		
				Design/Build	2	6/24/2016	9/30/2017	$ 362,692.53	ProPacific	Design Build project complete.
				Const. Mgmt				*B. Cruz is the construction manager.*		
12	RT4 Relief Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines that are located from Agana McDonalds to Marine Drive that have been known to overflow due to structural issues.	Brown & Caldwell	Design	9	3/1/2016	4/22/2017	$ 794,000.00	AECOM	· AECOM to provided services during bidding process.
				Construction		6/30/2018	09/31/2019			Procurement 70%, · Rebid advertised on 3/23, Prebid on 4/11, Bid opening on 5/25.
				Const. Mgmt		4/23/2017	12/31/2018	$ 647,000.00		Procurement 90%, EMPSCO original CM fee ($647K); revised fee is $647K + $56K if two contractors. GWA working on contract documents for execution.
13	Groundwater Wells Rehabilitation (D-3, D-17, D-18, D-22, M-9)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	2	8/19/2016	3/30/2018	$ 6,120,353.44	Pacific Rim	• EA/PRC still working on level sensor issues. • EA working to get GHD onboard with VFDs needed, and any additional changes the VFDs could cause. • D-03: Meeting with GWA/EA on 5/14.
				Const. Mgmt	4	3/22/2016	3/30/2018	$ 943,361.24	EA	CCU approved resolution relative to proposed CM Change Order #4. Change Order being proceed.

14	Southern SSES Sewer Rehabilitation (Baza Gardens-Talofofo)	Rehabilitation of segments of sewer lines in Windward Hills, Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				*The design was previously completed under bond funding.*		
				Construction	3	8/2/2016	7/2/2017	$ 1,189,815.00	ProPacific	• PPBC on notice since 12/01/2017 (via formal GWA letter) that continuing delays are unacceptable and grounds for potential default. • Santa Rita Wetland area (drawing AG-101): • On 3/15, Contractor notified BC/GWA that progress could not be made on sewer line MH5678 -- MH5679 due to the line filling with rocks. • On 3/30, BC/GWA held site visit with USACE. On 4/3, BC held site visit with GEPA. A third sewage spill into the wetland was observed and reported. Contractor immediately repaired the leak. • Meeting held on 4/13 with Tom, Kelly Clark, Frankie Meno (and BC) to discuss completion alternatives, course of action, and default position. • PPBC also has remaining punch list work for additional CIPP defects at 5680-5681. • Baza Gardens area: IMS robotic cutter arrived on island during week of 4/23. • PPBC informed that GWA considering its options for failed CIPP through wetland.
				Const. Mgmt	5	7/29/2016	5/28/2017	$ 347,945.93	EMPSCO	· PM to work on Change Order to extend contract and amount.
15	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	Design	10	9/9/2016	10/31/2017 (for design only)	$ 663,629.00	TG Engineers	· TGE to provide engineering services during bid process.
				Construction		4/29/2017	4/30/2018			Procurement 50%; bid pacakge being prepared. Expect to advertised mid-May.
				Const. Mgmt		4/29/2017	4/30/2018			Procurement 50%: RFP package beiing preapred.
16	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	11/30/2017	$ 477,999.50	EMPSCO	Talafofo Pump Station design /bid ackage recieced. Final Design of Chalan Pago Pump Station project under review by GWA. Change Order related to snails to be excuted.
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			

17	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	Design		8/17/2016	11/30/2017	*The design will be included with the Talofofo Pump Station design project.*		
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
18	Water Hydraulic Model (SCADA ready instruments to update Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	Design	12	8/3/2016	3/15/2017	$ 523,268.00	GHD	Design complete.
				Construction		2/1/2017	12/30/2019			Funding for construction project to be from FY18 grant that is still pending.
				Const. Mgmt		2/1/2017	12/30/2019			
19	Macheche Hill Sewer Rehabilitation/ Replacement	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently and is consider a high priority.	J. Davis	Design-Build	3	8/29/2016	3/30/2018	$ 2,202,545.47	Giant Const.	Construtcion project complete.
				Const. Mgmt	6	9/16/2016	3/30/2018	$ 379,994.38	Am Orient	CM work complete.
20	Asan-Adelup-Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Rehabilitation of sewer line in Asan that collapsed and which is current fitted with a temporary pumping system.	Brown & Caldwell	Design				Design cost covered under 3A above.		
				Construction	4	3/8/2017	12/30/2017	$ 2,470,658.00		GWA waiting on as-builts.
				Const. Mgmt	7	1/24/2017	12/30/2017	covered under 3A		CM work complete.

DASHBOARD

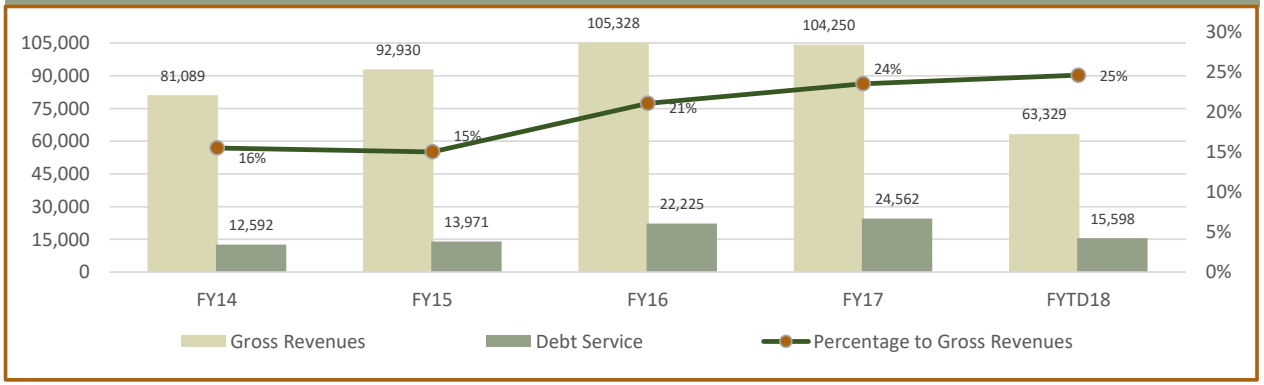
FYTD April 2018 Budget vs Actual ($000)

Category	Description	Budget FYTD18	Actual FYTD18	Variance
Rate Based Revenues	Water	$41,591	$39,959	($1,631)
	Wastewater	23,253	23,123	(129)
	Total	64,843	63,083	(1,760)
Operations & Maintenance	Salaries & Benefits	15,467	13,437	(2,030)
	Power	7,406	8,392	986
	Water Purchases	5,048	5,208	161
	A&G	7,506	5,976	(1,530)
	Contractual	2,613	2,482	(130)
	Total	$49,305	$46,630	($2,675)

Key Financial Ratios ($000)

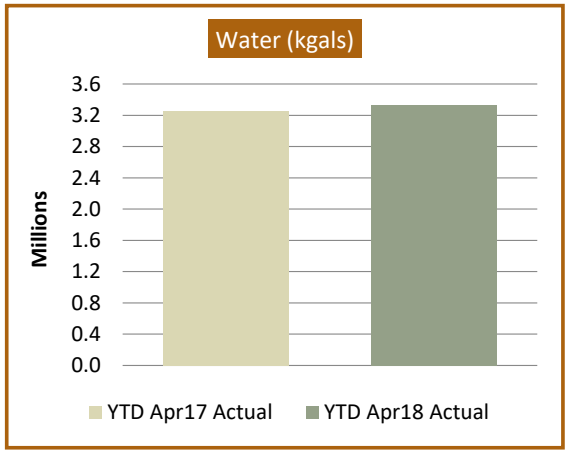
Category	FY18	FY17
Accounts Payable $$/Days	$4,149 / 46 days	$5,390 / 59 days
Accounts Receivable $$/Days	$15,531 / 61 days	$15,451 / 51 days
Days Cash On Hand	189 days	184 days
Annual Debt Service (Revenue Bonds)	$26,739	$24,563
Debt Service Coverage (Bond/PUC)	1.79 / 2.21	1.98 / 2.44

