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GWA WORK SESSION 8/21 / MEETING MATERIALS

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To: 34th Guam Legislature Clerks <clerks@guamlegislature.org>
Cc: Rennae Meno <rennae@guamlegislature.org>

Tue, Aug 21, 2018 at 4:55 PM

08/21/18	08/21/18	Guam Waterworks Authority	GWA Work Session 8/21 - Meeting materials. *emailed	34-18-2235

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OFFICE OF SPEAKER BENJAMIN J.F. CRUZ

Committee on Appropriations and Adjudication

I Mina'trentai Kuattro na Liheslaturan Guåhan

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

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Speaker Benjamin J.F. Cruz

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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., Tues., August 21, 2018

AGENDA (Amended)

1. **ISSUES FOR DECISION**
   - 1.1 Approval of the Contract with JMI-Edison for Purchase of Vacuum Regulators and Parts for Water Production Chlorination System / Resolution No. 42-FY2018
   - 1.2 Approval of the 2018 Water Resource Master Plan Update / Resolution No. 43-FY2018
   - 1.3 Approval of Contract for Asan-Adelup-Hagatna Route 1 Sewer Line Rehabilitation and Replacement Project / Resolution No. 44-FY2018
   - 1.4 Approval of Change Order #1 for the Tumon #2, Hyundai and Chaot #2 Reservoirs Construction Contract / Resolution No. 45-FY2018
   - 1.5 Approval of Funding Source for Baza Gardens Wastewater Cross-Island Pumping and Conveyance Construction Contracts / Resolution No. 46-FY2018
   - 1.6 Approval and Adoption of GWA's Asset Management Policy / Resolution No. 47-FY2018
   - 1.7 Approve Purchases Under Indefinite Quantity Contract with JMI Edison for Submersible Pump and Motors / Resolution No. 48-FY2019
   - *1.8 Approval of FY2019 Budget / Resolution No. 49-FY2018

2. **GM REPORT**
   - 2.1 GM Summary

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 WS 8/23/18 CCU Meeting: 8/28/18

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. 42-FY2017
Relative to the Approval of the Contract with JMI-Edison for the Purchase of Vacuum Regulators and Parts for Island Wide Water Production Chlorination Systems.

What is the project's objective and is it necessary and urgent?
This approval requested in this resolution will authorize the purchase water chlorination parts, materials and maintenance kits to improve the reliability and safety of chlorination systems employed throughout GWA's production facilities and decrease the downtime of deep well chlorination system due to corrective maintenance required.

The existing chlorination systems are showing signs of wear, with some components reaching the end of useful service life. If not properly repaired or replaced, these parts can fail, leading to an increased potential of chlorine gas leak or system malfunction. Such occurrences pose a safety hazard to employees and to the public if proper chlorination of our drinking water is not achieved.

The proposed purchase is necessary and urgent to establish a good working inventory of replacement parts to keep systems operational, and maintenance kits to extend the useful life of our existing systems. Maintenance kits can potentially double the useful life of essential chlorination system parts.

Where is the location?
GWA Island-wide Deep-well Production Facilities / Chlorination Sites.

How much will it cost?
Eight Hundred Seventeen Thousand, Four Hundred Twenty-Three and Thirty-Two Cents. ($817,423.32)

Description	Product Number	IFB 2018-22	Bid Qty (est'd)	IFB 2018-22 Unit Cost	Bid Cost
		Item No		EA	
NXT 3000 CLs Cylinder Mounted 500 PPD Max Cap	VR3000C021XX	1.0	50	$1,717.80	$85,890.00
Remote Multi-purpose Ejector Check	EJ17C101XX	2.0	224	$1,012.38	$226,773.12
Meter Assembly w/ Manual Rate Valve	MA3001C04XX	2.1	112	$809.62	$90,677.44
CR 3-10 A-FGJ-E-HQQE	Product No.: 96083216				$0.00
Flowmeter Maintenance Kit	PN 614S096U01	2.2	112	$54.91	$6,149.92
Regulator Maintenance Kit	PN 614S090U01	2.3	112	$129.54	$14,508.48
Ejector Maintenance Kit	PN 614S092U01	2.4	112	$98.56	$11,038.72
Inlet Valve Kit Double O Ring	PN 27385-1	2.5	112	$283.02	$31,698.24
Reducing Bushing, ½"MNPT x ¼"FNPT	Part# R-246	2.6	150	$9.86	$1,479.00
¼" NPT x 3/8" Tubing connector	Part# F-100-1	2.7	150	$14.08	$2,112.00
Plate, Inlet Fitting Support	Part# 22952	2.8	30	$83.08	$2,492.40
Retainer Ring	Part# U-1830	2.9	30	$15.49	$464.70
Fitting, Gas inlet	Part# 27100	3.0	30	$426.64	$12,799.20
Meter Tube Assemblies 25ppd	Part#600B060U04	3.1	30	$439.31	$13,179.30
Meter Tubes 25ppd	Part# 21496	3.2	30	$439.31	$13,179.30
					$512,441.82
Description	**Product Number**			**IFB 2018-22 Unit Cost**	**Bid Cost**
				EA	
Capital Controls Gas Detector Series 1610B Single Point Gas Detectors	P/N: 1610B-01-01-01-XX	3.3	50	$2,559.81	$127,990.50
Battery Backup Model 1640 for 1610B	P/N: 1640-01-01-XX	3.4	50	$2,365.50	$118,275.00
Gas Sensor Test Kit Part No BM-4709	BM-4709	3.5	75	$184.46	$13,834.50
Sensor for 1610B Single Point Gas Detectors Part No A-1387 (for Chlorine)	A-1387 (for Chlorine)	3.6	75	$598.42	$44,881.50
					$304,981.50

IFB 2018-22 Total	$817,423.32

When will it be completed?
The indefinite quantity contract will be in place for an initial term of 3 years and two (2) years one-year option to renew. Purchases will be ongoing on an as-needed basis over the life of the contract term.

What is the funding source(s)?
FY 2018 / FY 2019 GWA Water Production and Treatment Operations and Maintenance Budget.

The RFP / Bid Responses
IFB 2018-22 Vacuum Regulators and Parts (Re-Bid).

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. 42-FY2018

RELATIVE TO APPROVAL OF THE CONTRACT WITH JMI-EDISON FOR THE PURCHASE OF VACUUM REGULATORS AND PARTS FOR ISLANDWIDE WATER PRODUCTION CHLORINATION SYSTEMS

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 advertised an Invitation for Bid (IFB) 2018-22 soliciting bid proposals from experienced and responsive bidders to provide island wide GWA Water Production Chlorination systems with vacuum regulators, ejectors, flow meters, maintenance kits and parts to provide adequate stock replenishment when needed to continue to operate and maintain chlorination systems required under Safe Water Drinking Act; and

WHEREAS, six entities registered for the bid procurement, and there was one responsive and responsible bidder who met the bid requirements of IFB 2018-22; and

WHEREAS, the IFB 2018-22 offers were evaluated by GWA's review committee, who determined that the offer for Vacuum Regulators and Parts made by JMI-Edison is fair and reasonable on the basis of comparison to historical procurement data [EXHIBIT A]; and

WHEREAS, GWA accepted JMI-Edison's indefinite quantity bid proposal for Vacuum Regulators and Parts [EXHIBIT B] at an estimated total amount of Eight Hundred Seventeen

Thousand Four Hundred Twenty-Three Dollars and Thirty-Two Cents ($ 817,423.32) [EXHIBIT B]; and

WHEREAS, GWA Management seeks CCU Approval of the Contract amount of Eight Hundred Seventeen Thousand Four Hundred Twenty-Three Dollars and Thirty-Two Cents ($817,423.32) for the purchase of Water Production Chlorination System Vacuum Regulators and Parts; and

WHEREAS, the source of funding for the Vacuum Regulators and Parts Bid will be from FY 2018 / FY 2019 GWA Water Production and Treatment Operations and Maintenance Budget.

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 "JMI-Edison" are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to proceed based on the notice of award to "JMI-Edison" attached hereto as EXHIBIT B, and which is incorporated into this Resolution in its entirety.
4. The CCU hereby further authorizes the management of GWA to enter into a contract with "JMI Edison", to purchase up to Eight Hundred Seventeen Thousand Four Hundred Twenty-Three Dollars and Thirty-Two Cents ($ 817,423.32) worth of Vacuum Regulators and Parts, on as needed basis for the contract amount on IFB 2018-22, for the duration of the initial contract term of three (3) years as specified in the IFB 2018-22 "Indefinite Quantity Bid", and two (2) one-year options to renew, subject to availability of funds and agreement between the parties.
5. The CCU hereby approves the funding total of Eight Hundred Seventeen Thousand Four Hundred Twenty-Three Dollars and Thirty-Two Cents ($ 817,423.32) [EXHIBIT B];

2

6. GWA Management is hereby authorized to seek PUC approval in the event the contract value exceeds One Million Dollars ($1,000,000.00) as required by Docket 00-04.