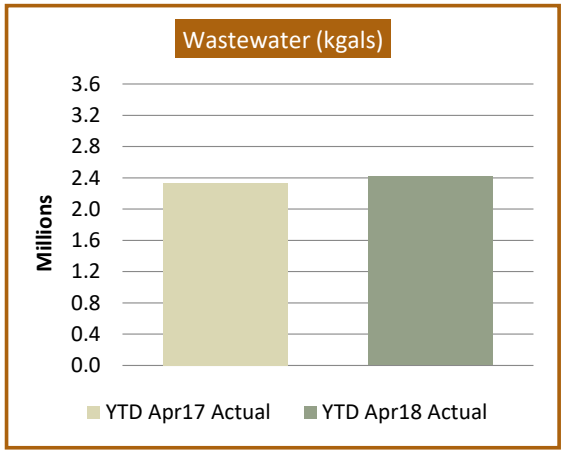
Debt as a Percent to Gross Revenue

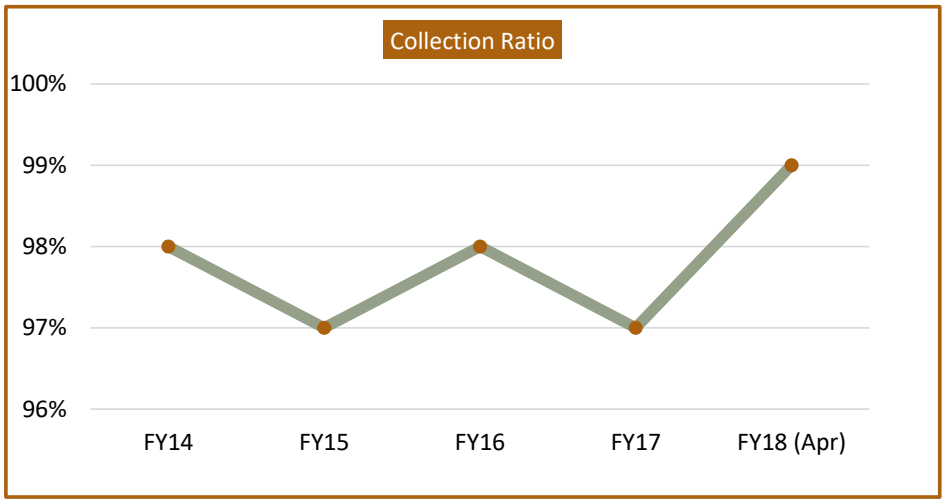


(1) Gross Revenues excludes SDC
(2) Debt Service Excludes Cap I

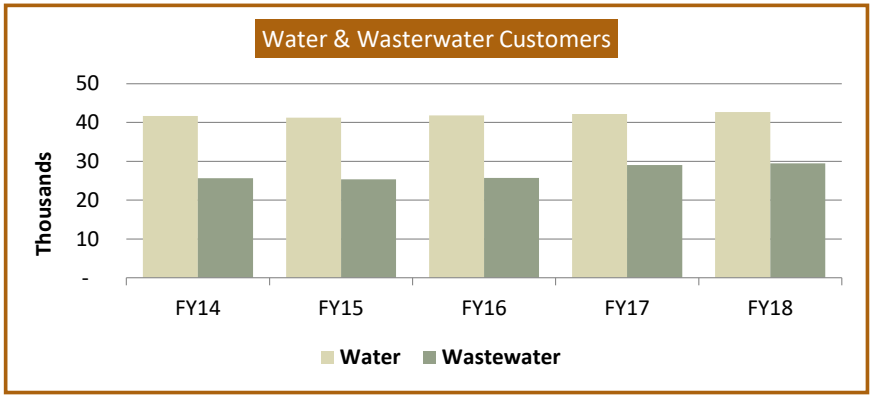
Water & Wastewater Analytics

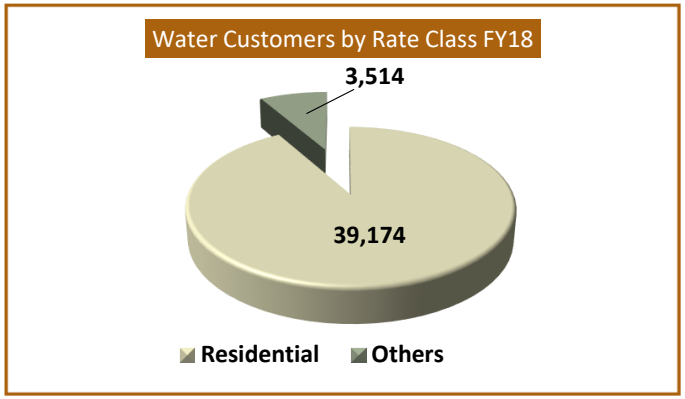


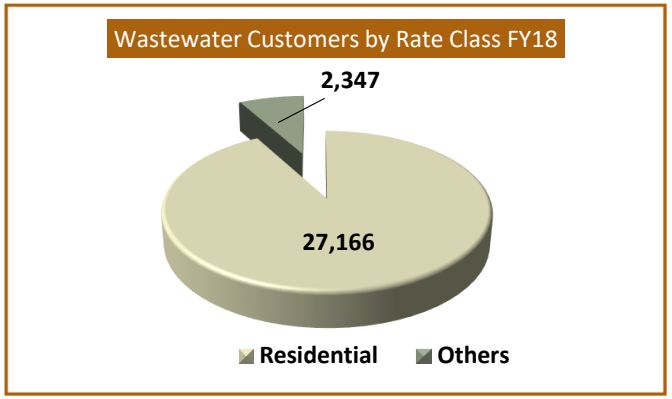


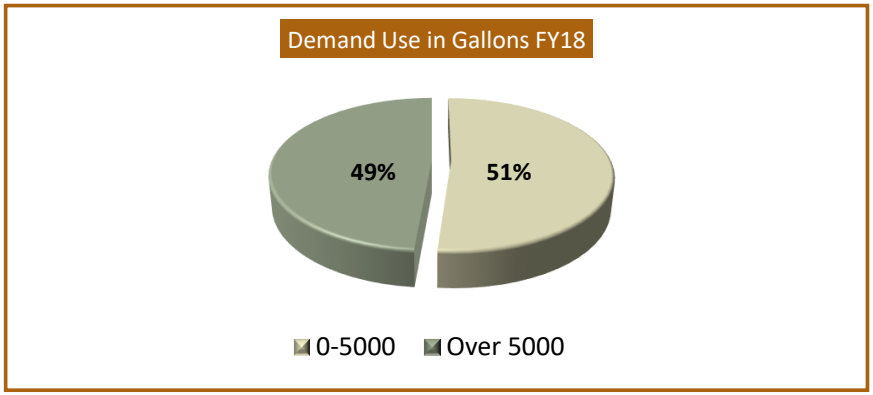


Water & Wastewater Customers





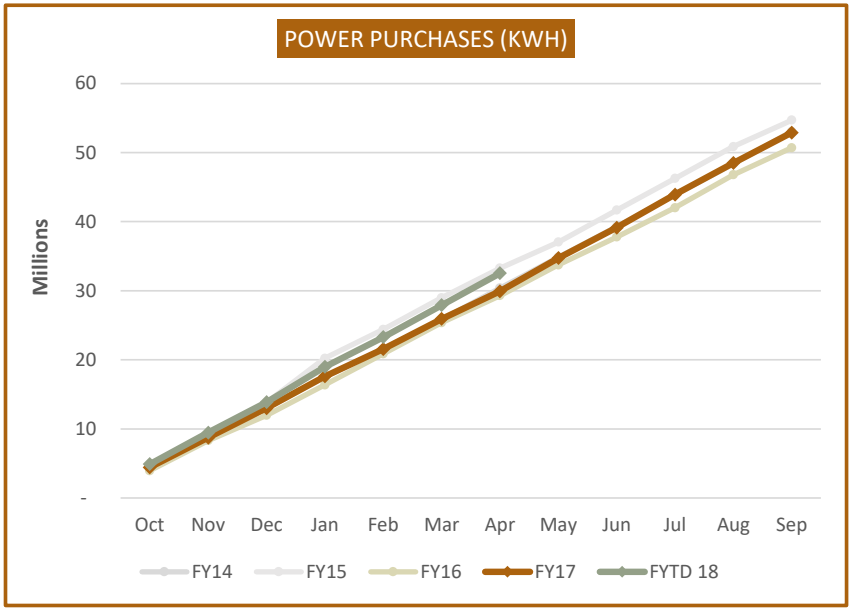


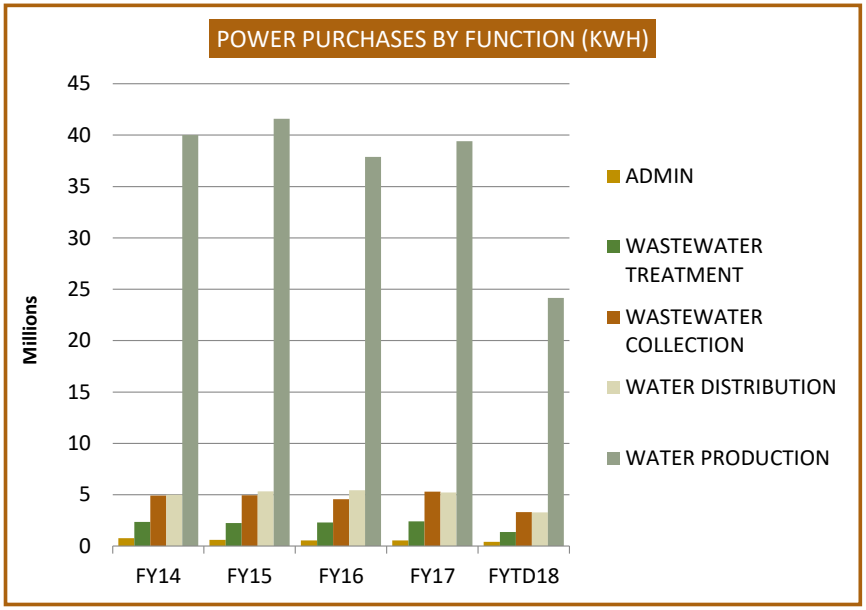


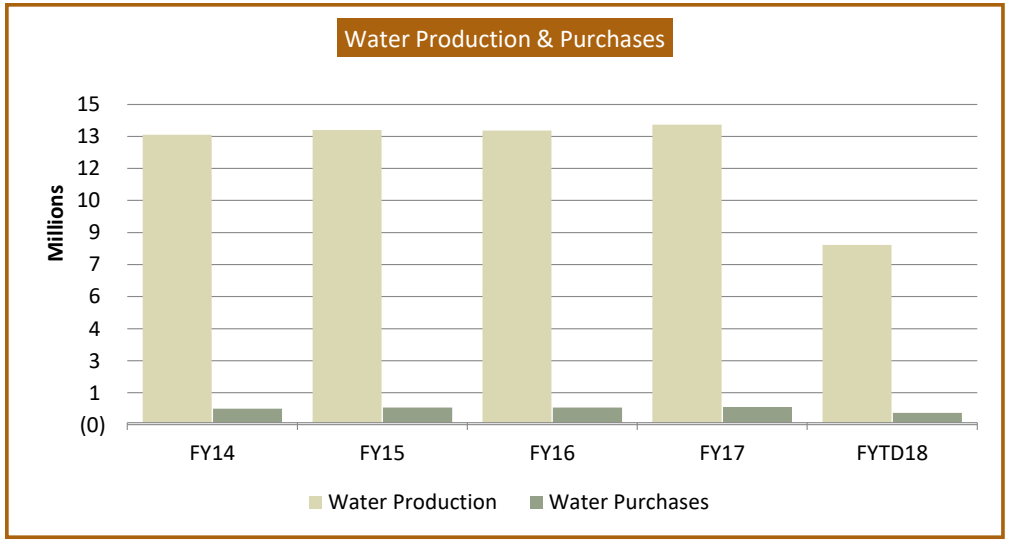
Top Ten Largest Water and Wastewater Customers – April 2018

Water			Wastewater		
Customer Name	FYTD18 Revenues	% of Total	Customer Name	FYTD18 Revenues	% of Total
1) MDI GUAM CORPORATION/LEOPALACE	$787,175	1.97%	1) AIR FORCE DOD	$2,200,025	9.52%
2) PACIFIC ISLANDS CLUB	687,809	1.72%	2) NAVY DOD	1,355,393	5.86%
3) HOTELS OF THE MARIANAS INC	579,823	1.45%	3) HOTELS OF THE MARIANAS INC	620,048	2.68%
4) HYATT	532,712	1.33%	4) HYATT	570,321	2.47%
5) HOTEL NIKKO GUAM	514,361	1.29%	5) HOTEL NIKKO GUAM	549,729	2.38%
6) GUAM REEF HOTEL INC	486,635	1.22%	6) GUAM REEF HOTEL INC	520,827	2.25%
7) SHERATON LAGUNA GUAM RESORT	458,360	1.15%	7) SHERATON LAGUNA GUAM RESORT	490,454	2.12%
8) MDI GUAM CORPORATION/WESTIN	379,827	0.95%	8) MDI GUAM CORPORATION/WESTIN	406,096	1.76%
9) OUTRIGGER GUAM RESORT	373,016	0.93%	9) OUTRIGGER GUAM RESORT	399,659	1.73%
10) GOODWIND DEVELOPMENT CORP/MICROMALL	355,457	0.89%	10) GOODWIND DEVELOPMENT CORP	379,039	1.64%
Total	**$5,155,176**	**12.90%**	**Total**	**$7,491,589**	**32.41%**

Power, Water Purchases and Water Production

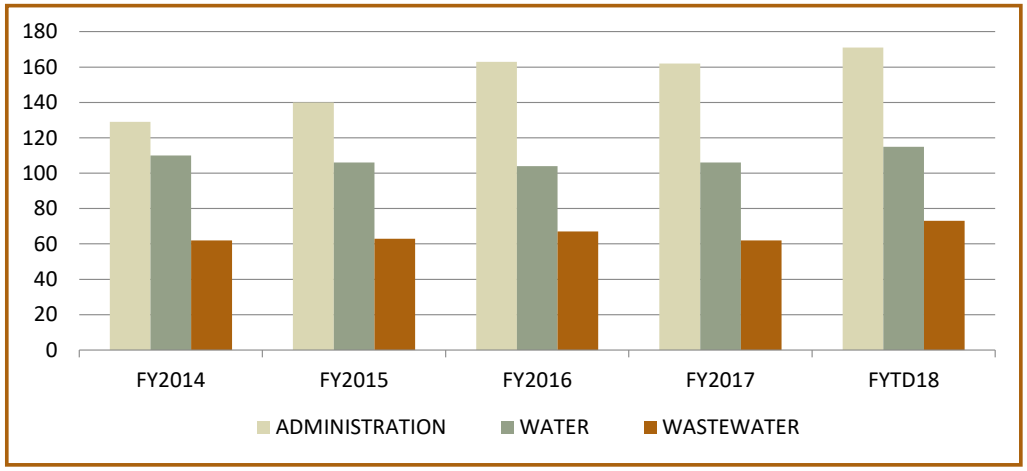




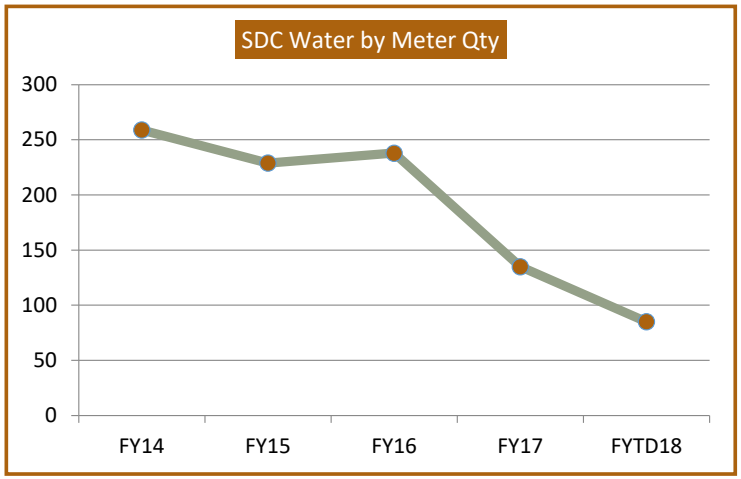


FTE by Major Division

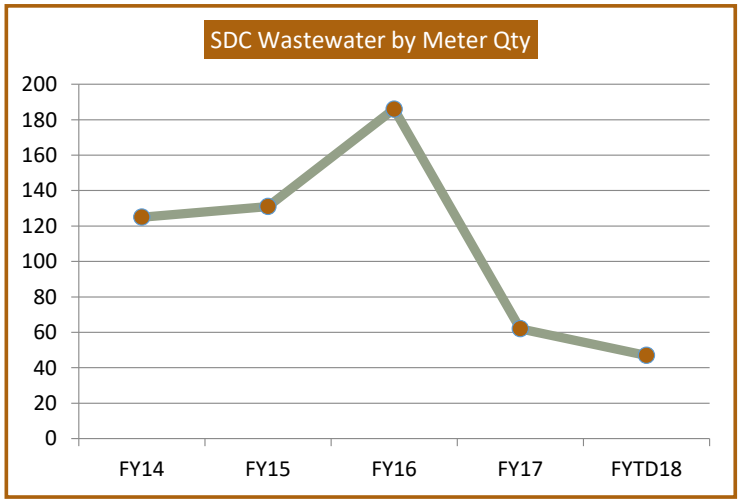
DIVISION	FY2014	FY2015	FY2016	FY2017	FYTD18
ADMINISTRATION	129	140	163	162	171
WATER	110	106	104	106	115
WASTEWATER	62	63	67	62	73
TOTAL NUMBER OF STAFF	301	309	334	330	359
Gross Salaries & Wages ($000)	15,532	15,805	16,442	17,210	10,102
Water Customers	41,702	41,274	41,858	42,181	42,688
Staff to Customers Ratio	0.72%	0.75%	0.80%	0.78%	0.84%



SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	248	220	239	129	77
1	5	5	7	2	1
1 1/2	1	1	1	1	3
2	3	2	4	2	3
3	1	-	1	-	-
4	-	1	-	-	1
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Water	259	229	252	135	85



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	115	124	179	58	39
1	4	3	2	-	1
1 1/2	1	1	1	1	3
2	3	2	3	2	3
3	1	-	1	-	-
4	-	1	-	-	-
6	-	-	-	1	1
8	1	-	-	-	-
10	-	-	-	-	-
Total SDC by Wastewater	125	131	186	62	47

GUAM WATERWORKS AUTHORITY
APRIL 30, 2018
FINANCIAL AND RELATED REPORTS
TABLE OF CONTENTS

	SCHEDULES	PAGE
BALANCE SHEET	A	2
INCOME STATEMENT MTD ACTUALS VS MTD BUDGET	B	3
INCOME STATEMENT MTD ACTUALS FY18 VS FY17	C	4
INCOME STATEMENT YTD ACTUALS VS YTD BUDGET	D	5
INCOME STATEMENT YTD ACTUALS FY18 VS FY17	E	6
BOND COMPLIANCE	F	7
SCHEDULE OF CASH RESTRICTED/UNRESTRICTED	G	8
STATEMENT OF CASH FLOWS	H	9
AGING REPORT - GOVERNMENT ACCOUNTS	I	10
SCHEDULE OF SERIES 2013 BOND STATUS	J	11
SCHEDULE OF SERIES 2014 REFUNDED BOND STATUS	K	12
SCHEDULE OF SERIES 2016 BOND STATUS	L	13
SCHEDULE OF SERIES 2017 REFUNDED BOND STATUS	M	14
SUMMARY OF BOND BANK BALANCES	N	15

GUAM WATERWORKS AUTHORITY
Balance Sheet
April 30, 2018

SCHEDULE A

ASSETS	Unaudited April 30, 2018	Audited September 30, 2017	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	3,346,422	4,873,275	(1,526,852)
Restricted Funds (Schedule G)	70,446,434	65,124,400	5,322,033
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $13,386,932 at Apr 30, 2018 and $12,619,034 at Sep 30, 2017	15,531,111	15,450,733	80,378
Other Receivable	2,810,119	8,433,446	(5,623,327)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Apr 30, 2018 and Sep 30, 2017	2,639,304	2,166,557	472,747
Total Current Assets	94,773,390	96,048,411	(1,275,021)
Property, Plant and Equipment			
Utility plant in service:			
Water system	328,363,021	327,484,191	878,829
Wastewater system	287,216,056	286,394,940	821,117
Non-utility property	19,042,110	18,938,255	103,854
Total property	634,621,187	632,817,387	1,803,800
Less Accumulated Depreciation	(296,730,554)	(286,043,580)	(10,686,974)
Land	1,163,298	1,110,998	52,300
Construction Work in Progress	159,330,343	111,695,887	47,634,456
Property, Plant and Equipment, net	498,384,273	459,580,691	38,803,582
Other noncurrent assets			
Restricted cash (Schedule G)	200,010,796	236,550,002	(36,539,206)
Investments (Schedule G)	48,086,827	41,042,038	7,044,788
Other Prepaid Expenses	291,179	551,128	(259,949)
Total other noncurrent assets	248,388,801	278,143,169	(29,754,368)
TOTAL ASSETS	841,546,465	833,772,271	7,774,194
Deferred outflows of resources:			
Debt defeasance due to bond refunding	13,468,204	1,695,981	11,772,223
Deferred outflows from pension	4,655,717	4,943,777	(288,060)
Total Assets and Deferred Outflows of Resources	**859,670,386**	**840,412,029**	**19,258,358**
LIABILITIES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Revenue Bond	1,725,000	1,725,000	-
-Series 2014 Refunding Bond	3,475,000	3,475,000	-
-Series 2017 Refunding Bond	295,000	-	295,000
-Notes Payable	2,873,988	3,037,569	(163,581)
Accounts Payable -Trade	4,149,073	5,390,256	(1,241,183)
Interest Payable	8,722,124	6,656,499	2,065,624
Accrued Payroll and Employee Benefits	2,073,277	2,604,471	(531,195)
Accrued Annual Leave	1,729,291	1,729,291	-
Current portion of employee annual leave	567,057	567,057	-
Contractors' Payable	8,622,608	13,950,287	(5,327,679)
Customer and Other Deposits	1,985,411	2,014,435	(29,024)
Other Liabilities	72,817	72,772	45
Total Current Liabilities	36,290,645	41,222,638	(4,931,992)
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	3,695,000	112,800,000	(109,105,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding Bond	72,520,000	72,520,000	-
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Series 2017 Refunding Bond	107,365,000	-	107,365,000
Unamortized Discount - Bond 2010	-	(1,867,525)	1,867,525
Unamortized Discount - Bond 2013	(1,308,943)	(1,338,751)	29,808
Unamortized Premium - Bond 2014	4,649,169	4,804,694	(155,524)
Unamortized Premium - Bond 2016	16,908,603	17,262,975	(354,372)
Unamortized Premium - Bond 2017	12,664,079	-	12,664,079
Notes Payable	3,982,421	5,533,918	(1,551,497)
Unfunded Ret Liability (GASB 67/68)	49,243,798	49,243,798	-
Employee Annual Leave, Less Current Portion	783,992	783,992	-
TOTAL LIABILITIES	622,733,765	616,905,739	5,828,026
Deferred inflows of resources:			
Deferred inflows from pension	564,514	564,514	-
Total Liabilities and Deferred Inflows of Resources	623,298,279	617,470,253	5,828,026
Net Assets	**236,372,107**	**222,941,776**	**13,430,331**
Total Liabilities, Deferred Inflows of Resources and Net Assets	**859,670,386**	**840,412,029**	**19,258,358**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE B**
Comparative Budget vs. Actual for the period ending April 30, 2018

	Month to Date		Variance
	Budget April-18	Actual (Unaudited) April-18	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,743,160	5,717,778	(25,382)
Wastewater Revenues	3,228,257	3,207,613	(20,645)
Legislative Surcharge	291,896	287,605	(4,292)
Other Revenues	57,638	40,764	(16,874)
System Development Charge	46,136	56,404	10,268
Total Operating Revenues	9,367,087	9,310,164	(56,923)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	721,113	693,782	27,331
Power Purchases	1,057,997	1,275,268	(217,271)
Total Utility Costs	1,779,110	1,969,050	(189,940)
Salaries and Wages	1,625,056	1,218,622	406,434
Pension and Benefits	584,558	412,315	172,244
Total Salaries and Benefits	2,209,614	1,630,936	578,678
Capitalized Labor and Benefits	(208,333)	(208,333)	(0)
Net Salaries and Benefits	2,001,281	1,422,603	578,677
Administrative and General Expenses			
Sludge removal	174,514	113,563	60,951
Chemicals	229,997	183,145	46,852
Materials & Supplies	237,400	129,820	107,580
Transportation	61,370	58,336	3,034
Communications	16,182	17,862	(1,680)
Claims	17,600	21,014	(3,414)
Insurance	97,757	75,480	22,276
Training & Travel	21,814	25,192	(3,377)
Advertising	13,910	18,500	(4,589)
Regulatory Expense	29,086	19,088	9,998
Bad Debts Provision	57,103	109,692	(52,590)
Miscellaneous	115,515	83,816	31,700
Total Administrative and General Expense	1,072,248	855,507	216,741
Depreciation Expense	1,528,175	1,528,175	(0)
Contractual Expense			
Audit & Computer Maint.	78,630	33,241	45,389
Building rental	37,955	37,028	927
Equipment rental	57,375	19,168	38,207
Legal	4,167	600	3,567
Laboratory	64,752	39,875	24,877
Other	130,363	177,106	(46,743)
Total Contractual Expense	373,241	307,017	66,224
Retiree Supp. Annuities and health care costs	240,008	236,940	3,068
Contribution to Government of Guam	49,500	49,833	(333)
Total Retiree Benefits	289,508	286,774	2,735
Total Operating Expenses	7,043,563	6,369,126	674,437
Earnings (Loss) from Operations	2,323,524	2,941,038	(617,514)
Interest Income-2010/13/14/16/17 Series Bond	15,727	247,291	231,564
Interest Income-Other Funds	2,935	42,752	39,817
Interest Income-SDC	2,414	440	(1,974)
Interest Expense- 2010/13/14/16/17 Series Bond	(2,625,587)	(2,180,531)	445,056
Interest Expense- ST BOG	(33,288)	(37,606)	(4,318)
Federal Expenditures	(51,332)	(43,562)	7,770
Loss on Asset Disposal	-	-	-
AFUDC	625,000	625,000	-
Amortization of Discount, Premium and Issuance Costs	(61,861)	(77,542)	(15,681)
Defeasance due to bond refunding	(15,218)	(12,444)	2,775
Deferred outflows from pension	(105,281)	-	105,281
Prior Year Adjustment	-	-	-
Total non-operating revenues (expenses)	(2,246,492)	(1,436,201)	810,290
Net Income (Loss) before capital contributions	77,032	1,504,836	1,427,804
Capital Contributions			
Grants from US Government	873,108	1,213,886	340,778
Grants from GovGuam & Others	-	20,084	20,084
Other Contributions	-	-	-
Total Capital Contributions	873,108	1,233,970	360,862
Change in Net Assets	950,140	2,738,806	1,788,666
Debt Service Calculation			
Earnings From Operations	2,323,524	2,941,038	
System Development Charge	(46,136)	(56,404)	
Retiree COLA	49,500	49,833	
Interest/Investment Income	2,935	42,752	
Depreciation	1,528,175	1,528,175	
Balance Available for Debt Service per Section 6.12	3,857,998	4,505,394	
Working Capital Reserve Available for Debt Service	935,321	935,321	
Transfer to Working Capital- Debt Service Reserve	(150,000)	-	
Transfer to Working Capital- O&M Reserve	(266,667)	-	
Balance Available for Debt Service inclusive of reserves	4,376,652	5,440,715	
Debt Service			
Principal	433,333	433,333	
Interest	2,063,402	1,794,910	
Total	2,496,736	2,228,243	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55	2.02	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	2.44	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending April 30, 2018 and 2017

SCHEDULE C

	Month to Date		Variance
	Actual (Unaudited) April-18	Actual (Audited) April-17	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,717,778	5,331,404	386,375
Wastewater Revenues	3,207,613	3,099,528	108,085
Legislative Surcharge	287,605	267,269	20,336
Other Revenues	40,764	36,293	4,471
System Development Charge	56,404	72,662	(16,258)
Total Operating Revenues	9,310,164	8,807,155	503,009
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	693,782	609,094	(84,688)
Power Purchases	1,275,268	1,006,355	(268,913)
Total Utility Costs	1,969,050	1,615,449	(353,601)
Salaries and Wages	1,218,622	1,413,608	194,987
Pension and Benefits	412,315	490,400	78,086
Total Salaries and Benefits	1,630,936	1,904,009	273,072
Capitalized Labor and Benefits	(208,333)	(262,516)	(54,183)
Net Salaries and Benefits	1,422,603	1,641,493	218,890
Administrative and General Expenses			
Sludge removal	113,563	140,487	26,924
Chemicals	183,145	174,001	(9,144)
Materials & Supplies	129,820	128,788	(1,032)
Transportation	58,336	53,744	(4,592)
Communications	17,862	10,884	(6,978)
Claims	21,014	22,151	1,137
Insurance	75,480	90,603	15,123
Training & Travel	25,192	23,055	(2,137)
Advertising	18,500	8,988	(9,512)
Regulatory Expense	19,088	24,134	5,046
Bad Debts Provision	109,692	109,700	8
Miscellaneous	83,816	71,997	(11,819)
Total Administrative and General Expense	855,507	858,530	3,023
Depreciation Expense	1,528,175	1,402,038	(126,137)
Contractual Expense			
Audit & Computer Maint.	33,241	76,901	43,660
Building rental	37,028	36,557	(471)
Equipment rental	19,168	59,374	40,206
Legal	600	414	(186)
Laboratory	39,875	10,627	(29,249)
Other	177,106	156,747	(20,359)
Total Contractual Expense	307,017	340,619	33,602
Retiree Supp. Annuities and health care costs	236,940	231,895	(5,045)
Contribution to Government of Guam	49,833	49,500	(333)
Total Retiree Benefits	286,774	281,395	(5,378)
Total Operating Expenses	6,369,126	6,139,525	(229,602)
Earnings (Loss) from Operations	2,941,038	2,667,630	273,407
Interest Income-2010/13/14/16/17 Series Bond	247,291	65,354	181,937
Interest Income-Other Funds	42,752	10,032	32,720
Interest Income-SDC	440	1,060	(620)
Interest Expense- 2010/13/14/16/17 Series Bond	(2,180,531)	(2,220,744)	40,213
Interest Expense- ST BOG	(37,606)	(43,736)	6,131
Federal Expenditures	(43,562)	(42,501)	(1,061)
Loss on Asset Disposal	-	(81,105)	81,105
AFUDC	625,000	1,172,241	(547,241)
Amortization of Discount, Premium and Issuance Costs	(77,542)	61,861	(139,403)
Defeasance due to bond refunding	(12,444)	(15,218)	2,775
Deferred outflows from pension	-	-	-
Prior Year Adjustment	-	(26,756)	26,756
Total non-operating revenues (expenses)	(1,436,201)	(1,119,512)	(316,689)
Net Income (Loss) before capital contributions	1,504,836	1,548,118	(43,282)
Capital Contributions			
Grants from US Government	1,213,886	1,815,921	(602,036)
Grants from GovGuam & Others	20,084	1,664	18,420
Other Contributions	-	-	-
Total Capital Contributions	1,233,970	1,817,586	(583,616)
Change in Net Assets	2,738,806	3,365,704	(626,897)
Debt Service Calculation			
Earnings From Operations	2,941,038	2,667,630	
System Development Charge	(56,404)	(72,662)	
Retiree COLA	49,833	49,500	
Interest/Investment Income	42,752	10,032	
Depreciation	1,528,175	1,402,038	
Balance Available for Debt Service per Section 6.12	4,505,394	4,056,538	
Working Capital Reserve Available for Debt Service	935,321	932,134	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	5,440,715	4,988,672	
Debt Service			
Principal	433,333	420,000	
Interest	1,794,910	1,626,858	
Total	2,228,243	2,046,858	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	2.02	1.98	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.44	2.44	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative Budget vs. Actual for the period ending April 30, 2018

SCHEDULE D

	Year to Date			Variance
	Budget April-18	**Encumbered April-18**	**Actual (Unaudited) April-18**	**Favorable / (Unfavorable)**
OPERATING REVENUES				
Water Revenues	40,202,121		38,631,697	(1,570,423)
Wastewater Revenues	22,597,801		22,465,756	(132,045)
Legislative Surcharge	2,043,272		1,985,275	(57,997)
Other Revenues	403,466		246,006	(157,460)
System Development Charge	322,951		711,484	388,534
Total Operating Revenues	65,569,611		64,040,219	(1,529,391)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	5,047,792		5,208,325	(160,533)
Power Purchases	7,405,978		8,392,038	(986,059)
Total Utility Costs	12,453,770		13,600,363	(1,146,592)
Salaries and Wages	11,375,392		10,101,787	1,273,605
Pension and Benefits	4,091,908		3,335,466	756,442
Total Salaries and Benefits	15,467,300		13,437,253	2,030,047
Capitalized Labor and Benefits	(1,458,333)		(1,572,614)	114,280
Net Salaries and Benefits	14,008,966		11,864,639	2,144,327
Administrative and General Expenses				
Sludge removal	1,221,598		938,370	283,228
Chemicals	1,434,978		1,353,358	81,619
Materials & Supplies	1,945,298	308,512	1,068,296	568,490
Transportation	366,593	50,860	293,647	22,086
Communications	113,273		108,187	5,086
Claims	77,700	10,000	53,223	14,477
Insurance	733,296		530,061	203,235
Training & Travel	152,699	10,891	74,791	67,017
Advertising	97,370		65,793	31,578
Regulatory Expense	154,604		132,754	21,850
Bad Debts Provision	399,718		767,853	(368,135)
Miscellaneous	808,608	49,990	589,607	169,011
Total Administrative and General Expense	7,505,737	430,253	5,975,941	1,099,543
Depreciation Expense	10,697,223		10,697,225	(2)
Contractual Expense				
Audit & Computer Maint.	565,412	111,103	310,503	143,807
Building rental	265,685		272,193	(6,508)
Equipment rental	401,622		487,712	(86,090)
Legal	29,167		4,200	24,967
Laboratory	438,261	109,837	231,798	96,626
Other	912,542		1,176,060	(263,518)
Total Contractual Expense	2,612,689	220,940	2,482,466	(90,717)
Retiree Supp. Annuities and health care costs	1,680,058		1,660,875	19,183
Contribution to Government of Guam	346,500		348,833	(2,333)
Total Retiree Benefits	2,026,558	-	2,009,708	16,850
Total Operating Expenses	49,304,943	651,193	46,630,341	2,023,409
Earnings (Loss) from Operations	16,264,668		17,409,878	494,017
Interest Income-2010/13/14/16/17 Series Bond	110,086		1,311,744	1,201,658
Interest Income-Other Funds	20,543		211,787	191,244
Interest Income-SDC	16,900		22,821	5,921
Interest Expense- 2010/13/14/16/17 Series Bond	(18,379,111)		(15,355,198)	3,023,913
Interest Expense- ST BOG	(233,017)		(256,497)	(23,480)
Federal Expenditures	(359,325)		(303,748)	55,577
Loss on Asset Disposal	-		-	-
AFUDC	4,375,000		4,375,000	-
Amortization of Discount, Premium and Issuance Costs	(433,026)		(124,585)	308,440
Defeasance due to bond refunding	(106,529)		(87,105)	19,424
Deferred outflows from pension	(736,964)		(288,060)	448,905
Prior Year Adjustment	-		7,336	7,336
Total non-operating revenues (expenses)	(15,725,443)		(10,486,504)	5,238,939
Net Income (Loss) before capital contributions	539,225		6,923,374	5,732,956
Capital Contributions				
Grants from US Government	6,111,757		6,349,141	237,383
Grants from GovGuam & Others	-		157,817	157,817
Other Contributions	-		-	-
Total Capital Contributions	6,111,757		6,506,958	395,200
Change in Net Assets	6,650,982		13,430,332	6,128,156
Debt Service Calculation				
Earnings From Operations	16,264,668		17,409,878	
System Development Charge	(322,951)		(711,484)	
Retiree COLA	346,500		348,833	
Interest/Investment Income	20,543		211,787	
Depreciation	10,697,223		10,697,225	
Balance Available for Debt Service per Section 6.12	27,005,983		27,956,239	
Working Capital Reserve Available for Debt Service	6,547,247		6,524,939	
Transfer to Working Capital- Debt Service Reserve	(1,050,000)		-	
Transfer to Working Capital- O&M Reserve	(1,866,667)		-	
Balance Available for Debt Service inclusive of reserves	30,636,564		34,481,178	
Debt Service				
Principal	3,033,333		3,033,333	
Interest	14,443,815		12,564,370	
Total	17,477,149		15,597,703	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55		1.79	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75		2.21	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending April 30, 2018 and 2017