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

DULY AND REGULARLY ADOPTED, this 28th day of August 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: _____

3

EXHIBIT A

GUAM WATERWORKS AUTHORITY

"Better Water. Better Lives."
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao GU, 96913
Tel: 671.300.6032/30 Fax: 671.649.3750

NOTICE OF CONDITIONAL AWARD

JMI Edison
125 North Marine Drive
P.O. Box 6577
Tamuning, Guam 96931

Date:

Re: Invitation for Bid Number: IFB 2018-22 (RE-BID) Vacuum Regulators and Parts

Hafa Adai Mr. Romeo I. Oriondo,

The Guam Waterworks Authority ("GWA") has considered the bid submitted by JMI Edison for the above described reference in response to its Advertisement for Bids dated May 08, 2018 and you are hereby notified that the bid price for all line Items Nos has been accepted by GWA. Please be advised that you must now deliver all other documents required by the bid, including, but not limited to, proof of insurance and the Performance and Payment Bond (which must remain in full force and effect until all performance has ended, which includes all warranty periods).

You are also advised that any obligation incurred by your firm prior to execution of the contract is entirely at your own risk and GWA shall have no obligation to reimburse costs incurred prior to execution of the contract.

Please note this Notice of Award is conditional on obtaining the approval of the Guam Consolidated Commission on Utilities for any award over $250,000 and the approval of the Guam Public Utilities Commission where the total value over the life of the contract could exceed $1M. Also, award is conditional upon providing any documents such as proof of licensure, proof of insurance or other documents required to be submitted to GWA under the Bid or Guam law.

You are required to return an acknowledged copy of this Conditional Notice of Award to the Procurement Administrator.

Sincerely,

Miguel C. Bordallo, P.E.
General Manager

REF: IFB 2018-22 Vacuum Regulators and Parts

ACCEPTANCE OF CONDITIONAL NOTICE OF AWARD

Receipt of the above Notice of Conditional Award for GWA Bid No. 2018-22 (RE-BID) is hereby acknowledged

By: Mr delosreyes Title: OFFICE MANAGER

Signature (please print)

Dated this 1st day of August, 2018.

******** END OF CONDITIONAL NOTICE OF AWARD *******

REF: IFB 2018-22 Vacuum Regulators and Parts

EXHIBIT B

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

MEMORANDUM

TO: General Manager

VIA: Supply Management Administrator

FROM: Evaluation Committee Members

SUBJECT: Invitation to Bid No. GWA 2018-22
Ref: (RE-BID) Vacuum Regulators and Parts

REF: Recommendation of Award

DATE: July 9, 2018

Invitation to Bid No. GWA 2018-22 was officially announced and advertised in the Pacific Daily News, Marianas Variety and Guam Waterworks Authority Website on May 08, 2018 and open as scheduled on May 24, 2018 @ 10:00 am. Six (6) prospective bidders expressed their interests by acknowledging receipt of the bid package thru GWA's website.

Bidders Register:

1. Compacific
2. Benson Guam Ent. Inc.
3. JMI Edison
4. A
5. ONVIA
6. Guam Pacific Enterprise

Of the Six (6) only One (1) submitted their bid package, namely:

- JMI Edison

An evaluation committee was formally assembled and met on May 31, 2018 @ 10:00 am to review/discuss and evaluate bid submittal. Completing the evaluation, the committee members have determined JMI Edison bid proposal is deemed responsive and have complied with all terms & conditions and requirements set for in the IFB with their cost proposal as follows:

I. BID ITEM(s)

Indefinite Quantity Bid

Item No	Description	Est. Qty	Unit Cost	Total Cost
1.0	Vacuum Regulator Series NXT3000 PPD Max Cap (Cylinder Mounted) w/Standard Accessories	50 each	$1,717.80	$85,890.00

BIDDING ON:

MFG: Denora
Brand: Denora
Place: of Origin: USA
Date of Delivery: 90 DAYS
(After Receipt of Purchase Order)

Item No	Description	Est. Qty	Unit Cost	Total Cost
2.0	Remote Multi-Purpose Ejector Check Part # EJ17C101XX	224 each	$1,012.38	$226,773.12
2.1	Flow Meter Assembly w/ Manual Rate Valve Part # MA3001C04XX	112 each	$809.62	$90,677.44
2.2	Flowmeter Maintenance Kit Part # 614S096U01	112 each	$54.91	$6,149.92
2.3	Regulator Maintenance Kit Parts # 614S090U01	112 each	$129.54	$14,508.48
2.4	Ejector Maintenance Kit Parts # 614S092U01	112 each	$98.56	$11,038.72
2.5	Inlet Valve Kit Double O Ring Parts # 27385-1	112 each	$283.02	$31,698.24
2.6	Reducing Bushing, ½" MNPT x ¼" FNPT Part # R-246	150 each	$9.86	$1,479.00

2.7	Tubing connector ¼" NPT x 3/8" Parts # F-100-1	150 each	$14.08	$2,112.00
2.8	Plate, Inlet Fitting Support Part# 22952	30 each	$83.08	$2,492.40
2.9	Retainer Ring Part # U-1830	30 each	$15.49	$464.70
3.0	Fitting, Gas inlet Part # 27100	30 each	$426.64	$12,799.20
3.1	Meter Tube Assemblies 25ppd Part # 600B060U04	30 each	$439.31	$13,179.30
3.2	Meter Tubes 25ppd	30 each	$439.31	$13,179.30
3.3	Capital Controls Gas Detector Series 1610B Single Point Gas Detectors Part # 1610B-01-01-01-XX	50 each	$2,559.81	$127,990.50
3.4	Battery Backup Model 1640 for 1610B Part # 1640-01-01-XX	50 each	$2,365.50	$118,275.00
3.5	Gas Sensor Test Kit. Part # BM-4709	75 each	$184.46	$13,834.50
3.6	Sensor for 1610B Single Point Gas Detectors Part #1387 (for Chlorine)	75 each	$598.42	$44,881.50

BIDDING ON:

MFG: Denora
Brand: Denora
Place: of Origin: USA
Date of Delivery: 90 DAYS
(After Receipt of Purchase Order)

Summary:

The Date of Delivery has been amended to 90 days stated on Response to Inquiries No. 1

Delivery:

The vendor will be responsible for all cost and all risks associated with the provision of these goods until delivery is made and the items are formally accepted by GWA. All goods shall be delivered to Guam Waterworks Authority at GWA's warehouse at Tamuning, Guam. Delivery time is **90 Days** from the date on the Notice to Proceed.

Warranty:

The successful bidder shall warrant that all goods and services to be provided hereunder are fit for the intended purpose stated in this Bid, are manufactured in the United States and meet the standards set forth in this Bid. The bidder shall also warrant all goods and services provided under this Bid to be free from manufacturer's defects for a period of not less than 3 years after receipt of goods unless the manufacturer provides for a longer standard warranty, in which case, the longer term shall apply. The warranty shall require the vendor to bear all costs to provide replacement goods within a reasonable period.

Contract Term:

GWA and the lowest responsible bidder may enter into a contract (which may be in the form of a Purchase Order) on terms acceptable to GWA which shall commence upon vendor's acknowledged receipt of a Notice to Proceed from GWA. The initial term of the contract is two (2) years, with option to renew for an additional 1-year term.

Concurred and accepted by the committee members:

7/9/2018
Ron Top, Operations and Maintenance Manager

7/9/2018
Karen Cheryl O. Grape, Management Analyst III

July 9, 2018
Mary D. Torres, Buyer II

Antonio C. Camacho, Buyer II

Your approval is greatly appreciated.

In consideration of the foregoing, please indicate your approval of this recommendation by your signature below.

[✓] CONCURRED [ ] UNCONCURRED

VINCENT ED. GUERRERO, SMA

[✓] APPROVED [ ] DISAPPROVED

7.11.18

MIGUEL C. BORDALLO, P.E. GENERAL MANAGER

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. 43- FY2018
Relative to Approval of GWA's 2018 Water Resource Master Plan (WRMP) Update

What is the project's objective and is it necessary and urgent?
The Water Resource Master Plan update is a 20-year long-term planning document. The objectives and goals of the WRMP Update are to Improve water quality and system reliability, reduce number of water outages, replace asbestos cement and galvanized steel water lines, rehabilitate/replace sewer lines and sewer pump stations, upgrade WW treatment plants to achieve Federal Permit compliance, and reduce wastewater overflows. In addition, the WRMP will guide GWA towards improving operational sustainability to maintain all assets by expanding programmatic efforts in the areas of asset management, water loss control, fire hydrant repair/replacement and hydraulic modeling.

Where is the location?
WRMP Update impacts the water and wastewater systems island-wide

How much will it cost?
The 2018 WRMP Update characterizes and quantifies the cost of the water and wastewater needs from 2018 through 2037 as; 1) court order related at an estimated One Hundred Nine Million Dollars ($109,000,000); 2) improvements for system reliability/quality at an estimated Ninety-Six Million Dollars ($96,000,000.00), upgrades associated with rehabilitating the systems or increasing capacity at an estimated Eight Hundred Thirty-Two Million Dollars ($832,000,000), and overall systems expansion at an estimated Two Hundred Eighteen Million Dollars ($218,000,000).