SCHEDULE E

	Year to Date ACTUAL (Unaudited) April-18	Year to Date Actual (Audited) April-17	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	38,631,697	37,319,825	1,311,872
Wastewater Revenues	22,465,756	21,696,694	769,062
Legislative Surcharge	1,985,275	1,870,882	114,393
Other Revenues	246,006	254,050	(8,044)
System Development Charge	711,484	508,635	202,849
Total Operating Revenues	64,040,219	61,650,086	2,390,134
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	5,208,325	4,263,656	(944,669)
Power Purchases	8,392,038	7,044,486	(1,347,551)
Total Utility Costs	13,600,363	11,308,143	(2,292,220)
Salaries and Wages	10,101,787	9,895,259	(206,527)
Pension and Benefits	3,335,466	3,432,802	97,336
Total Salaries and Benefits	13,437,253	13,328,062	(109,191)
Capitalized Labor and Benefits	(1,572,614)	(1,837,610)	(264,996)
Net Salaries and Benefits	11,864,639	11,490,451	(374,187)
Administrative and General Expenses			
Sludge removal	938,370	983,408	45,038
Chemicals	1,353,358	1,218,008	(135,351)
Materials & Supplies	1,068,296	901,514	(166,783)
Transportation	293,647	376,211	82,564
Communications	108,187	76,187	(32,001)
Claims	53,223	155,057	101,834
Insurance	530,061	634,219	104,158
Training & Travel	74,791	161,382	86,591
Advertising	65,793	62,914	(2,878)
Regulatory Expense	132,754	168,941	36,187
Bad Debts Provision	767,853	767,898	45
Miscellaneous	589,607	503,976	(85,631)
Total Administrative and General Expense	5,975,941	6,009,713	33,772
Depreciation Expense	10,697,225	9,814,265	(882,960)
Contractual Expense			
Audit & Computer Maint.	310,503	538,307	227,804
Building rental	272,193	255,896	(16,298)
Equipment rental	487,712	415,617	(72,095)
Legal	4,200	2,898	(1,302)
Laboratory	231,798	74,386	(157,413)
Other	1,176,060	1,097,230	(78,830)
Total Contractual Expense	2,482,466	2,384,334	(98,132)
Retiree Supp. Annuities and health care costs	1,660,875	1,623,268	(37,607)
Contribution to Government of Guam	348,833	346,500	(2,333)
Total Retiree Benefits	2,009,708	1,969,768	(39,941)
Total Operating Expenses	46,630,341	42,976,674	(3,653,668)
Earnings (Loss) from Operations	17,409,878	18,673,412	(1,263,534)
Interest Income-2010/13/14/16/17 Series Bond	1,311,744	457,481	854,264
Interest Income-Other Funds	211,787	70,223	141,565
Interest Income-SDC	22,821	7,418	15,403
Interest Expense- 2010/13/14/16/17 Series Bond	(15,355,198)	(15,545,206)	190,009
Interest Expense- ST BOG	(256,497)	(306,154)	49,657
Federal Expenditures	(303,748)	(297,510)	(6,238)
Loss on Asset Disposal	-	(567,732)	567,732
AFUDC	4,375,000	8,205,687	(3,830,687)
Amortization of Discount, Premium and Issuance Costs	(124,585)	433,025	(557,610)
Defeasance due to bond refunding	(87,105)	(106,529)	19,424
Deferred outflows from pension	(288,060)	-	(288,060)
Prior Year Adjustment	7,336	(187,290)	194,626
Total non-operating revenues (expenses)	(10,486,504)	(7,836,587)	(2,649,917)
Net Income (Loss) before capital contributions	6,923,374	10,836,825	(3,913,451)
Capital Contributions			
Grants from US Government	6,349,141	12,711,450	(6,362,310)
Grants from GovGuam & Others	157,817	11,651	146,166
Other Contributions	-	-	-
Total Capital Contributions	6,506,958	12,723,101	(6,216,143)
Change in Net Assets	13,430,332	23,559,926	(10,129,594)
Debt Service Calculation			
Earnings From Operations	17,409,878	18,673,412	
System Development Charge	(711,484)	(508,635)	
Retiree COLA	348,833	346,500	
Interest/Investment Income	211,787	70,223	
Depreciation	10,697,225	9,814,265	
Balance Available for Debt Service per Section 6.12	27,956,239	28,395,765	
Working Capital Reserve Available for Debt Service	6,524,939	6,524,939	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	34,481,178	34,920,704	
Debt Service			
Principal	3,033,333	2,940,000	
Interest	12,564,370	11,388,009	
Total	15,597,703	14,328,009	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.79	1.98	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.21	2.44	

SCHEDULE F

Bond Compliance		**($$$) Per Indenture**	**As of 4/30/18 ($$$) Bond 2013/2014/2016/2017**
• Operation and Maintenance Fund-BOG	*Equivalent to 55 days of the annual O&M budget less depreciation*	$10.5M	$10.5M
• Bond Reserve Fund - US Bank	*Fully funded- Principal and Interest (Bond Series 2010, 2013, 2014 Refunding and 2016)*	$34.9M	$34.9M
• Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	*Equivalent to 1/4 of the annual O&M budget & CIP budget to be funded in 5 years ($2M/year)*	$17.4M	$17.4M
• Capital Improvement Fund	*Balance remaining in the Revenue Fund after the foregoing deposits*	$3.9K	$5.6K

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY 2018

SCHEDULE G

Description	Unaudited April 30, 2018	Audited September 30, 2017	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	-
Petty Cash	5,000	5,000	-
BOG - General Fund	3,309,383	4,836,236	(1,526,852)
BOG - PRN Payroll	30,039	30,039	-
Sub-total Unrestricted	3,346,422	4,873,275	(1,526,852)
RESTRICTED			
BOG - On Line Payment	8,708	-	8,708
BOG - Sweep Account	207	-	207
Bank of Hawaii	163,770	133,931	29,839
First Hawaiian Bank	8,352	10,261	(1,909)
Bank Pacific	9,779	15,825	(6,046)
Community First FCU	2,919	3,448	(530)
BOG - Customer Refunds	1,854,367	1,831,426	22,941
Bank Pacific - Surcharge	475,891	278,142	197,749
Bank Pacific - Escrow Deposit	659,756	666,140	(6,384)
BOG Emergency Reserve Fund	6,126	6,122	4
BOG - Revenue Trust	533,724	201,614	332,110
BOG Revenue Trust Fund	7,422,662	7,782,227	(359,565)
BOG Capital Improvement Fund-Bond	5,598	5,598	0
BOG Capital Improvement Revenue Fund	4,193,955	-	4,193,955
BOG-O & M Reserve	13,583,288	13,516,540	66,747
BOG-Debt Service Reserve	11,273,230	11,217,733	55,497
BOG-CAPEX Reserve	15,537,694	15,462,869	74,825
BOG Sewer Hookup Revolving Fund	64,767	63,590	1,178
BOG Subord. Sec. Fund	859,233	859,233	-
BOG Operation and Maintenance Fund	3,083,482	3,083,482	-
	59,747,509	55,138,182	4,609,327
BOG - SDC Deposit	3,448,925	1,486,219	1,962,707
BOG - SDC CDs	7,250,000	8,500,000	(1,250,000)
Total Restricted	70,446,434	65,124,400	5,322,033
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	-
BOG Series 13 Construction Fund	50,984,673	74,461,765	(23,477,093)
BOG Series 14 Refunding Construction Fund	737,399	771,281	(33,882)
BOG Series 16 Construction Fund	122,226,749	132,811,449	(10,584,699)
BOG Series 16 Cap Int Fund	-	1,782,982	(1,782,982)
BOG Series 17 Refunding Construction Fund	8,591,217	9,299,311	(708,094)
BOG Series 17 Refunding COI Fund	47,545	-	47,545
Total Restricted - Held by Trustee	200,010,796	236,550,002	(36,539,206)
USB Series 2013 Debt Service Fund	3,124,124	2,336,754	787,370
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	-
USB Series 2014 Refunding Debt Service Fu	4,142,670	1,796,559	2,346,112
USB Series 2014 Refunding Debt Service Re	7,789,571	7,707,602	81,969
USB Series 2016 Debt Service Fund	2,391,990	130	2,391,860
USB Series 2016 Debt Service Reserve Fund	7,594,589	7,582,725	11,864
USB Series 2010 Debt Service Fund	1,539,811	2,020,121	(480,310)
USB Series 2017 Refunding Debt Service Re	7,566,460	7,566,460	-
USB Series 2017 Debt Service Fund	1,905,924	-	1,905,924
Total Investments	48,086,827	41,042,038	7,044,788
Total Restricted and Unrestricted Cash	321,890,478	347,589,716	(25,699,237)

SCHEDULE H

Guam Waterworks Authority
Statement of Cash Flows (Unaudited)
FY 2018

	YTD Apr-18
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	63,371,655
Cash payments to suppliers/contractors for goods and services	(22,744,897)
Cash payments to employees for services	(15,341,263)
Net cash provided by operating activities	25,285,495
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	11,617,891
Acquisition of utility plant	(50,453,486)
Repayment of Long Term Debt	7,186,516
Interest expense	(15,753,563)
Net cash provided by (used in) capital and related financing activities	(47,402,641)
Cash flows from investing activities:	
Transfers from (to) restricted fund	19,043,942
Interest income received	1,546,352
Net cash provided by investing activities	20,590,294
Net increase (decrease) in cash	(1,526,852)
Unrestricted cash at beginning of the period	4,873,275
Unrestricted cash at end of period	3,346,423
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	16,228,964
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	10,697,225
Other Expense/income	1,055,913
(Increase) decrease in assets:	
Accounts receivable	(639,586)
Materials and supplies inventory	(472,747)
Other Assets	259,949
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	(1,284,050)
Accrued payroll	(531,195)
Customer deposits	(28,979)
Net cash provided by operating activities	25,285,495

Guam Waterworks Authority
Accounts Receivable - Government
As of April 30, 2018

SCHEDULE I

Customer Name	No of Accounts	Current Balance	AGING 31-60 days	61-90 days	91-120 days	Over 120 days	Outstanding Bal.
Guam Int'l Airport Authority	8	43,763	39,519	52,685	45,217	143,014	324,198
Guam Memorial Hospital Authority	3	39,356	34,786	-	-	-	74,142
Port Authority of Guam	1	37,242	31,271	-	-	-	68,514
Guam Power Authority	20	47,298	112	-	-	-	47,409
Guam Community College	3	5,083	12,618	11,500	8,771	8,877	46,848
University of Guam	2	13,776	-	-	-	-	13,776
Guam Housing & Urban Renewal Authority	5	1,262	-	-	-	92	1,354
Guam Housing Corporation	1	39	-	-	-	-	39
AUTONOMOUS AGENCIES	**43**	**187,818**	**118,306**	**64,185**	**53,988**	**151,983**	**576,280**
Department of Parks & Recreation	16	41,400	46,439	239,341	27,309	217,078	571,568
Department of Education	51	178,786	187,948	47,986	8,800	123,847	547,367
Department of Public Health & Social Services	3	1,407	3,154	1,044	-	101,613	107,218
Department of Corrections	2	39,157	43,322	17,124	-	-	99,603
Mayors' Council of Guam	41	12,661	931	20	-	-	13,611
Office of the Governor	2	6,739	-	-	-	-	6,739
Guam Fire Department	7	6,340	-	-	-	-	6,340
Department of Public Works	10	2,490	3,552	-	-	-	6,042
Department of Youth Affairs	1	23	650	3,294	-	-	3,967
Sanctuary Inc.	1	3,120	-	-	-	-	3,120
Guam Police Department	2	2,519	-	-	-	-	2,519
Department of Agriculture	2	2,201	-	-	-	-	2,201
Department of Military Affairs/GUARNG	1	2,115	-	-	-	-	2,115
Guam Solid Waste Authority	2	987	-	-	-	-	987
Division of Senior Citizens, DPH&SS	2	372	135	152	64	-	723
Department of Chamorro Affairs	1	401	-	-	-	-	401
Department of Customs & Quarantine	1	389	-	-	-	-	389
Department of Mental Health and Substance Abuse	1	278	-	-	-	-	278
Department of Agriculture - Fisheries	1	90	134	-	-	-	224
Guam Veterans Affairs Office	2	218	-	-	-	-	218
The Office of the Dededo Mayor	1	167	-	-	-	-	167
Guam Public Library	3	144	-	-	-	-	144
Merizo Mayor	1	25	26	-	-	-	50
LINE AGENCIES	**154**	**302,030**	**286,290**	**308,960**	**36,174**	**442,538**	**1,375,992**
TOTAL April 30, 2018	**197**	**489,848**	**404,596**	**373,146**	**90,161**	**594,521**	**1,952,272**
TOTAL September 30, 2017	**253**	**715,578**	**442,522**	**169,120**	**72,476**	**396,347**	**1,796,043**
% INCREASE/ (DECREASE)	**-22%**	**-32%**	**-9%**	**121%**	**24%**	**50%**	**9%**

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of April 30,2018

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	77,400	22,600	$ 100,000	$ -	$ 22,600
"A" Series Well Transmission Line	$ 400,000	$ 400,000	369,846	(0)	$ 369,846	$ 30,154	$ 30,154
Water Booster Pump Station	$ 6,000,000	$ 1,861,000	1,656,428	23,536	$ 1,679,964	$ 181,036	$ 204,572
Meter Replacement Program		$ 999,000	996,532	-	$ 996,532	$ 2,468	$ 2,468
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0	$ 62,041
Leak Detection	$ 100,000	$ 20,000	16,916	-	$ 16,916	$ 3,084	$ 3,084
Potable Water System Planning	$ 800,000	$ 624,000	603,390	20,610	$ 624,000	$ -	$ 20,610
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	189,930	10,071	$ 200,000	$ (0)	$ 10,070
New Deep Wells at Down Hard	$ 2,000,000	$ 810,000			$ -	$ 810,000	$ 810,000
Master Meters	$ 4,000,000	$ 784,000	531,188	180,872	$ 712,060	$ 71,940	$ 252,812
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	578,858	280,943	$ 859,801	$ 122,199	$ 403,142
Water Wells	$ 4,200,000	$ 4,200,000	2,284,474	745,555	$ 3,030,029	$ 1,169,971	$ 1,915,527
Water Distribution System	$ 12,000,000	$ 11,151,000	6,718,325	4,194,128	$ 10,912,453	$ 238,547	$ 4,432,675
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	336,036	1,074	$ 337,110	$ 93,890	$ 94,964
Mechanical/Electrical Equipment	$ 430,000	$ 430,000	328,686	98,112	$ 426,798	$ 3,202	$ 101,314
Water Reservoir Internal/External	$ 800,000	$ -			$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 21,000,000	$ 13,878,000	10,857,217	3,020,784	$ 13,878,000	$ (0)	$ 3,020,783
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000	$ 90,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	241,603	1,088,684	$ 1,330,287	$ 1,949,713	$ 3,038,397
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	5,398,068	6,206,932	$ 11,605,000	$ 0	$ 6,206,932
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of maloiloi Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
Wastewater System Planning	$ 800,000	$ 651,000	550,968	99,933	$ 650,900	$ 100	$ 100,032
Lift Station Upgrades	$ 5,000,000	$ 946,000	562,785	363	$ 563,149	$ 382,852	$ 383,215
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 780,000	555,848	104,465	$ 660,314	$ 119,687	$ 224,152
Baza Gardens STP Replacement		$ 3,114,883	969,594	2,145,275	$ 3,114,869	$ 15	$ 2,145,290
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	341,226	30,473	$ 371,699	$ 101,301	$ 131,774
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	43,563,454	23,636,545	$ 67,200,000	$ 0	$ 23,636,546
Agana WWTP Interim Measures		$ 673,000	611,247	61,753	$ 673,000	$ (0)	$ 61,753
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	91,348	8,513	$ 99,861	$ 520,139	$ 528,652
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,480,769	19,230	$ 1,500,000	$ 0	$ 19,231
Electrical Upgrade - Water Booster	$ 325,000	$ 2,000			$ -	$ 2,000	$ 2,000
Electrical Upgrade -Water Booster	$ 350,000	$ 200,000	977	-	$ 977	$ 199,023	$ 199,023
Electrical Upgrade - Other Water	$ 250,000	$ 150,000	60,700	-	$ 60,700	$ 89,300	$ 89,300
SCADA Improvements – Phase 3	$ 1,850,000	$ 923,000	427,949	294,410	$ 722,359	$ 200,641	$ 495,051
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
Laboratory Modernization	$ 1,500,000	$ 1,173,000	1,163,037	8,428	$ 1,171,465	$ 1,535	$ 9,963
Land Survey	$ 2,000,000	$ 2,000	1,038	15	$ 1,053	$ 948	$ 963
General Plant Improvements / Water	$ 2,000,000	$ 2,600,000	1,265,043	1,176,695	$ 2,441,737	$ 158,263	$ 1,334,957
Allowance for COI							$ 275,005
Interest Earned							$ 602,317
Total Construction Fund	**$ 139,325,000**	**$ 139,325,000**	**$ 89,217,649**	**$ 43,565,345**	**$ 132,782,994**	**$ 6,542,006**	**$ 50,984,672**

PUC's Docket 14-04 dated February 25, 2014

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of April 30,2018

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT	ADJUSTED PROJECT COST	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 04/30/18	Construction fund balance AS OF 04/30/18
Agana Treatment Plant	$ 10,475,000	$ 11,065,512	11,065,512	$ -	$ 11,065,512	$ (0)	$ 2,095,000	$ (0)
Agana Outfall	$ 5,030,000	$ 10,127,198	10,127,198	$ -	$ 10,127,198	$ 0	$ 1,006,000	$ 0
Northern District (Outfall)	$ 4,700,000	$ 10,251,423	10,251,423	$ -	$ 10,251,423	$ 0	$ 940,000	$ 0
Northern District WWTP Upgrade		$ 173,681	173,681		$ 173,681	$ -		$ -
Northern Treatment Plant		$ -	-		$ -	$ -		$ -
Baza Gardens Wastewater Treatment Plant Upgrade	$ 500,000	$ 297,177	297,177	$ -	$ 297,177	$ (0)	$ 100,000	$ (0)
Interim Disinfection Facilities	$ 581,000	$ 3,437,311	3,408,599	$ 28,712	$ 3,437,311	$ (0)	$ 116,200	$ 28,712
Electrical Protection	$ 1,000,000	$ 1,512,483	1,512,483.3	$ -	$ 1,512,483	$ (0)	$ 200,000	$ (0)
Well Vulnerability Reduction	$ 600,000	$ 185,522	185,522	$ -	$ 185,522	$ 0	$ 120,000	$ 0
Old Agat Wastewater Collection (I/I Reduction)	$ 2,155,000	$ 1,931,659	1,931,659	$ -	$ 1,931,659	$ (0)	$ 431,000	$ (0)
Chaot WW Pump Station/Collection System	$ 410,000	$ 399,120	399,120	$ -	$ 399,120	$ -	$ 82,000	$ -
Lift Station Upgrades	$ 230,000	$ 149,895	149,895	$ -	$ 149,895	$ 0	$ 46,000	$ 0
Collection Line Upgrades	$ 200,000	$ 62,755	62,755	$ -	$ 62,755	$ 0	$ 40,000	$ 0
"A" Well Transmission Line	$ 2,413,000	$ 3,833,175	3,818,088	$ 15,087	$ 3,833,175	$ (0)	$ 482,600	$ 15,087
Santa Rita Springs - Booster Pump Rehab.	$ 648,000	$ 306,841	306,841	-	$ 306,841	$ (0)	$ 129,600	$ (0)
Fena Bypass Transmission line		$ 160,913	160,913	$ -	$ 160,913	$ (0)	$ -	$ (0)
Storage Additions	$ 950,000	$ -			$ -	$ -	$ 190,000	$ -
Booster Station Upgrades	$ 390,000	$ 66,734	66,734	$ -	$ 66,734	$ -	$ 78,000	$ -
Mangilao Tank Repair	$ 800,000	$ 398,367	397,933	$ 434	$ 398,367	$ (0)	$ 160,000	$ 434
Ugum Tank Replacement	$ 2,500,000	$ -			$ -	$ -	$ 500,000	$ -
Ugum WTPlant Refurbishment ($1.724,970EPA)		$ 6,588,473	6,531,525	$ 56,949	$ 6,588,473	$ (0)		$ 56,948
Barrigada Tank Repair/Replacement	$ 3,000,000	$ 65,019	65,019	$ -	$ 65,019	$ 0	$ 600,000	$ 0
Water Reservoir Condition Assessment		$ 1,250,000	1,249,227.16	$ 772	$ 1,250,000	$ 0	$ -	$ 773
EarthTech Well Buyout	$ 5,000,000	$ 5,975,000	5,975,000	$ -	$ 5,975,000	$ -	$ 1,000,000	$ -
Water Wastewater Master Plan	$ 4,900,000	$ 4,881,308	4,881,308	$ -	$ 4,881,308	$ 0	$ 980,000	$ 0
Laboratory Modernization	$ 800,000	$ 135,055	135,055	$ -	$ 135,055	$ 0	$ 160,000	$ 0
Land Survey	$ 800,000	$ 577,836	576,134	$ 1,702	$ 577,836	$ 0	$ 160,000	$ 1,702
Ground Water Disinfection		$ -				$ -		$ -
GWUDI Study		$ 262,234	260,430	1,804	$ 262,234	$ -		$ 1,804
Contingency	$ 12,276,023	$ 154	-	$ -	$ -	$ -		$ 732
Vehicles	$ 1,100,000	$ 1,280,000	2,130,305	$ (850,305)	$ 1,280,000	$ -	$ 220,000	$ -
Generation Equipment	$ 700,000	$ 880,000	2,712	$ 877,288	$ 880,000	$ 0		$ 27,033
Leak Detection/Line Replacement	$ 8,200,000	$ 5,988,494	5,988,494	$ -	$ 5,988,494	$ -	$ 1,640,000	$ -
Automated Meter Reading	$ 12,572,063	$ 17,468,359	16,870,522	$ 537,157	$ 17,468,359	$ 0	$ 2,514,413	$ 597,837
Total Construction Fund	$ 82,930,086	$ 89,711,698	$ 88,981,263	$ 669,600	$ 89,711,543	$ 1	$ 13,990,813	$ 731,063
Interest Earned	$ 6,781,612							$ 6,337
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**88,981,263**	**$ 669,600**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 737,400**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of April 30,2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Water Booster Pump Station	$ 4,139,000	$ 4,139,000			$ -	$ 4,139,000	$ 4,139,000
Meter Replacement Program	$ 4,501,000	$ 4,501,000	27,351	122,648.72	$ 150,000	$ 4,351,000	$ 4,473,649
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	257,062	619,231.76	$ 876,294	$ 1,399,706	$ 2,018,938
Deep Well Rehabilitation	$ 250,000	$ 250,000		110,013.00	$ 110,013	$ 139,987	$ 250,000
New Deep Wells at Down Hard	$ 1,190,000	$ 1,190,000			$ -	$ 1,190,000	$ 1,190,000
Master Meters	$ 3,616,000	$ 3,616,000	151,539	-	$ 151,539	$ 3,464,461	$ 3,464,461
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000		668,355.20	$ 668,355	$ 472,645	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000			$ -	$ 800,000	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	1,923,069	12,345,718.67	$ 14,268,787	$ 14,081,213	$ 26,426,931
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000		500,000.00	$ 500,000	$ 720,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000		1,822,132.80	$ 1,822,133	$ 72,867	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 10,500,000	$ 7,409,830		7,300,000.00	$ 7,300,000	$ 109,830	$ 7,409,830
Fire Hydrant Replacement Program	$ 2,000,000	$ 2,000,000			$ -	$ 2,000,000	$ 2,000,000
Wastewater System Planning	$ 349,000	$ 349,000	118,587	194,396.23	$ 312,983	$ 36,017	$ 230,413
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	193,511	321,243.53	$ 514,755	$ 1,889,245	$ 2,210,489
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000		555,478.00	$ 555,478	$ 2,364,522	$ 2,920,000
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	10,030,819	19,174,963.36	$ 29,205,782	$ 194,388	$ 19,369,351
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	225,258	26,846.67	$ 252,105	$ 274,895	$ 301,742
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	902,989	216,710.57	$ 1,119,700	$ 1,880,300	$ 2,097,011
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	2,803,249	17,799,005.51	$ 20,602,254	$ 197,746	$ 17,996,751
Wastewater Pump Station Electrical Upgrade	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Electrical Upgrade - Water Wells	$ 650,000	$ 650,000			$ -	$ 650,000	$ 650,000
Electrical Upgrade - Water Booster	$ 323,000	$ 323,000			$ -	$ 323,000	$ 323,000
SCADA Improvements – Phase 3	$ 1,177,000	$ 1,177,000	18,000	599,496.51	$ 617,497	$ 559,503	$ 1,159,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
Laboratory Modernization	$ 1,127,000	$ 1,127,000	1,127,000	-	$ 1,127,000	$ -	$ -
Land Survey	$ 1,998,000	$ 1,998,000	130,370	1,130,153.37	$ 1,260,524	$ 737,476	$ 1,867,630
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	647,695	896,065.14	$ 1,543,760	$ 1,225,703	$ 2,121,768
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned							$ 1,007,853
Total Construction Fund	**$ 140,019,463**	**$ 140,019,463**	**$ 18,800,568**	**$ 64,402,459**	**$ 83,203,027**	**$ 56,816,436**	**$ 122,226,749**

GUAM WATERWORKS AUTHORITY
2017 Series Refunded Bond Project Status
As of April 30,2018