When will it be completed?
The WRMP covers a 20-year period.

What is the funding source?
Funding for the proposed WRMP Update projects will come primarily from bonds that will be paid through rate payer revenues as well as with funds from USEPA State Revolving Fund (SRF), Internally Funded CIP (IFCIP), Federal Grants and possibly Federal Loans.

If the WRMP Update is adopted, specific funding needs and proposed sources will be developed and presented to the CCU at a later time in 5-year Capital Improvement Plans.

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

RESOLUTION NO. 43–FY2018

RELATIVE TO APPROVAL OF GWA's 2018 WATER RESOURCE MASTER PLAN (WRMP) UPDATE

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 is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, in 2006 the Guam Waterworks Authority completed a Water Resource Master Plan that attempted to document and assess GWA's water and wastewater system at the time and made certain assumptions of the systems capacity and operability to meet the Safe Drinking Water and Clean Water Acts from which recommendations for capital improvements were made and projected out over a 20-year period; and

WHEREAS, GWA's 2006 Water Resource Mater Plan was past due for updating thus GWA initiated steps in October 2015 to engage its Program Management Office through "Work Authorization 2015-07" to update the 2006 WRMP which was funded from USEPA State Revolving Fund; and

WHEREAS, the purpose of updating the WRMP was to give GWA an opportunity to review and document progress since 2006 plan, recognize that GWA infrastructure has since aged 10 years, account for impacts resulting from the US-Japan Security Consultative Committee's "2012 Roadmap Adjustment" that outlined the relocation of 5,000 Marines to Guam by 2023, evaluate the impacts of an increasing population, address new regulations that

require higher treatment levels for GWAs wastewater treatment plants as well as advance GWA's goals to continuously improve GWA's level of service from the 2006 levels; and

WHEREAS, the objectives and goals the WRMP Update intends to establish for GWA are to improve water quality and system capacity and reliability, reduce number of water outages, replace asbestos cement and galvanized steel water lines, rehabilitate/replace sewer lines and sewer lift stations, upgrade WW treatment plants to achieve Federal Permit compliance, and reduce wastewater overflows; and

WHEREAS, the 2018 WRMP Update also reviewed and assessed GWA's operational sustainability to maintain all assets, and recommended measures to accomplish this sustainability through expanding programmatic efforts in the areas of asset management, water loss control, fire hydrant repair/replacement and hydraulic modeling, just to name a few; and

WHEREAS, the WRMP Update summarizes that there are one hundred twenty four (124) new CIP projects recommended with an estimated total cost of Nine Hundred Eighty-Two Million Two Hundred Forty-Two Thousand Dollars ($982,242,000.00) along with twenty nine (29) existing CIP projects that are estimated to cost Two Hundred Seventy-Eight Million One Hundred Nineteen Thousand Dollars ($278,119,000.00) for a total capital cost for the next 20 year period of One Billion Two Hundred Sixty Million Three Hundred Sixty-One Thousand Dollars ($1,260,361,000.00) in 2018 dollars (See Exhibit A) ; and

WHEREAS, the 2018 WRMP Update further characterizes and quantifies the cost of the water and wastewater needs as; 1) court order related at an estimated One Hundred Nine Million Dollars ($109,000,000), 2) improvements for system reliability/quality at an estimated Ninety-Six Million Dollars ($96,000,000), upgrades associated with rehabilitating the systems or increasing capacity at an estimated Eight Hundred Thirty-Two Million Dollars ($832,000,000), and overall systems expansion at an estimated Two Hundred Eighteen Million Dollars ($218,000,000) in 2018 dollars (see Exhibit B); and

WHEREAS, the costs associated with the 2018 WRMP Update was further analyzed with experts in municipal financial planning from which the WRMP Update recommended

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annual rate increases averaging 4-4.5% for the first seven years of the plan, then reducing to 3% throughout the remainder of the plan; and

WHEREAS, in an effort to bring awareness of the 2018 WRMP Update to the rate payers on Guam, GWA management along with support from GWA staff and Program Management Office personnel held village meetings in Dededo, Tamuning and Agat, made presentations in industry forums such as the Guam Contractor Association (GCA), Guam Society of Professional Engineer (GSPE) and Guam Hotel and Restaurant Association (GHRA), made presentation to legislative, Mayors Council members, and administrative government officials as well as provided the complete draft document on the GWA website, GWA offices, and village Mayor's offices for review and comment; and

WHEREAS, GWA management has compiled all questions or comments made during each of the awareness presentations and have determined there are no questions or comments that impacted the contents of the WRMP Update therefore the WRMP Update as prepared is being submitted for CCU approval; and

WHEREAS, GWA management will prepare an updated 5-Year Capital Improvements Plan (CIP), once the 2018 WRMP Update is approved, that details each of the capital projects and the funding sources which GWA management anticipates will come primarily from bonds that will be paid through rate payer revenues as well as with USEPA State Revolving Funds (SRF), Internally Funded CIP Funds (IFCIP), Federal Grants and possibly Federal Loans; 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 hereby approves the 2018 Water Resources Master Plan Update that will be identified with "Final August 2018".
3. The CCU hereby further authorizes GWA management to implement the projects and programs called for in the plan in a manner consistent with the plan.

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

DULY AND REGULARLY ADOPTED, this 28th day of August 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 1)

Capital Improvement Projects Summary

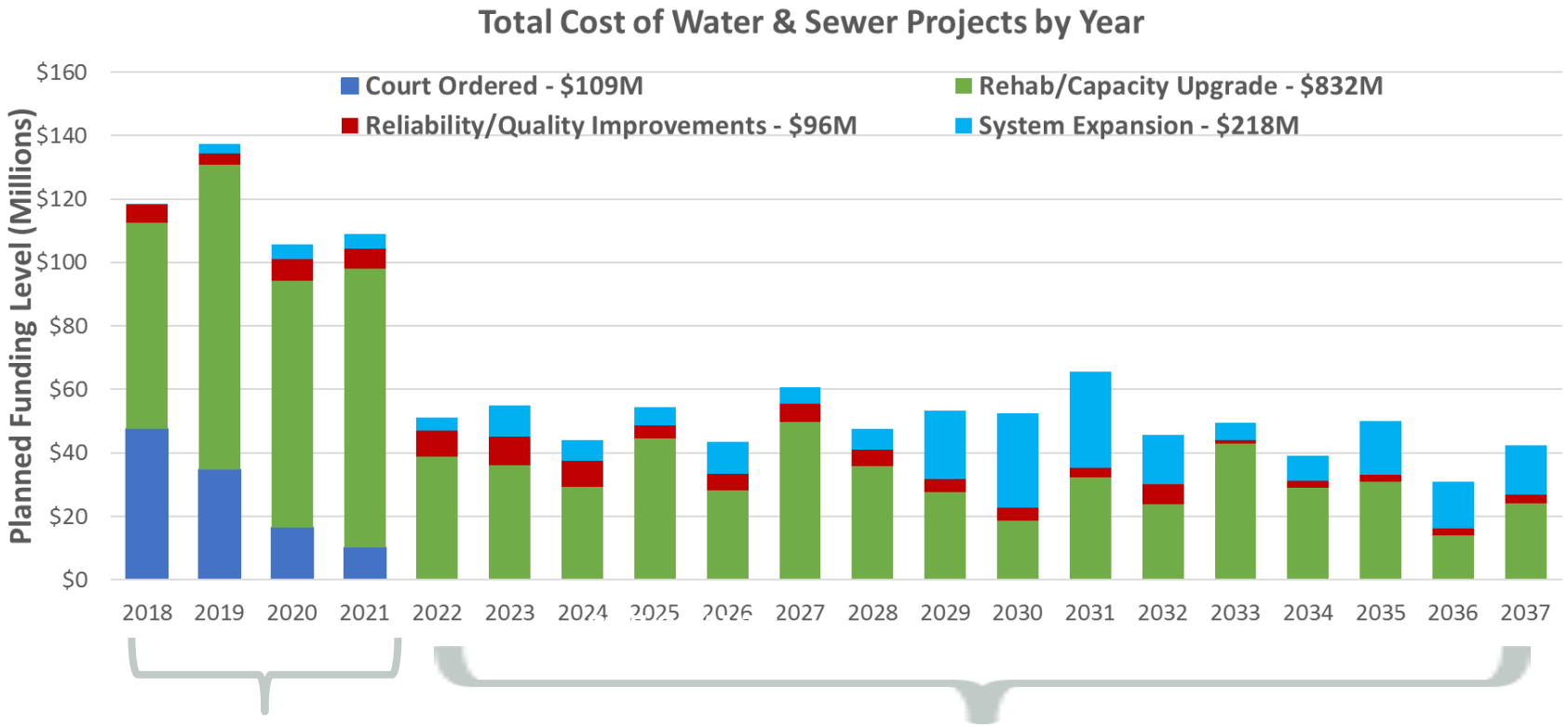
Project Category	Number of New Projects	Estimated Cost WRMPU Proposed CIP	Number of Ongoing Projects	Estimated Cost Current/Ongoing CIP
Water System Improvements				
Pipeline Projects	17	$204,402,000	2	$2,500,000
Storage Tank and BPS Projects	30	$120,082,000	5	$30,808,000
Water Production Projects	10	$123,216,000	3	$8,667,000
Other Water System Projects/Studies	5	$14,449,000	4	$5,500,000
Total Water System Improvements	62	$462,149,000	14	$47,475,000
Wastewater System Improvements				
Gravity Sewer Projects	27	$250,247,000	7	$69,230,000
Force main Projects	4	$22,498,000		
Lift Station Projects	3	$68,156,000	2	$4,293,000
Wastewater Treatment Facilities	9	$71,238,000	3	$151,946,000
Other Wastewater System Projects/Studies	5	$10,978,000		
Total Wastewater System Improvements	48	$423,117,000	12	$225,469,000
General Systems Improvements				
General Facilities / Equipment Improvements	10	$59,800,000	1	
SCADA / Electrical	4	$37,176,000	2	$5,175,000
Total General System Improvements	14	96,976,000	3	$5,175,000
Total (rounded)	124	$982,242,000	29	$278,119,000