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 04/30/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 04/30/18
Ground Water Disinfection	$ -	$ 500,000	$ 438,141	$ 61,859	$ 500,000	$ 0	$ 61,859
"A" Series Well Transmission Line	$ 600,000	$ 518,144	$ 474,434	$ 1,274	$ 475,709	$ 42,435	$ 43,710
Water Booster Pump Station	$ 500,000	$ 500,000	$ 418,844	$ 81,156	$ 500,000	$ (0)	$ 81,156
Meter Replacement Program	$ 2,500,000	$ 10,300,000	$ 10,255,079	$ 18,549	$ 10,273,628	$ 26,372	$ 44,921
Barrigada Tank Repair/Replacement	$ -	$ 5,450,000	$ 5,442,302	$ 7,698	$ 5,450,000	$ 0	$ 7,698
Leak Detection		$ 200,000	$ -	$ 200,000	$ 200,000	$ -	$ 200,000
Potable Water System Planning	$ 200,000	$ 200,000	$ 180,927	$ 19,073	$ 200,000	$ -	$ 19,073
Implement Ground Water Rule		$ 1,700,000	$ 1,499,464	$ 200,535	$ 1,700,000	$ 1	$ 200,536
Brigade II (Ugum Lift) BPS Upgrade	$ 1,200,000	$ 1,700,000	$ 210,007	$ 127,887	$ 337,895	$ 1,362,105	$ 1,489,993
Deep Well Rehabilitation	$ 548,000	$ 548,000	$ 548,000	$ -	$ 548,000	$ -	$ -
New Deep Wells at Down Hard	$ 3,773,000	$ 638,252	$ 485,743	$ -	$ 485,743	$ 152,509	$ 152,509
Rehabilitation of Asan Springs	$ 900,000	$ 900,000	$ 188,771	$ 152,068	$ 340,838	$ 559,162	$ 711,229
Master Meters	$ 1,600,000	$ 1,600,000	$ 1,421,267	$ 68,690	$ 1,489,957	$ 110,043	$ 178,733
Ugum Water Treatment Plant Intake	$ 3,670,000	$ 700,000	$ 543,615	$ 156,385	$ 700,000	$ -	$ 156,385
Water Wells	$ 2,000,000	$ -	$ -		$ -	$ -	$ -
Water Distribution System	$ 384,000	$ 3,174,748	$ 3,174,748	$ -	$ 3,174,748	$ (0)	$ (0)
Pressure Zone Realignment /	$ 3,550,000	$ -	$ -		$ -	$ -	$ -
Northern System Water Distribution	$ 2,725,000	$ -	$ -	$ -	$ -	$ -	$ -
Central Water Distribution System 2005	$ 1,200,000	$ 900,000	$ 730,182	$ 44,820	$ 775,002	$ 124,998	$ 169,818
Southern Water Distribution System	$ 1,800,000	$ -	$ -		$ -	$ -	$ -
Mechanical/Electrical Equipment	$ 1,360,000	$ 1,200,000	$ 1,079,495	$ 120,505	$ 1,200,000	$ (0)	$ 120,505
Water Reservoir Internal/External	$ 500,000	$ 2,000,000	$ 1,037,655	$ 471,729	$ 1,509,384	$ 490,616	$ 962,345
Water Reservoir Internal/External	$ 2,400,000	$ -	$ -		$ -	$ -	$ -
Water System Reservoirs 2005 Improvements	$ 11,697,000	$ 1,050,000	$ 1,050,000		$ 1,050,000	$ 0	$ 0
Distribution System Upgrades	$ 3,182,000	$ 474,160	$ 456,678	$ 17,481	$ 474,160	$ 0	$ 17,482
Ugum Water Treatment Plant Reservoir	$ 3,672,000	$ -	$ -		$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan		$ 100,000	$ 15,031	$ 63,428	$ 78,459	$ 21,541	$ 84,970
Production Plan / Reduce Navy Purchases		$ 100,000	$ 94,286	$ 5,714	$ 100,000	$ -	$ 5,714
Hydraulic Asessment of Tank		$ 500,000	$ 497,004	$ 2,996	$ 500,000	$ -	$ 2,996
Agana Heights & Chaot Tanks		$ 4,700,000	$ 4,350,014	$ 349,986	$ 4,700,000	$ -	$ 349,986
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ 1,900,000	$ 1,750,355	$ 97,659	$ 1,848,013	$ 51,987	$ 149,645
Tank Major Repair Yigo#1 Mangilao#2 Agat#2		$ -			$ -	$ -	$ -
Assessment of malojloj Elevetad & Yigo Elevated		$ 200,000	$ 200,000	$ -	$ 200,000	$ -	$ -
Public Water System Asser Inventory/Condition Assesment		$ 100,000	$ 98,414	$ 1,586	$ 100,000	$ -	$ 1,586
Public Water System GIS & Mapping		$ 50,000	$ 50,000	$ -	$ 50,000	$ -	$ -
Wastewater System Planning	$ 1,500,000	$ 1,500,000	$ 1,468,176	$ 5,824	$ 1,474,000	$ 26,000	$ 31,824
Wastewater Vehicles	$ 235,000	$ 235,000	$ 209,795	$ 25,205	$ 235,000	$ 0	$ 25,205
NDWWTP - Chlorine Tanks	$ 250,000	$ 250,000	$ 250,000		$ 250,000	$ -	$ -
Tumon Bay Sewer Upgrades	$ 100,000	$ -	$ -		$ -	$ -	$ -
Wastewater Collection System Repl/Rehab		$ 1,105,000	$ 723,591	$ 283,287	$ 1,006,878	$ 98,122	$ 381,409
Facilities Plan/Design for Baza Gardens WWTP	$ 1,250,000	$ 1,250,000	$ 1,245,244	$ 4,756	$ 1,250,000	$ -	$ 4,756
Facilities Plan/Design for Agat-Santa Rita WWTP	$ 900,000	$ 899,630	$ 891,702	$ 7,928	$ 899,630	$ -	$ 7,928
Priority 1 Sewer Upgrades – Baza Gardens WWTP	$ 650,000	$ -	$ -		$ -	$ -	$ -
Baza Gardens STP Replacement	$ 3,567,000	$ 1,301,947	$ 316,686	$ 314	$ 317,000	$ 984,947	$ 985,261
Facilities Plan/Design for Umatac Merizo WWTP		$ 900,000	$ 760,845	$ 93,013	$ 853,858	$ 46,142	$ 139,155
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,218,000	$ 2,217,314	$ 387	$ 2,217,701	$ 300	$ 686
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,750,000	$ 11,532,253	$ 211,261	$ 11,743,514	$ 6,486	$ 217,747
Biosolids Management Plan		$ 200,000	$ 196,414	$ 3,586	$ 200,000	$ -	$ 3,586
Agana WWTP Interim Measures	$ -	$ 11,500,000	$ 11,254,925	$ 45,075	$ 11,300,000	$ 200,000	$ 245,075
I&I SSES Southern		$ 800,000	$ 794,722	$ 5,278	$ 800,000	$ (0)	$ 5,278
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Northern District WWTP Secondary Treatment Upgrades		$ 1,000,000	$ -	$ 1,000,000	$ 1,000,000	$ -	$ 1,000,000
Well Electrical Protection	$ 26,000	$ -	$ -		$ -	$ -	$ -
SCADA Pilot Project	$ 300,000	$ 61,950	$ 19,812	$ 42,138	$ 61,950	$ (0)	$ 42,138
Electrical Upgrade - Water Wells	$ 3,000,000	$ 354,227	$ 339,948	$ 14,278	$ 354,227	$ 0	$ 14,279
Electrical Upgrade - Water Booster	$ 325,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade -Water Booster	$ 350,000	$ -	$ -		$ -	$ -	$ -
Electrical Upgrade - Other Water	$ 250,000	$ -			$ -	$ -	$ -
SCADA Improvements – Phase 1	$ 250,000	$ 250,000	$ 194,849	$ 55,151	$ 250,000	$ -	$ 55,151
SCADA Improvements – Phase 2	$ 1,100,000	$ 1,056,986	$ 1,028,284	$ 28,702	$ 1,056,986	$ -	$ 28,702
SCADA Improvements – Phase 3	$ 2,500,000	$ 24,956	$ 24,956	$ -	$ 24,956	$ 0	$ 0
SCADA Improvements – Phase 4	$ 850,000	$ -	$ -		$ -	$ -	$ -
Laboratory Modernization	$ 1,200,000	$ -	$ -		$ -	$ -	$ -
Land Survey	$ 1,500,000	$ 500,000	$ 471,450	$ 28,237	$ 499,687	$ 313	$ 28,550
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 103,395
Total Construction Fund	**$ 87,402,000**	**$ 87,402,000**	**$ 78,914,178**	**$ 4,183,743**	**$ 83,097,921**	**$ 4,304,079**	**$ 8,591,217**

1) PUC's Docket 11-01 $29,000,000.00 dated 09/19/11authorized GWA for reallocation
2) PUC's Docket 11-01 Reallocation of $23,246,000.00 dated 07/30/12
3) PUC's Dockect Reallocation dated February 2013

GUAM WATERWORKS AUTHORITY
Schedule of Series 2013, 2014 Refunding, 2016 and 2017 Refunding Bond Bank Accounts
As of April 30, 2018

SCHEDULE N

	4/30/2018
BANK OF GUAM	
BOG - Revenue Account	7,422,662
BOG - Operations and Maintenance Reserve	3,083,482
BOG - Operations, Maintenance, Renewal and Replacement Reserve Fund	17,423,213
BOG - Capital Improvement Fund	4,199,553
BOG - O & M Reserve	13,583,288
BOG - Debt Service Reserve	11,273,230
BOG - CAPEX Reserve	15,537,694
Total BOG Bank Account Balance	**72,523,121**
Series 2013 Bond:	
BOG - Construction Fund	50,984,673
USB - Debt Service Fund	3,124,124
USB - Debt Service Reserve Fund	12,031,688
Total Series 2013 Bond Bank Balance	**66,140,484**
Series 2014 Refunding Bond:	
BOG - Construction Fund	737,399
USB - Debt Service Fund	4,142,670
USB - Debt Service Reserve Fund	7,789,571
Total Series 2014 Refunding Bond Bank Balance	**12,669,640**
Series 2016 Bond:	
BOG - Construction Account	122,226,749
BOG - Capitalized Interest Fund	-
USB - Debt Service Fund	2,391,990
USB - Debt Service Reserve Fund	7,594,589
Total Series 2016 Bond Bank Balance	**132,213,329**
Series 2017 Refunding Bond:	
BOG - Construction Account	8,591,217
BOG - Cost of Issuance Fund	47,545
USB - Debt Service Fund	3,445,735
USB - Debt Service Reserve Fund	7,566,460
Total Series 2017 Refunding Bond Bank Balance	**19,650,956**

Guam Waterworks Authority	Date: 5/3/2018 Time:

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

REVIEWS			
TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	92%
TOTAL PUMPS OPERATIONAL	47	% OF OPERATING PUMPS	92%
TOTAL BOOSTER PUMP STATIONS	25		

Northern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	2	100%	OP	A						
3	Santa Rosa	15	2	2	100%	OP	A						
4	Hyundai	40	2	1	50%	OP	A	Pump # 1 requires pump and motor.					
5	Access	60	2	2	100%	OP	A						
6	Chln. Palauan	5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
7	Nimitz Hill	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
8	Adawag	1.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
9	Pale Kiren	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
10	Ulloa/Untalan	1	2	2	100%	OP	A						
11	Latte Heights	15	2	2	100%	OP	A						
	TOTAL = 11		**21**	**20**	**95%**								
pump availability =no of operational pumps/no of pumps*100%													

Central District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	2	67%	0P	A			ASSESING PUMP 3 MOTOR		Removed and at vendor 4/25/18 (Rewind)	PENDING RFQ APPROVAL
2	Brigade	60	3	3	100%	OP	A			Generator inadequate for 2 pump operation			
3	Windward Hills	200 / 75	3	3	100%	OP	A	All pumps operational.					
4	Santa Rita Spring	40	2	2	100%	OP	A						
5	Santa Ana (Lower)	25	2	1	50%	N/A		CHECK VALVE P1 NOT OPENING		Unable to secure discharge valve. Need to schedule an outage for area to make repairs		CIP required for new unit and electrical for generator	Need to schedule valve repairs
6	Camacho	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
7	Tenorio	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
	Total=7		**15**	**13**	**87%**								
pump availability =no of operational pumps/no of pumps*100%													

Southern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Malojloj Line	125 / 50	3	2	67%	OP	A	PUMP 3		ASSESING P3 MOTOR		Removed and at vendor 4/25/18 (Rewind)	PENDING RFQ APPRVAL
2	Geus	25	2	2	100%	OP	A						
3	Pigua	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
4	Toguan	25	2	2	100%	OP	A						
5	WBP-2	25	2	2	100%	OP	A						
6	WBP-1	5	2	2	100%	OP	A						
7	Malojloj Elevated	15	2	2	100%	OP	A						
	Total=7		**15**	**14**	**93%**								
pump availability =no of operational pumps/no of pumps*100%													

GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority

VEHICLE FLEET STATUS

5/8/2018

EQUIPMENT STATUS				
Description	Number of Equipment	Number of Equipment Available	Number of Equipment Not Available	Percentage
Backhoe	5	2	3	40%
Bobcat	1	1	0	100%
Boom Truck	2	1	1	50%
Crane	2	1	1	50%
Dump Truck	3	1	2	33%
Flat Bed	1	0	1	0%
Forklift	7	6	1	86%
Fuel Tanker	1	1	0	100%
Heavy Duty	3	1	2	33%
Light	160	109	51	68%
Mini Backhoe	4	0	4	0%
Pumper Truck	1	1	0	100%
Skidster	1	1	0	100%
Sludge Truck	5	5	0	100%
Tow	1	0	1	0%
Tractor	2	2	0	100%
Tractor Mower	1	1	0	100%
Trailer	14	11	3	79%
Trencher	1	1	0	100%
Vaccon	1	1	0	100%
Vacuum Truck	3	2	1	67%
Water Buffalo	2	2	0	100%
Water Tanker	5	1	4	20%
Total	226	151	75	

SUMMARY						
Operational	Operational w/Rprs Pending	In Shop-Accident Repairs	In Shop-Assessment Pending	In Shop-Repairs Pending	In Shop-Vendor Repairs	Recommend Survey
2	0	0	0	1	0	2
1	0	0	0	0	0	0
1	0	0	0	1	0	0
0	1	0	0	0	0	1
1	0	0	0	2	0	0
0	0	0	0	0	0	1
6	0	0	0	0	0	1
1	0	0	0	0	0	0
1	0	0	0	0	1	1
108	1	1	4	5	8	33
0	0	0	0	2	2	0
1	0	0	0	0	0	0
1	0	0	0	0	0	0
5	0	0	0	0	0	0
0	0	0	0	0	0	1
2	0	0	0	0	0	0
1	0	0	0	0	0	0
11	0	0	0	1	0	2
1	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	1	0
2	0	0	0	0	0	0
1	0	0	0	0	3	1
149	2	1	4	12	15	43

GUAM WATERWORKS AUTHORITY

WASTEWATER COLLECTION REPORT

MONTHLY REPORT

APRIL 2018



CCTV INSPECTIONS AND SEWER CLEANING
APRIL 2018

APR. 01 - APR. 07	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	7255			7255
	222.07%	0.00%		111%