Total Capital Improvement Program 2018 – 2037 = $ 1.26 billion

GUAM WATERWORKS AUTHORITY

Exhibit B (1 of 1)

Funding needed for improvements



Average Annual Funding
$118M/year for first 4 years
w/ ~ $40M/year DOD funding

Average Annual Funding
$49M/year

GUAM WATERWORKS AUTHORITY

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 Discussion

Resolution 44-FY2018

Relative to Contract Approval for the Asan-Adelup-Hagatna, Route 1 Sewerline Rehabilitation and Replacement Project

What is the project's objective and is it necessary and urgent?
The objective of this project is to improve the sewer collection system, which included rehabilitating, repairing and/or replacing sewer manholes and over 5,000 linear feet of gravity sewer line along Route 1 in the village of Asan and Hagatna. These sewer infrastructure elements have been identified by GWA, through an SSES investigation, as requiring significant improvement to prevent adverse impact to the subsurface environment and to operation of the collection system. Successful completion of this project will result in restoring this part of the collection system to proper operation, and improve maintenance of the sewer collection system. USEPA agree that efforts to rehabilitate, repair or replace the sewer line are urgent and necessary.

Where is the project located?
This project is located along Route 1, from the Asan "War in the Pacific" National Historic Park to the Fonte River in Hagatna. Construction activities will be limited to the sewer infrastructure elements within the established government easements.

How much will it cost?
The construction services contract was proposed by Infratech at a total of Six Million Two Hundred Seventy-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents **(**$6,275,782.88). This contract amount, which is primarily based on unit pricing, includes the furnishing of all labor, tools, equipment and materials, and agency coordination needed to complete the sewer infrastructure replacement in the aforementioned locations.

GWA management is also seeking a 10% contingency in the amount of Six Hundred Twenty-Seven Thousand Five Hundred Seventy-Eight Dollars and Twenty-Nine Cents **(**$627,578.29), which brings the total authorized funding amount to Six Million Nine Hundred Three Thousand Three Hundred Sixty-One Dollars and Seventeen Cents ($6,903,361.17) for the project.

When will it be completed?
The construction contract duration for this project is 450 calendar days. Estimated completion of construction is beginning of 2020.

What is the funding source?
The funding for this project will be from USEPA SRF Grant Funds and, if necessary, GWA Bond Funds with a maximum project budget of Six Million Nine Hundred Three Thousand Three Hundred Sixty-One Dollars and Seventeen Cents ($6,903,361.17).

The RFP/BID responses (if applicable):
Seven (7) bid packages were picked up, only two (2) bids were received.

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

RESOLUTION NO. 44–FY2018

RELATIVE TO CONTRACT APPROVAL FOR THE ASAN-ADELUP-HAGATNA, ROUTE 1 SEWER LINE 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 is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA has received a grant from USEPA under the State Revolving Fund 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 stretch of gravity sewer line indicated is deteriorating, which included over 3,600 linear feet of gravity sewer line along Route 1 in Asan, and over 1,400 liner feet in Adelup, and the intent of this project is to rehabilitate, repair or replace these sections; and

WHEREAS, GWA and USEPA agreed that efforts to rehabilitate, repair or replace these sewer lines are necessary to properly operate and improve the maintenance of the sewer collection system, and the first order of business in doing so was through a scope of design services that includes general civil engineering, geotechnical engineering, and archeological investigation for wastewater collection system evaluation, analysis and design; and

WHEREAS, in June 2015 GWA Management began the procurement process to find a consulting engineering team to design the sewer rehabilitation and replacement, and via Resolution No. 02-FY2016, approved by the CCU in October 2015, GWA Management was authorized to enter into a contract with HDR Engineering, Inc. (HDR) to design the sewer rehabilitation and replacement; and

WHEREAS, in December of 2015 GWA Management entered into a contract with HDR to design the sewer rehabilitation and replacement, and in April of 2017 the final design was completed; and

WHEREAS, on May 12, 2017, GWA advertised the Invitation to Bid (IFB-06-ENG-2017) for the Asan-Adelup-Hagatna, Route 1 Sewer Line Rehabilitation and Replacement soliciting bid proposals from experienced and responsive bidders to repair and/or replace segments of gravity sewer lines and manholes in the villages of Asan and Hagatna, but ultimately received no responsive and responsible bids; and

WHEREAS, on October 31, 2017, GWA advertised the Invitation to Re-Bid (IFB-11-ENG-2017) for the Asan-Adelup-Hagatna, Route 1 Sewer Line Rehabilitation and Replacement soliciting bid proposals from experienced and responsive bidders to repair and/or replace segments of gravity sewer lines and manholes in the villages of Asan and Hagatna, but again received no bids; and

WHEREAS, following the Invitation to Re-Bid, GWA discussed with contractors the challenges that may have prevented them from bidding, reviewed all the available information, and developed two separate bids for the contractors to bid on, Schedule A which involved Cured In Place Pipe (CIPP) and Schedule B which involved open cut trenching; and

WHEREAS, on May 4, 2018, GWA advertised the Invitation to Re-bid (IFB-05-ENG-2018) for the Asan-Adelup-Hagatna, Route 1 Sewer Line Rehabilitation and Replacement soliciting bid proposals from experienced and responsive bidders to repair and/or replace segments of gravity sewer lines and manholes in the villages of Asan and Hagatna; and

WHEREAS, this project consists of furnishing all labor, tools, equipment and materials, necessary to install, replace, and repair sewer along Rt.1, in Asan and Hagatna, including coordination with GWA Wastewater Operations, GWA Engineering, the Construction Manager, the project Design Engineer, and GWA's Program Management Office; and

WHEREAS, IFB packages were obtained by multiple interested parties, from which GWA received bid proposals from two (2) parties (SEE EXHIBIT A – Abstract of Bids) before the bid proposal deadline, with both parties submitting a proposal for Schedule A, and no bids received for Schedule B; and

WHEREAS, the project Design Engineer, in conjunction with GWA, analyzed the bid proposal received on July 13, 2018 and determined that Infratech International, LLC (Infratech) for Schedule A submitted the lowest responsive and responsible bids and met all the bid requirements set forth by GWA (SEE EXHIBIT B – Evaluation); and

WHEREAS, GWA Management finds Infratech's bid proposal for Schedule A in the amount of Five Million Nine Hundred Twenty Thousand Dollars and Zero Cents ($5,920,000.00), as well as Additive Bid No. 2 in the amount of Three Hundred Fifty-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents ($355,782.88), acceptable (SEE EXHIBIT C – Bid Proposal); and

WHEREAS, GWA Management seeks CCU approval of the total fee proposal for Schedule A and Additive Bid No. 2 in the amount of Six Million Two Hundred Seventy-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents **(**$6,275,782.88); and

WHEREAS, GWA Management further seeks CCU approval of the total fee proposal for Schedule A and Additive Bid No. 2 in the amount of Six Million Two Hundred Seventy-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents ($6,275,782.88) plus a ten percent (10%) contingency of Six Hundred Twenty-Seven Thousand Five Hundred Seventy-Eight Dollars and Twenty-Nine Cents **(**$627,578.29), to bring the total authorized funding amount to Six Million Nine Hundred Three Thousand Three Hundred Sixty-One Dollars and Seventeen Cents ($6,903,361.17); 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 and 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).
3. The CCU hereby authorizes the management of GWA to accept the bid proposal from "Infratech International, LLC." For Schedule A and Additive Bid No. 2.
4. The CCU hereby further authorizes the management of GWA to enter into a contract with "Infratech International, LLC" in the amount of Six Million Two Hundred Seventy-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents **(**$6,275,782.88).
5. The CCU hereby further approves the funding total of Six Million Two Hundred Seventy-Five Thousand Seven Hundred Eighty-Two Dollars and Eighty-Eight Cents **(**$6,275,782.88), plus a ten percent (10%) contingency of Six Hundred Twenty-Seven Thousand Five Hundred Seventy-Eight Dollars and Twenty-Nine Cents **(**$627,578.29), for a total authorized funding amount of Six Million Nine Hundred Three Thousand Three Hundred Sixty-One Dollars and Seventeen Cents ($6,903,361.17).
6. The CCU hereby further approves the funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds applicable to the project.

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

DULY AND REGULARLY ADOPTED, this 28th day of August, 2018.

Certified by: Attested by:

_____ _____

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

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 (1 of 1)

ORIGINAL

GUAM WATERWORKS AUTHORITY
ABSTRACT OF BIDS

Project Name: **ASAN-ADELUP-HAGATNA, ROUTE 1 SEWERLINE REHABILITATION AND REPLACEMENT (RE-BID2)**

Bid Opening Date: July 13, 2018
Time: 3:00 pm

Project Number: S15-002-EPA IFB NO.: IFB-05-ENG-2018

	Qualified Bidders Name	Section A-5 Bid Bond	CERTIFICATIONS													SCHEDULE A			SCHEDULE B		
			Bidder Qualification Statement	Non-Collusion Affidavit	Equal Employment Opportunity	Non-Segregated Facilities	Non-Employment of Sexual Offender	Wage & Benefit Determination	Major Shareholders Affidavit	Special Instruction to Bidders	Addendum 1	Addendum 2	Addendum 3	Addendum 4	Addendum 5	BASE BID	ADDITIVE BID NO. 1	ADDITIVE BID NO. 2	BASE BID	ADDITIVE BID NO. 1	ADDITIVE BID NO. 2
1.	IAN CORPORATION																				
2.	CORE TECH INTERNATIONAL CORP.	FIDELITY AND DEPOSIT COMPANY OF MARYLAND, 15%	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$8,754,800.00	$2,632,500.00	$272,500.00	No Bid	No Bid	No Bid
3.	GIANT CONSTRUCTION CORP.																				
4.	MCCONNELL DOWELL CONSTRUCTORS, LTD																				
5.	PROPACIFIC BUILDER CORP.																				
6.	PACIFIC DEVELOPMENT/INSITUFORM																				
7.	INFRATECH INTL., INC.	PACIFIC INDEMNITY INSURANCE COMPANY, 15%	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$5,920,000.00	$2,898,797.80	$355,782.98	No Bid	No Bid	No Bid
	GWA Estimate															$6,542,177.40	$1,171,708.05	$284,129.80			

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

Tabulated by:
GEORGE WATSON
(Name and Signature)

GWA Procurement Representative:
Victoria Hecocke
(Name and Signature)

Witnesses:
K. Naresh Kumar

Exhibit B (1 of 15)

July 24, 2018

Mr. Thomas F. Cruz, PE
Chief Engineer
The Guam Waterworks Authority
Engineering Division
Gloria B. Nelson Public Service Building
688 Rt. 15
Mangilao, Guam 96913

SUBJECT: Asan-Adelup-Hagatna, Route 1 Sewer Line Rehabilitation and Replacement, Recommendation of Bid Award, GWA Project No. S15-002-EPA

Dear Mr. Cruz,

HDR has reviewed the two (2) bid submissions submitted for the second re-bid attempt for the Asan-Adelup-Hagatna Sewer Line Rehabilitation and Replacement project from the following construction contractors:

1. Infratech International, LLC
2. Core-Tech/Hawaiian Dredging

All bid submissions included all of the required bidding forms to be submitted as part of the bid package. All bonding requirements have been met by both contractors. There were two bid schedules, Bid Schedule “A” and Bid Schedule “B”, that were advertised as part of this bid solicitation. There were no bids provided for Schedule “B”, therefore any further reference in this letter to the bid schedule is to the Schedule “A” that was submitted by both contractors.

The bid schedules for both contractors were tabulated, reviewed and are included herein with this letter for your review. The following observations were made while tabulating each Contractor’s bid:

Infratech, International, LLC:

1. Overall, the pricing for the base bid line items were close to the engineer’s estimate, however the following items were noted for GWA to be aware of, due to their significant variance from the engineer’s estimate: Bid Item No. 2 (Unclassified Trench Excavation, 0-10’), Bid Item No. 3 (Unclassified Trench Excavation, 10-20’) and Bid Item No. 17 (A.C. Pavement Resurfacing). The engineer’s estimate for these prices were based upon review of the previous bids received by other contractor’s during the bidding of the Asan Sewer Break Repair, therefore these unit costs provided are much lower.

hdrinc.com

134 W. Soledad Ave., Suite 404, Hagatna, GU 96910
T 671.989.5558 **F** 671.989.5557

Exhibit B (2 of 15)

2. On the base bid, line item 28, the unit price provided on the bid schedule is typed as $970/LF, however after reviewing the total price and the quantity provided, it was determined that the unit cost should have been $9.70/LF.
3. The summary totals found on page 21 of the bid schedule, the total listed for the base bid is shown to be $5,224,389.99, which is incorrect and should read $5,920,000.00 as shown on page 13 of the bid schedule. This matches what was tabulated using the unit prices given in the bid schedule.
4. For Additive Bid #1, the following bid items have a significant variance from the engineer's estimate: Bid Item No. 2 (10-20'), Bid Item No. 7 (A.C. Pavement Resurfacing), Bid Item No. 8 (Milling Asphalt) and Bid Item No. 9 (Asphalt Friction Course). The engineer's estimate for these prices were based upon review of the previous bids received by other contractor's during the bidding of the Asan Sewer Break Repair, therefore these unit costs provided are much lower. For Bid Item No. 8 & 9, it was noticed that the unit price for these varies drastically lower than from the same bid line items provided under the base bid.

Coretech/Hawaiian Dredging, LLC:

1. The bid proposal had most of the unit prices to the nearest $0.0001 of accuracy. Even with this level of accuracy on the bid items unit prices and multiplying them against the unit quantities, there were some total bid item prices that did not match the totals provided on the bid schedule. These amounts were off by one to a few cents and caused the bid tabulation sum total for Coretech/Hawaiian Dredging to not match their submitted bid schedule totals.
2. For the base bid, the following items were noted due to their significant variance from the engineer's estimate: Bid Item No. 2 (Unclassified Trench Excavation, 0-10'). As stated earlier the engineer's estimate for these prices were based upon review of the previous bids received by other contractor's during the bidding of the Asan Sewer Break Repair, therefore these unit costs provided are much lower.
3. For additive bid #1, the following items were noted due to their significant variance from the engineer's estimate: Bid Item No. 2 (Unclassified Trench Excavation, 10-20'). As stated earlier the engineer's estimate for these prices were based upon review of the previous bids received by other contractor's during the bidding of the Asan Sewer Break Repair, therefore these unit costs provided are much lower.

Additional project reference verification was made on Infratech International, LLC and specifically with their proposed subconsultant, Allied Trenchless. Contact was attempted with all of the listed past project clients that Cured in Place Piping (CIPP) was conducted, but only one project reference was able to be verified. That project was with the Federal Highway Administration (FHWA) and was the WA PRA OLYM 12(2) Hurricane Ridge Rd, Phase II project. This project is still currently under construction and consists of CIPP on 18-24 in Corrugated Metal Pipe and 36-48 inch concrete pipe using UV cured in place method. I spoke with Mr. Mike Nemy with FHWA and he without hesitation gave a high recommendation for Allied Trenchless. No other client contacts returned my calls to verify the others projects and their satisfaction with the work.

Exhibit B (3 of 15)

A request was made of Infratech International, LLC and Allied Trenchless for them to provide resumes for both the CIPP Work Supervisor, CIPP work crew member and the lateral reinstatement personnel to verify they meet the minimum requirements as listed in the Contractor qualifications found in Specification Section 33 01 30.72 or Section 33 01 30.73. These resumes were provided and are included herein for your reference. Allied Trenchless meets the minimum project linear footage requirements of the CIPP Work Supervisor and the CIPP Work crew member. The CIPP Work crew member is the lateral reinstatement person, however from the resume it was not able to be determined if they meet the minimum requirements, but it is expected from the listing of the projects that they do.