APR. 08 – APR. 14	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	5883			5883
	180%	0%		90%

APR. 15 – APR. 21	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	7,692.00			7692
	235%	0%		118%

APR. 22 – APR. 28	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267		6,534
Feet Completed	13517			13517
	414%	0%		207%

APR. 29 – APR. 30	Team #1	Team #2	Vendor	Total
Feet Scheduled				
Feet Completed				

	January	February	March	April	May	June
SEWER CLEANING	2.86	6.09	2.81	6.50	0.00	0.00

TOTAL FEET SCHEDULED	26,136
TOTAL FEET COMPLETED	34,347
TOTAL MILES FOR THE MONTH	6.5
TOTAL MILES SCHEDULED	5.0
PERCENTAGE COMPLETED	130%

PUMPING STATION TROUBLE CALLS 2018

Apr. 01 - 07	CREATED	COMPLETED	PENDING
NORTHERN	3	3	0
CENTRAL	5	5	0
SOUTHERN	1	1	0
TOTAL	9	9	0

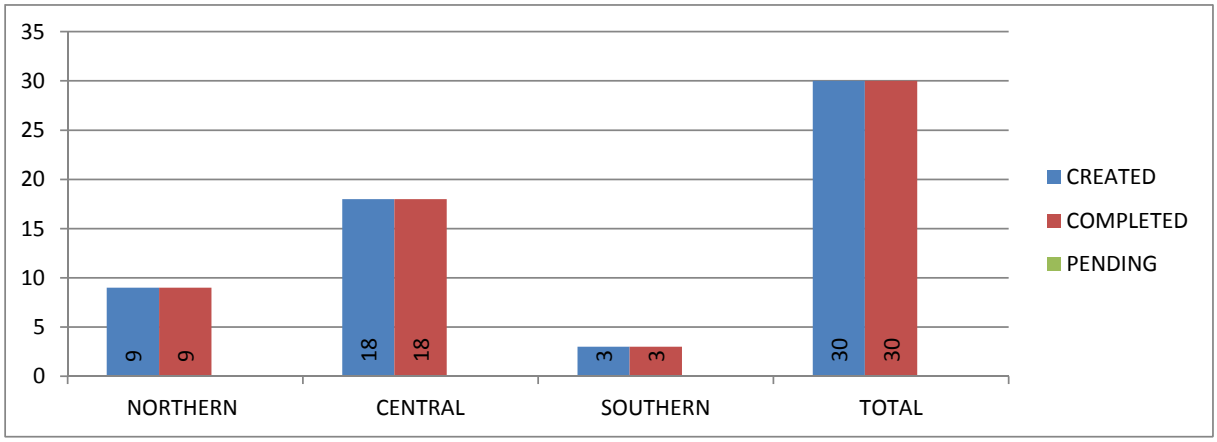
Apr. 08 – 14	CREATED	COMPLETED	PENDING
NORTHERN	3	3	0
CENTRAL	4	4	0
SOUTHERN	0	0	0
TOTAL	7	7	0

Apr. 15 – 21	CREATED	COMPLETED	PENDING
NORTHERN	1	1	0
CENTRAL	5	5	0
SOUTHERN	1	1	0
TOTAL	7	7	0

Apr. 22 – 28	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	4	4	0
SOUTHERN	1	1	0
TOTAL	7	7	0

Apr. 29 – 30	CREATED	COMPLETED	PENDING
NORTHERN	0	0	0
CENTRAL	0	0	0
SOUTHERN	0	0	0
TOTAL	0	0	0

	CREATED	COMPLETED	PENDING
NORTHERN	9	9	0
CENTRAL	18	18	0
SOUTHERN	3	3	0
TOTAL	30	30	0



MAINTENANCE PREVENTIVE AND CORRECTIVE CALL OUTS

04/02/18 – 04/06/18	PREVENTIVE	CORRECTIVE
NORTHERN	14	2
CENTRAL	12	6
SOUTHERN	16	1
TOTAL	42	9

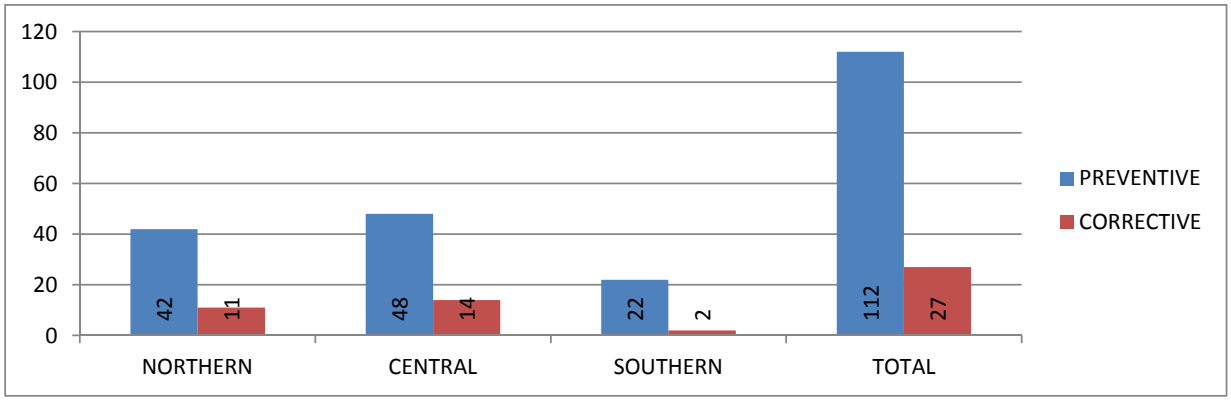
04/09/18 – 04/13/18	PREVENTIVE	CORRECTIVE
NORTHERN	16	3
CENTRAL	20	2
SOUTHERN	6	0
TOTAL	42	5

04/16/18 – 04/20/18	PREVENTIVE	CORRECTIVE
NORTHERN	0	5
CENTRAL	8	1
SOUTHERN	0	0
TOTAL	8	6

04/23/18 – 04/27/18	PREVENTIVE	CORRECTIVE
NORTHERN	12	1
CENTRAL	0	3
SOUTHERN	0	1
TOTAL	12	5

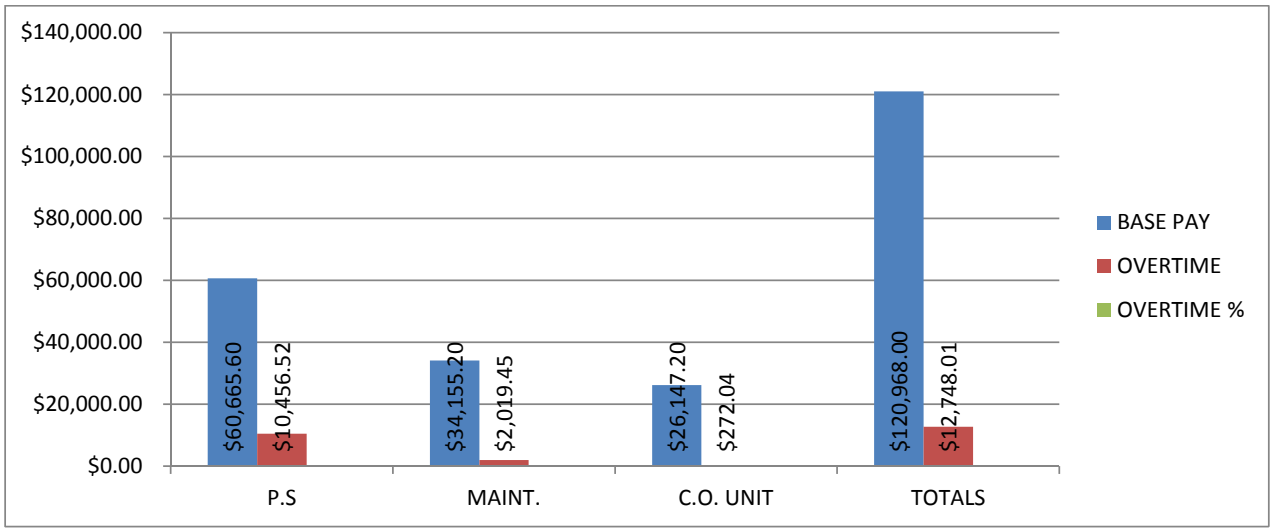
04/30/18	PREVENTIVE	CORRECTIVE
NORTHERN	0	0
CENTRAL	8	2
SOUTHERN	0	0
TOTAL	8	2

04/01/18 – 04/30/18	PREVENTIVE	CORRECTIVE
NORTHERN	42	11
CENTRAL	48	14
SOUTHERN	22	2
TOTAL	112	27



BASE PAY VS OVERTIME

	BASE PAY	OVERTIME	OVERTIME %
PUMPING STATION	$60,665.60	$10,456.52	17%
MAINTENANCE	$34,155.20	$2,019.45	6%
COURT ORDER UNIT	$26,147.20	$272.04	1%
TOTALS	$120,968.00	$12,748.01	24%



Guam Waterworks Authority	Date: 5/4/2018
	Time:

REVIEWS

TOTAL PUMPS INSTALLED	169	OVERAL AVERAGE	85%
TOTAL PUMPS OPERATIONAL	144	% OF OPERATING PUMPS	85%
TOTAL PUMP STATIONS	78		

GUAM WATERWORKS AUTHORITY

WASTEWATER FACILITIES REPORT

Northern District

NO:	FACILITY	Priority Listing	NO OF INSTALLED	NO OF OPERATIONAL	PUMP AVAILABILITY %	Pump NO.	Action Required	Ref. No./Date	PUMP UNIT REMARKS	Additional Remarks
1	FUJITA					1				
						2				
						3	Pump #3 suction valve damaged (unable to close). 4.12.18 found replacement valve in the warehouse, working with engineers on the OMCP to shut down the station to make change out to the valve. Pumper trucks OR's awaiting			
						4				
			4	4	100%					
2	Southern Link					1				
						2				
						3				
						4	Pump #4 suction clogged			VFD place on CIP funding awaiting approval 11/16/17
			4	3	75%					
3	Route #16					1	Said pump burnt and removed on 4/13/18.			
							Pump #1 taken to Washland on 5/04/18 for repairs.	PO #302211 OQ#32462		
						2				
						3	Pump #3 impeller and bolt on shaft broken and removed for repairs. Pump #4 being utilized temporarily on line#3. 4/13/18			
						4	Pump #4 removed and installed on pump line #3 on 4/13/18. Pump VFD Issues			working with JMI on VFD issues.
			4	2	50%					
4	HARMON					1				
						2	Pump #2 at Washland for open winding. Vendor is still waiting on parts for pump as of 3/30/18.	PO #301753		
			2	1	50%					
5	MACHECHE					1				
							PS #20 pump			
			2	2	100%					
6	LATTE DOUBLE TROUBLE					1				
						2				
			2	2	100%					
7	LATTE SUBMARINE					1				
						2				
			2	2	100%					
8	MACHANAO					1				
						2				
			2	2	100%					
9	YPAOPAO ESTATES					1				
						2				
						3				
			3	3	100%					
10	PGD					1				
						2	Removed on 4/26/18 as per Ed Aguon.			
							Said pump sent to JMI EDISON for bearing replacement and repair of mechanical seals. Awaiting PO	OQ #32496 / OR #32287		
			2	1	50%					

11	LATTE PLANTATION					1					
						2					
			2	2	100%						
12	PASEO DE ORO					1					
						2					
			2	2	100%						
13	ASTUMBO #1					1					
						2					
			2	2	100%						
14	ASTUMBO #2					1					
						2					
			2	2	100%						
15	FEMA '96					1					
						2					
			2	2	100%						
16	LATTE SUN RISE					1					
						2					
			2	2	100%						
17	HAFA ADAI					1					
						2					
			2	2	100%						
18	PACIFIC LATTE					1					
						2					
			2	2	100%						
19	SANTA ANA					1					
						2					
			2	2	100%						
20	ZERO DOWN					1					
						2					
			2	2	100%						
21	Yigo PS					1					
						2					
						3	Pump #3 awaiting installation of discharge valve. Shutdown of station needed. Detry, Ben Lujan & PGE Pumper Trucks. **Awaiting approval on other pumper trucks.**	**Detry: PO 302076 Ben Lujan: OR #31652 PGE: OR #31659**			
			3	2	67%						
22	Ypao PS					1					
						2					
			2	2	100%						
	Northern TP						**Bar Screen still off-line. Solenoid valve for the water line is defective causing auger not to operate.**	**3/30/2018**			
							Awaiting SCADA system part for solenoid. 4/13/18	**OQ#32361 / OR #32335**			awaiting for vendor's feed back. JMI / Frontiers
	TOTAL = 22		**52**	**46**	**88%**						