Listed below is a summary table of the various bid options and their respective totals for both bidders:

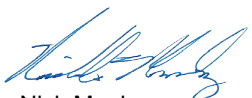
	Infratech International, LLC	Coretech/Hawaiian Dredging, LLC
Base Bid (Basis of Award)	**$5,920,000.00**	**$8,754,800.00**
Base Bid + Additive Bid #1	$8,818,797.81	$11,387,300.00
Base Bid + Additive Bid #2	$6,275,782.88	$9,027,300.00
Base Bid + Additive Bid #1 + Additive Bid #2	$9,174,580.69	$11,659,800.00

The basis of award for this project was the base bid, which resulted in the lowest bidder to be Infratech International, LLC. After reviewing the two bid options, Additive Bid #1 by Infratech International is $1.8 million higher from the engineer's estimate and therefore is not recommended to be included in this award. Additive Bid #2, although higher than the engineer's estimate, is recommended to be considered at this time, if it is within the overall budget that GWA has for this project. This additive bid would allow for GWA to have a good look at the condition of the siphon that is under the Fonte River and then be able to decide what needs to be done, if anything, in any future project(s) that will continue the repair or replacement of the rest of the overall Route 1 project limits that were excluded from this contract package, but are within the overall design project.

If you should have further questions, please feel free to call me.

Sincerely,

HDR Engineering, Inc.



Nick Manley
Project Manager

Exhibit B (4 of 15)

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

HDR Project No. 10013963
7/24/2018

Bid Tabulation

SCHEDULE A - Base Bid Description of Work:

Line A Work (SMH 1399Asan to Asan Pump Station)

Work consists of replacement of 18-inch and 20-inch diameter asbestos cement pipe (ACP) gravity sewer lines with new 18-inch and 20-inch diameter polyvinyl chloride (PVC) sewer lines, respectively, reconnecting sewer laterals after new pipe installation is complete, removing and disposing of 18-inch and 20-inch diameter ACP, abandoning 12-inch PVC sewer lines, cleaning existing 14-inch, 16-inch, 18-inch, and 20-inch diameter gravity sewer lines and rehabilitating those lines with cured-in-place pipe (CIPP) liner, reinstating sewer laterals after CIPP rehabilitation is complete, rehabilitating manholes, and providing temporary bypassing and traffic control as necessary to complete the replacement and rehabilitation work.

			Engineer's Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
Item No.	Description	Unit	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	Lump Sum	$ 594,743.40	1	$ 594,743.40	$ 911,001.55	1	$ 911,001.55	$ 346,337.14	1	$ 346,337.14	$ 1,475,665.9669	1	$ 1,475,665.97
2	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (0'-10' Depth)	Lin. Ft.	$ 2,500.00	458	$ 1,145,000.00	$ 478.41	458	$ 219,112.97	348.69	458	159,700.02	608.1352	458	278,525.92
3	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (10'-20' Depth)	Lin. Ft.	$ 3,000.00	223	$ 669,000.00	$ 1,471.67	223	$ 328,182.27	810.64	223	180,772.72	2,132.6987	223	475,591.81
4	Dewatering and dewatering effluent disposal	Lump Sum	$ 135,000.00	1	$ 135,000.00	$ 128,110.11	1	$ 128,110.11	$ 154,423.87	1	$ 154,423.87	$ 101,796.3459	1	$ 101,796.35
5	Removal and disposal of existing 12-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 127.00	458	$ 58,166.00	$ 311.93	458	$ 142,865.27	379.80	458	173,948.40	244.0658	458	111,782.14
6	Removal and disposal of existing 12-inch diameter polyvinyl chloride pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 20.00	152	$ 3,040.00	$ 37.01	152	$ 5,625.88	68.65	152	10,434.80	5.3748	152	816.97
7	Removal and disposal of existing 18-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 253.00	157	$ 39,721.00	$ 396.23	157	$ 62,207.98	461.43	157	72,444.51	331.0284	157	51,971.46
8	Removal and disposal of existing 20-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 329.00	66	$ 21,714.00	$ 451.34	66	$ 29,788.48	483.18	66	31,889.88	419.5012	66	27,687.08
9	Abandonment of 12-inch diameter PVC pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 8.00	321	$ 2,568.00	$ 55.04	321	$ 17,668.35	77.63	321	24,919.23	32.4532	321	10,417.48
10	Abandonment of sewer manhole and all incidentals required to complete the work.	Ea.	$ 1,300.00	2	$ 2,600.00	$ 2,293.10	2	$ 4,586.20	3,768.31	2	7,536.62	817.8855	2	1,635.77
11	Crushed rock bedding including compaction and woven geotextile fabric for 16-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 63.00	458	$ 28,854.00	$ 52.17	458	$ 23,895.37	44.10	458	20,197.80	60.2466	458	27,592.94
12	Crushed rock bedding including compaction and woven geotextile fabric for 18-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 76.00	157	$ 11,932.00	$ 53.82	157	$ 8,449.58	45.24	157	7,102.68	62.3979	157	9,796.47
13	Crushed rock bedding including compaction and woven geotextile fabric for 20-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 83.00	66	$ 5,478.00	$ 71.28	66	$ 4,704.40	49.38	66	3,259.08	93.1776	66	6,149.72
14	Pipe Repair; install new 16" PVC pipe (AWWA C-905, DR 25) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (0'-10' Depth)	Lin. Ft.	$ 86.00	458	$ 39,388.00	$ 230.48	458	$ 105,560.37	199.85	458	91,531.30	261.1123	458	119,589.43
15	Pipe Repair; install new 18" PVC pipe (AWWA C-905, DR 18) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (10'-20' Depth)	Lin. Ft.	$ 101.00	157	$ 15,857.00	$ 1,004.75	157	$ 157,746.15	366.99	157	57,617.43	1,642.5151	157	257,874.87
16	Pipe Repair; install new 20" PVC pipe (AWWA C-905, DR 18) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (10'-20' Depth)	Lin. Ft.	$ 127.00	66	$ 8,382.00	$ 369.61	66	$ 24,394.22	453.65	66	29,940.90	285.5688	66	18,847.54
17	A.C. Pavement Resurfacing, including pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 202.00	450	$ 90,900.00	$ 265.67	450	$ 119,552.18	90.09	450	40,540.50	441.2530	450	198,563.85
18	Milling Asphalt Friction Course, including all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 100.00	126	$ 12,600.00	$ 317.83	126	$ 40,046.11	141.99	126	17,890.74	493.6625	126	62,201.48

HDR

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

Exhibit B (5 of 15)

HDR Project: 10026963
7/24/2018

Item No.	Description	Unit	Engineer's Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
			Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
19	Asphalt Friction Course, including pavement transitions and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 140.00	261	$ 36,540.00	$ 229.49	261	$ 59,897.62	108.42	261	28,297.62	350.5656	261	91,497.62
20	Sewer Line Cleaning of existing 14-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 22.00	1,153	$ 25,366.00	$ 13.13	1,153	$ 15,140.91	18.95	1,153	21,849.35	7.3135	1,153	8,432.47
21	Sewer Line Cleaning of existing 16-inch Asbestos Cement Pipe (ACP) and 16-inch Polyvinyl Chloride (PVC) pipe sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 22.00	815	$ 17,930.00	$ 14.34	815	$ 11,685.55	19.90	815	16,218.50	8.7762	815	7,152.60
22	Sewer Line Cleaning of existing 18-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 33.00	915	$ 30,195.00	$ 15.63	915	$ 14,297.61	19.55	915	17,888.25	11.7016	915	10,706.96
23	Sewer Line Cleaning of existing 20-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 39.00	35	$ 1,365.00	$ 41.60	35	$ 1,455.91	32.00	35	1,120.00	51.1946	35	1,791.81
24	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 14" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	1,153	$ 13,836.00	$ 8.94	1,153	$ 10,302.52	12.02	1,153	13,859.06	5.8508	1,153	6,745.97
25	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	815	$ 9,780.00	$ 10.14	815	$ 8,265.53	12.97	815	10,570.55	7.3135	815	5,960.50
26	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 18" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	915	$ 10,980.00	$ 10.69	915	$ 9,784.19	12.61	915	11,538.15	8.7762	915	8,030.22
27	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 20" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	35	$ 420.00	$ 30.69	35	$ 1,074.11	24.81	35	868.35	36.5676	35	1,279.87
28	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 14" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	2,306	$ 27,672.00	$ 8.51	2,306	$ 19,616.57	9.70	2,306	22,368.20	7.3135	2,306	16,864.93
29	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	1,630	$ 19,560.00	$ 9.71	1,630	$ 15,832.35	10.65	1,630	17,359.50	8.7762	1,630	14,305.21
30	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 18" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	1,830	$ 21,960.00	$ 10.26	1,830	$ 18,783.94	10.29	1,830	18,830.70	10.2389	1,830	18,737.19
31	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 20" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	70	$ 840.00	$ 18.45	70	$ 1,291.17	14.95	70	1,046.50	21.9406	70	1,535.84
32	Installation of cured-in-place pipe (CIPP) lining in existing 14-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 320.00	1,153	$ 368,960.00	$ 301.25	1,153	$ 347,339.00	361.15	1,153	416,405.95	241.3461	1,153	278,272.05
33	Installation of cured-in-place pipe (CIPP) lining in existing 16-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 330.00	815	$ 268,950.00	$ 346.76	815	$ 282,608.26	408.29	815	332,756.35	285.2272	815	232,460.17
34	Installation of cured-in-place pipe (CIPP) lining in existing 18-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 367.00	915	$ 335,805.00	$ 373.17	915	$ 341,453.62	483.06	915	441,999.90	263.2867	915	240,907.33

Exhibit B (6 of 15)

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

HDR Project: 10026963
7/24/2018

Item No.	Description	Unit	Engineer's Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
			Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
35	Installation of cured-in-place pipe (CIPP) lining in existing 20-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 405.00	35	$ 14,175.00	$ 796.43	35	$ 27,875.17	788.38	35	27,593.30	804.4871	35	28,157.05
36	Reinstatement of existing sewer laterals upon completion of CIPP lining installation, and all incidentals, in place complete.	Ea.	$ 1,012.00	20	$ 20,240.00	$ 2,534.51	20	$ 50,690.22	$ 4,337.67	20	$ 86,753.40	$ 731.3519	20	$ 14,627.04
37	Rehabilitation of Sewer Manholes with epoxy coating, including cleaning of manhole, bench repair, surface preparation, cementitious underlayment, epoxy topcoat, testing, and other items as necessary to complete the work.	Vert. Ft.	$ 1,100.00	18	$ 19,800.00	$ 4,222.83	18	$ 76,010.90	766.46	18	13,796.28	7,679.1951	18	138,225.51
38	Rehabilitation of Sewer Manholes; patching surface defects and other items as necessary to complete the work.	Ea.	$ 5,500.00	4	$ 22,000.00	$ 4,044.41	4	$ 16,177.64	$ 4,578.33	4	$ 18,313.32	$ 3,510.4892	4	$ 14,041.96
39	Cast iron manhole frame and cover, 25-inch diameter, including grade adjustment rings where required, and other items as necessary to complete the work.	Ea.	$ 900.00	18	$ 16,200.00	$ 3,146.80	18	$ 56,642.32	$ 4,747.44	18	$ 85,453.92	$ 1,546.1511	18	$ 27,830.72
40	Cast iron manhole frame and cover, 30-inch diameter, including grade adjustment rings where required, and other items as necessary to complete the work.	Ea.	$ 1,020.00	1	$ 1,020.00	$ 4,009.92	1	$ 4,009.92	$ 5,895.33	1	$ 5,895.33	$ 2,124.5115	1	$ 2,124.51
41	Sewer manhole concrete collar, including reinforcing steel, borrow material where required, and other items as necessary to complete the work.	Ea.	$ 900.00	19	$ 17,100.00	$ 3,146.04	19	$ 59,774.67	$ 5,251.09	19	$ 99,770.71	$ 1,040.9807	19	$ 19,778.63
42	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Lump Sum	$ 380,000.00	1	$ 380,000.00	$ 1,023,176.95	1	$ 1,023,176.95	294,146.34	1	294,146.34	1,752,207.5657	1	1,752,207.57
43	Traffic Control Work, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 391,000.00	1	$ 391,000.00	$ 226,703.42	1	$ 226,703.42	145,982.52	1	145,982.52	307,424.3218	1	307,424.32
44	Point Repair for 14-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)	Ea.	$ 4,950.00	5	$ 24,750.00	$ 16,359.22	5	$ 81,796.09	23,602.76	5	118,013.80	9,115.6755	5	45,578.38
45	Extra Length Point Repair for 14-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,320.00	321	$ 423,720.00	$ 1,262.99	321	$ 405,420.98	$ 1,568.59	321	$ 503,517.39	$ 957.3974	321	$ 307,324.57
46	Point Repair for 16-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)	Ea.	$ 5,060.00	4	$ 20,240.00	$ 14,764.01	4	$ 59,056.03	13,747.56	4	54,990.24	15,780.4554	4	63,121.82
47	Extra Length Point Repair for 16-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,320.00	305	$ 402,600.00	$ 1,424.55	305	$ 434,488.73	$ 1,705.88	305	$ 520,293.40	$ 1,143.2264	305	$ 348,684.05
48	Point Repair for 18-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)	Ea.	$ 5,500.00	5	$ 27,500.00	$ 46,334.60	5	$ 231,673.00	33,399.22	5	166,996.10	59,269.9800	5	296,349.90
49	Extra Length Point Repair for 18-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,430.00	351	$ 501,930.00	$ 2,063.82	351	$ 724,400.40	$ 1,670.24	351	$ 586,254.24	$ 2,457.3976	351	$ 862,546.56

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

Exhibit B (7 of 15)

HDR Project: 10026963
7/24/2018

Item No.	Description	Unit	Engineer's Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
			Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
50	Sewer Flow Control for Point Repairs of 14-inch, 16-inch, and 18-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Ea.	$ 11,000.00	14	$ 154,000.00	$ 15,734.58	14	$ 220,284.10	14,582.88	14	204,160.32	16,886.2776	14	236,407.89
51	Traffic Control Work for Point Repairs, including traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Ea.	$ 2,200.00	14	$ 30,800.00	$ 10,492.36	14	$ 146,893.04	13,186.06	14	184,604.84	7,798.6604	14	109,181.25
	SCHEDULE A - BASE BID (TOTAL Items 1 through 51, inclusive)				**$ 6,542,177.40**			**$ 7,337,399.85**			**$ 5,920,000.00**			**$ 8,754,799.70**
	BASE BID (BASIS OF AWARD) =				**$ 6,542,177.40**			**$ 7,337,399.85**			**$ 5,920,000.00**			**$ 8,754,799.70**
	BASE BID + ADDITIVE BID #1 =				**$ 7,713,885.45**			**$ 8,370,267.78**			**$ 8,818,797.81**			**$ 11,387,299.75**
	BASE BID + ADDITIVE BID #1 + ADDITIVE BID #2 =				**$ 7,948,010.25**			**$ 8,684,409.22**			**$ 9,174,580.69**			**$ 11,659,799.75**

Exhibit B (8 of 15)

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

HDR Project: 10026963
7/24/2018

Bid Tabulation

SCHEDULE A - Additive Bid #1 Description of Work:

Line B Work (SMH 13ASAN to SMH 350AHAGA)

Work consists of cleaning existing 16-inch and 24-inch diameter gravity sewer lines, rehabilitating approximately 16-inch and 24-inch diameter sewer lines with cured-in-place pipe (CIPP) liner, reinstating sewer laterals after CIPP rehabilitation is complete, replacing sewer manhole concrete collars, and providing temporary bypassing and traffic control as necessary to complete the rehabilitation work.

Line C Work (SMH 398Asan to 355AAsan)

Work consists of abandoning an existing 12-inch ACP sewer line, installing a new 12-inch diameter polyvinyl chloride (PVC) sewer line, and providing temporary bypassing and traffic control as necessary to complete the work.

			Engineers Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
Item No.	Description	Unit	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
1	Mobilization (For costs associated with bonding, insurance and permits for Additive Bid #1)	Lump Sum	$ 98,387.05	1	$ 98,387.05	$ 109,640.79	1	$ 109,640.79	$ 96,843.00	1	$ 96,843.00	$ 122,438.5700	1	$ 122,438.57
2	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (10'-20' Depth)	Lin. Ft.	$ 3,000.00	80	$ 240,000.00	$ 634.83	80	$ 50,786.64	$ 499.16	80	$ 39,932.80	$ 770.5061	80	$ 61,640.49
3	Dewatering and dewatering effluent disposal for Additive Bid #1	Lump Sum	$ 43,000.00	1	$ 43,000.00	$ 33,337.77	1	$ 33,337.77	$ 53,509.26	1	$ 53,509.26	$ 13,166.2882	1	$ 13,166.29
4	Crushed rock bedding including compaction and woven geotextile fabric for 12-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 41.00	80	$ 3,280.00	$ 75.71	80	$ 6,056.83	$ 62.24	80	$ 4,979.20	$ 89.1807	80	$ 7,134.46
5	Abandonment of 12-inch diameter ACP pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 7.00	123	$ 861.00	$ 145.45	123	$ 17,890.69	$ 228.21	123	$ 28,069.83	$ 62.6956	123	$ 7,711.56
6	Pipe Repair; install new 12" PVC pipe (AWWA C-900, DR 25) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (10'-20' Depth)	Lin. Ft.	$ 75.00	80	$ 6,000.00	$ 176.07	80	$ 14,085.60	$ 260.46	80	$ 20,836.80	$ 91.6800	80	$ 7,334.40
7	A.C. Pavement Resurfacing, including pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 202.00	74	$ 14,948.00	$ 107.77	74	$ 7,975.13	$ 51.66	74	$ 3,822.84	$ 163.8840	74	$ 12,127.42
8	Milling Asphalt Friction Course, including all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 100.00	109	$ 10,900.00	$ 56.81	109	$ 6,192.59	$ 50.36	109	$ 5,489.24	$ 63.2655	109	$ 6,895.94
9	Asphalt Friction Course, including pavement transitions and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 140.00	183	$ 25,620.00	$ 48.17	183	$ 8,815.23	$ 24.24	183	$ 4,435.92	$ 72.1013	183	$ 13,194.54
10	Sewer Line Cleaning of existing 16-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 20.00	1,324	$ 26,480.00	$ 12.07	1,324	$ 15,979.55	$ 17.16	1,324	$ 22,719.84	$ 6.9783	1,324	$ 9,239.27
11	Sewer Line Cleaning of existing 18-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 30.00	248	$ 7,440.00	$ 15.68	248	$ 3,889.83	$ 21.60	248	$ 5,356.80	$ 9.7696	248	$ 2,422.86
12	Sewer Line Cleaning of existing 24-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 35.00	408	$ 14,280.00	$ 18.09	408	$ 7,382.33	$ 19.44	408	$ 7,931.52	$ 16.7479	408	$ 6,833.14
13	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.00	646	$ 6,460.00	$ 11.06	646	$ 7,145.60	$ 16.54	646	$ 10,684.84	$ 5.5826	646	$ 3,606.36
14	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 24" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.00	144	$ 1,440.00	$ 12.95	144	$ 1,865.18	$ 14.74	144	$ 2,122.56	$ 11.1653	144	$ 1,607.80
15	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.00	1,292	$ 12,920.00	$ 8.45	1,292	$ 10,922.76	$ 9.93	1,292	$ 12,829.56	$ 6.9783	1,292	$ 9,015.96
16	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 24" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.00	288	$ 2,880.00	$ 12.93	288	$ 3,724.40	$ 17.49	288	$ 5,037.12	$ 8.3739	288	$ 2,411.68