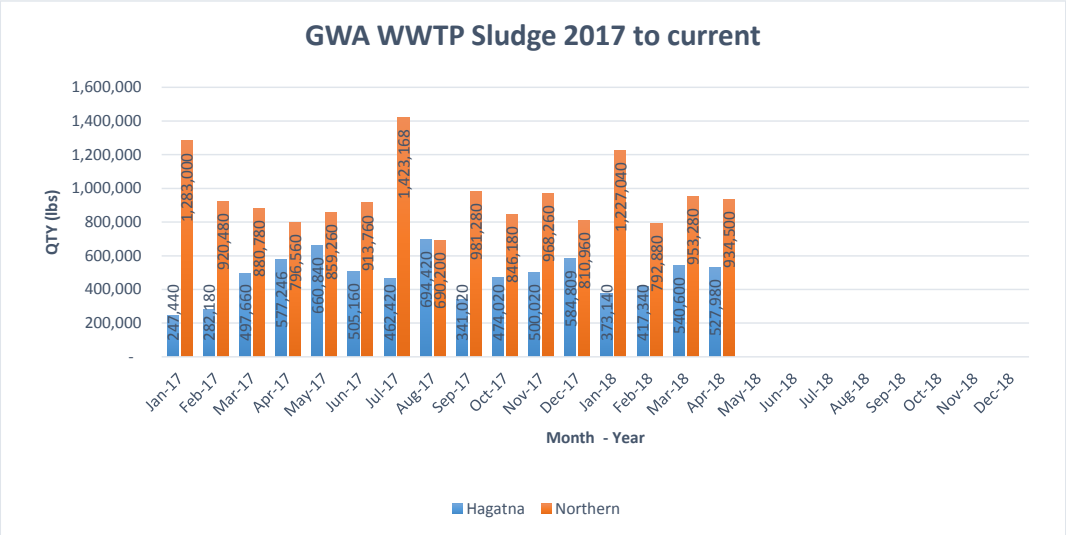
Central District

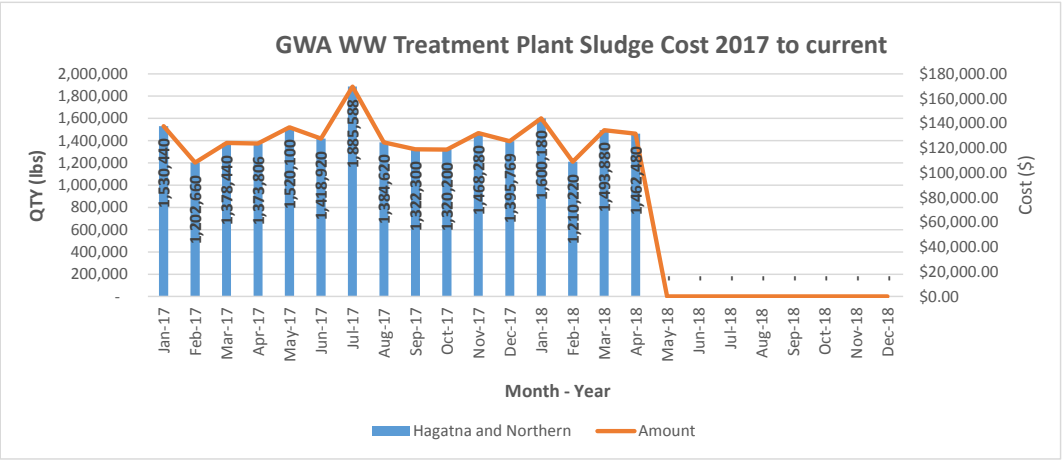
NO:	FACILITY	Priority Listing	NO OF INSTALLED	NO OF OPERATIONAL	PUMP AVAILABILITY %	Pump NO.	Action Required	Ref. No./Date	PUMP UNIT REMARKS	Additional Remarks
1	AGANA MAIN					1				
						2	Pump #2 taken out (2/13/18) and sent to JMI due to seals leaking. Awaiting PO.	OQ#32161 OR#31950 2/21/18		
						3				
						4				
			4	3	75.00%					
2	CHAOT					1				
						2				
						3				
			3	3	100.00%					
3	MAMAJANAO					1	Off-line awaiting eccentric reducer	OQ#31721 (12/07/18) OR #31551(12/14/17)		looking at flygt pump on there new horizontal installation. And replacing the DWF pump to a WWF pump.
						2				
						3				
			3	2	66.67%					
4	BARRIGADA					1				
						2				
			2	2	100.00%					
5	BAYSIDE					1	Existing pump was extracted due to experiencing surges. Bigger pump (Sulzer Sn0006585) installed. Requested J. Quinata to monitor pumping operations due to line being surged upon new **Upon observation by J. Quinata. Surging still happening at the pump station wet well. Maintenance is coordinating with Engineering Dept. to see if abondoning manhole in place would alleviate I&I.**	**4/13/2018**		
			1	1	100.00%					
6	TA'I MANGILAO					1				
						2	Seal failure/pump at Washland for rewinding.	OQ#31870(01/02/18) OR#31663(01/05/18)		
						3				
			3	2	66.67%					
7	MONGMONG/TOTO					1				
						2				
			2	2	100.00%					
8	PAGO DOUBLE					1	secured & needs to be replaced**/CIP** approved pending final review from finance.			
						2				
						3				
			3	2	66.67%					
9	MANGILAO					1	Impeller needed for pump #1	OQ#31892(01/05/18) OR#31765(01/25/18)		
							Pump #1 at JMI for repair (SULZER ABS Ser. No. 001922)	OQ#31890(01/05/18) OR#31686(01/09/18)		
						2	Awaiting eccentric reducers for discharge line / Pump #2 temporary online on line #1	OQ#31461(11/01/17) OR#31558(12/15/18)		
			2	1	50.00%					
10	PITI					1				
						2	**Pump #2 taken to JMI EDISON due to water in the oil chamber. Said pump is supposedly still under warranty.**			
			2	1	50.00%					
						1				

11	ASAN					2				
			2	2	100.00%					
12	SINAJANA					1				
						2				
			2	2	100.00%					
13	DAIRY ROAD					1				
						2				
			2	2	100.00%					
14	FADIAN					1				
						2				
			2	2	100.00%					
15	FLORA GARDENS					1				
						2				
			2	2	100.00%					
16	ORDOT					1				
						2				
			2	2	100.00%					
17	CHALAN PAGO #5					1	Pump #1 at @Washland for rewinding.	?		
						2				
			2	1	50.00%					
18	COMMERCIAL PORT					1				
						2				
						3				
			3	3	100.00%					
19	CHALAN PAGO #3					1				
						2				
			2	2	100.00%					
20	CABRAS ISLAND					1				
						2				
			2	2	100.00%					
						1				

	Hagatna		Northern		Hagatna and Northern	
2017	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-17	247,440	$22,269.60	1,283,000	$115,470.00	1,530,440	$137,739.60
Feb-17	282,180	$25,396.20	920,480	$82,843.20	1,202,660	$108,239.40
Mar-17	497,660	$44,789.40	880,780	$79,270.20	1,378,440	$124,059.60
Apr-17	577,246	$51,952.14	796,560	$71,690.40	1,373,806	$123,642.54
May-17	660,840	$59,475.60	859,260	$77,333.40	1,520,100	$136,809.00
Jun-17	505,160	$45,464.40	913,760	$82,238.40	1,418,920	$127,702.80
Jul-17	462,420	$41,617.80	1,423,168	$128,085.12	1,885,588	$169,702.92
Aug-17	694,420	$62,497.80	690,200	$62,118.00	1,384,620	$124,615.80
Sep-17	341,020	$30,691.80	981,280	$88,315.20	1,322,300	$119,007.00
Oct-17	474,020	$42,661.80	846,180	$76,156.20	1,320,200	$118,818.00
Nov-17	500,020	$45,001.80	968,260	$87,143.40	1,468,280	$132,145.20
Dec-17	584,809	$52,632.81	810,960	$72,986.40	1,395,769	$125,619.21
Grand Total	5827235	$524,451.15	11373888	$1,023,649.92	17201123	$1,548,101.07

	Hagatna		Northern		Hagatna and Northern	
2018	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	$	lbs	$	lbs	$
Jan-18	373,140	$33,582.60	1,227,040	$110,433.60	1,600,180	$144,016.20
Feb-18	417,340	$37,560.60	792,880	$71,359.20	1,210,220	$108,919.80
Mar-18	540,600	$48,654.00	953,280	$85,795.20	1,493,880	$134,449.20
Apr-18	527,980	$47,518.20	934,500	$84,105.00	1,462,480	$131,623.20
May-18		$0.00		$0.00	-	$0.00
Jun-18		$0.00		$0.00	-	$0.00
Jul-18		$0.00		$0.00	-	$0.00
Aug-18		$0.00		$0.00	-	$0.00
Sep-18		$0.00		$0.00	-	$0.00
Oct-18		$0.00		$0.00	-	$0.00
Nov-18		$0.00		$0.00	-	$0.00
Dec-18		$0.00		$0.00	-	$0.00
Grand Total	1859060	$167,315.40	3907700	$351,693.00	5766760	$519,008.40


GWA WWTP Sludge 2017 to current
QTY (lbs)
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
247,440
1,283,000
282,180
920,480
497,660
880,780
577,246
796,560
660,840
859,260
505,160
913,760
462,420
1,423,168
694,420
690,200
341,020
981,280
474,020
846,180
500,020
968,260
584,809
810,960
373,140
1,227,040
417,340
792,880
540,600
953,280
527,980
934,500
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
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Oct-18
Nov-18
Dec-18
Month - Year
Hagatna
Northern

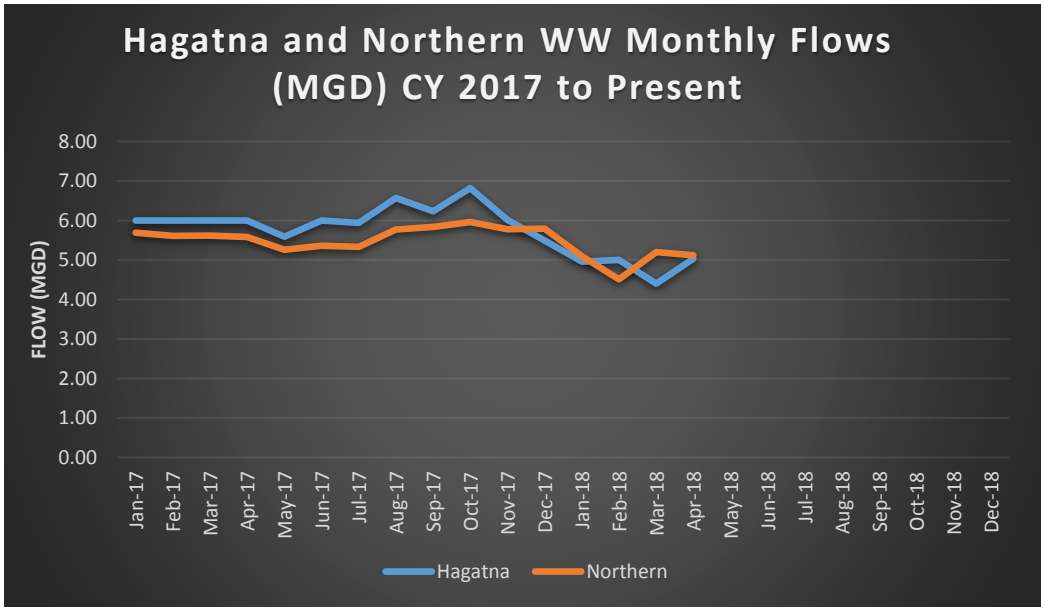

GWA WW Treatment Plant Sludge Cost 2017 to current
QTY (lbs)
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
Cost ($)
$180,000.00
$160,000.00
$140,000.00
$120,000.00
$100,000.00
$80,000.00
$60,000.00
$40,000.00
$20,000.00
$0.00
1,530,440
1,202,660
1,378,440
1,373,806
1,520,100
1,418,920
1,885,589
1,384,620
1,322,300
1,320,200
1,468,280
1,395,769
1,600,180
1,210,220
1,493,880
1,462,480
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Month - Year
Hagatna and Northern
Amount

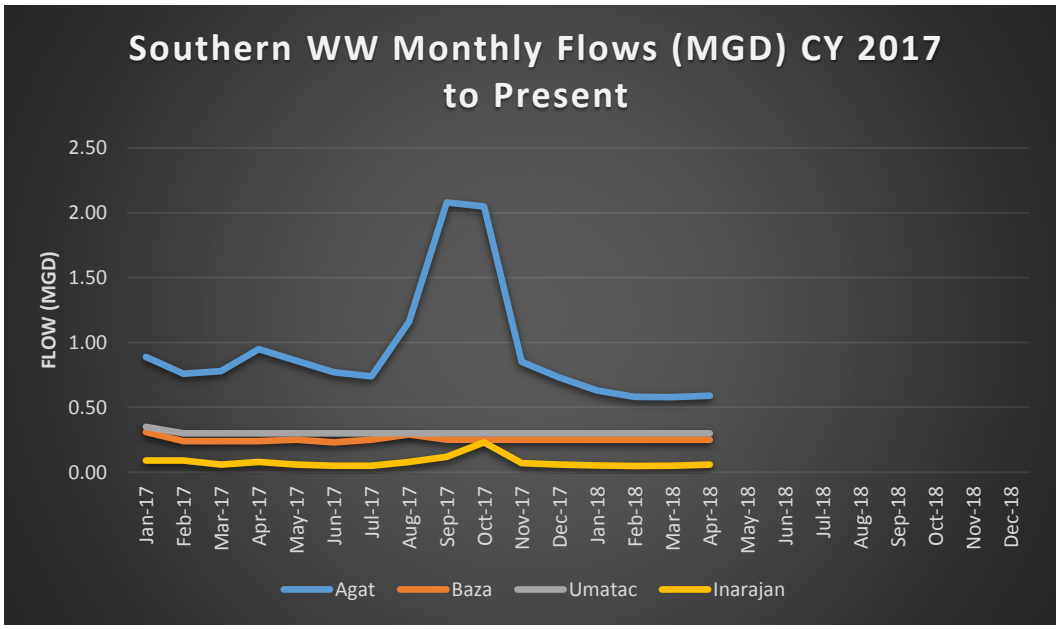
Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

2017	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-17	6.00	5.69	0.89	0.31	0.35	0.09
Feb-17	6.00	5.61	0.76	0.24	0.30	0.09
Mar-17	6.00	5.62	0.78	0.24	0.30	0.06
Apr-17	6.00	5.58	0.95	0.24	0.30	0.08
May-17	5.59	5.26	0.86	0.25	0.30	0.06
Jun-17	6.00	5.36	0.77	0.23	0.30	0.05
Jul-17	5.94	5.33	0.74	0.25	0.30	0.05
Aug-17	6.57	5.77	1.16	0.29	0.30	0.08
Sep-17	6.23	5.84	2.08	0.25	0.30	0.12
Oct-17	6.82	5.96	2.05	0.25	0.30	0.23
Nov-17	6.01	5.78	0.85	0.25	0.30	0.07
Dec-17	5.49	5.79	0.73	0.25	0.30	0.06
2017 Average MGD	**6.05**	**5.63**	**1.05**	**0.25**	**0.30**	**0.09**
2017 Total MGY	2,210	2,056	384	93	111	32

2018	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-18	4.96	5.10	0.63	0.25	0.30	0.05
Feb-18	5.00	4.51	0.58	0.25	0.30	0.05
Mar-18	4.40	5.20	0.58	0.25	0.30	0.05
Apr-18	5.03	5.12	0.59	0.25	0.30	0.06
May-18						
Jun-18						
Jul-18						
Aug-18						
Sep-18						
Oct-18						
Nov-18						
Dec-18						
2018 Average MGD	**4.85**	**4.98**	**0.60**	**0.25**	**0.30**	**0.05**
2018 Total MGY	1,769	1,819	217	91	110	19

GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 5/9/2018





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