HDR

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

Exhibit B (9 of 15)

HDR Project: 10026963
7/24/2018

Item No.	Description	Unit	Engineers Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
			Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
17	Installation of cured-in-place pipe (CIPP) lining in existing 16-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 300.00	646	$ 193,800.00	$ 278.62	646	$ 179,989.49	$ 285.09	646	$ 184,168.14	$ 272.1530	646	$ 175,810.84
18	Installation of cured-in-place pipe (CIPP) lining in existing 24-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 368.00	144	$ 52,992.00	$ 416.32	144	$ 59,949.76	$ 448.83	144	$ 64,631.52	$ 383.8055	144	$ 55,267.99
19	Reinstatement of existing sewer laterals upon completion of CIPP lining installation, and all incidentals, in place complete.	Ea.	$ 920.00	3	$ 2,760.00	$ 1,438.44	3	$ 4,315.31	$ 2,193.00	3	$ 6,579.00	$ 683.8717	3	$ 2,051.62
20	Sewer manhole concrete collar, including reinforcing steel, borrow material where required, and other items as necessary to complete the work.	Ea.	$ 820.00	3	$ 2,460.00	$ 2,868.49	3	$ 8,605.46	$ 4,743.71	3	$ 14,231.13	$ 993.2643	3	$ 2,979.79
21	Install new Plain Precast Concrete Manhole, including plugging or bypass pumping, excavation and backfill, crushed rock base, reinforced concrete base, precast concrete riser(s) and cone, flexible pipe seals and connectors, grade adjustment ring(s), Type "SA" frame and cover, channelized invert, testing, incidentals, and all necessary labor, materials, and equipment, in place complete.	Ea.	$ 19,000.00	1	$ 19,000.00	$ 43,194.57	1	$ 43,194.57	$ 19,189.50	1	$ 19,189.50	$ 67,199.6499	1	$ 67,199.65
22	Sewer Flow Control for new pipe installation and rehabilitation, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Lump Sum	$ 159,400.00	1	$ 159,400.00	$ 358,824.08	1	$ 358,824.08	$ 154,328.91	1	$ 154,328.91	$ 563,319.2431	1	$ 563,319.24
23	Traffic Control Work for new pipe installation and rehabilitation, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 226,400.00	1	$ 226,400.00	$ 72,298.33	1	$ 72,298.33	$ 115,556.62	1	$ 115,556.62	$ 29,040.0383	1	$ 29,040.04
24	Point Repair for 16-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)	Ea.	$ 5,100.00	4	$ 20,400.00	$ 24,992.34	4	$ 99,969.36	$ 37,609.90	4	$ 150,439.60	$ 12,374.7809	4	$ 49,499.12
25	Extra Length Point Repair for 16-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,320.00	311	$ 410,520.00	$ 1,828.99	311	$ 568,816.42	$ 2,322.87	311	$ 722,412.57	$ 1,335.1134	311	$ 415,220.27
26	Point Repair for 24-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)	Ea.	$ 6,500.00	3	$ 19,500.00	$ 44,914.76	3	$ 134,744.29	$ 35,207.54	3	$ 105,622.62	$ 54,621.9885	3	$ 163,865.97
27	Extra Length Point Repair for 24-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,430.00	260	$ 371,800.00	$ 2,406.80	260	$ 625,768.18	$ 2,715.02	260	$ 705,905.20	$ 2,098.5814	260	$ 545,631.16
28	Sewer Flow Control for Point Repairs of 16-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Ea.	$ 10,000.00	4	$ 40,000.00	$ 34,284.53	4	$ 137,138.10	$ 38,806.19	4	$ 155,224.76	$ 29,762.8608	4	$ 119,051.44

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

Exhibit B (10 of 15)

HDR Project No. 10126963
7/24/2018

Item No.	Description	Unit	Engineers Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
			Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
29	Sewer Flow Control for Point Repairs of 24-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Ea.	$ 10,000.00	3	$ 30,000.00	$ 29,938.41	3	$ 89,815.23	$ 20,350.75	3	$ 61,052.25	$ 39,526.0681	3	$ 118,578.20
30	Traffic Control Work for Point Repairs, including traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Ea.	$ 2,200.00	1	$ 2,200.00	$ 76,529.42	1	$ 76,529.42	$ 114,854.86	1	$ 114,854.86	$ 38,203.9745	1	$ 38,203.97
	SCHEDULE A - ADDITIVE BID #1 (TOTAL Items 1 through 30, inclusive)				**$ 1,171,708.05**			**$ 1,032,867.93**			**$ 2,898,797.81**			**$ 2,632,500.05**

HDR

Asan-Adelup-Hagatna, Route 1 Sewer Rehabilitation and Replacement
IFB-05-ENG-2018
GWA Project No. S15-002-EPA

Exhibit B (11 of 15)

HDR Project: 10026963
7/27/2018

Bid Tabulation

SCHEDULE A - Additive Bid #2 Description of Work:
Line B Work (SMH 350AHAGA to SMH 350BHAGA)
Work consists of cleaning and inspecting one siphon consisting of two (2) - 18-inch barrels and providing temporary bypassing and traffic control as necessary to complete the rehabilitation work.

			Engineer's Estimate			Average Unit Price			Infratech International, LLC			Core-Tech/Hawaiian Dredging, LLC		
Item No.	Description	Unit	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount	Unit Price	Qty	Bid Amount
1	Mobilization (For costs associated with bonding, insurance and permits for Additive Bid #2)	Lump Sum	$ 11,148.80	1	$ 11,148.80	$ 22,402.25	1	$ 22,402.25	$ 27,398.66	1	$ 27,398.66	$ 17,405.8400	1	$ 17,405.84
2	Sewer Line Cleaning of Inverted Siphon (2 - 18" Cast Iron Barrels, approximately 124 linear feet each, 22.5 degree bends), including removal and disposal of debris, and all incidentals necessary to complete work.	Lump Sum	$ 22,000.00	1	$ 22,000.00	$ 40,963.27	1	$ 40,963.27	12,120.19	1	12,120.19	69,806.3400	1	69,806.34
3	Closed-Circuit Television (CCTV) inspections for assessment of existing inverted siphon (2 - 18" Cast Iron Barrels, approximately 124 linear feet each, 22.5 degree bends) and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.00	248	$ 2,976.00	$ 103.33	248	$ 25,625.29	14.45	248	3,583.60	192.2056	248	47,666.99
4	Sewer Flow Control for siphon inspection and cleaning, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Lump Sum	$ 165,000.00	1	$ 165,000.00	$ 188,637.46	1	$ 188,637.46	250,822.56	1	250,822.56	126,452.3600	1	126,452.36
5	Traffic Control Work, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 33,000.00	1	$ 33,000.00	$ 36,513.17	1	$ 36,513.17	61,857.87	1	61,857.87	11,168.4700	1	11,168.47
	SCHEDULE A - ADDITIVE BID #2 (TOTAL Items 1 through 5, inclusive)				**$ 234,124.80**			**$ 314,141.44**			**$ 355,782.88**			**$ 272,500.00**

Exhibit B (12 of 15)

RON SMILEY III

TRENCHLESS CIPP LINING APPLICATION INSTALLER| ALLIED TRENCHLESS

SKILLS

Specializes using the latest technologies, wet out procedures, robotics, cutters and cameras.

EXPERIENCE

TRENCHLESS/CIPP LINING INSTALLER • ALLIED TRENCHLESS • FROM 2012 TO CURRENT

Starting in 2012, we have completed roughly 250 successful CIPP projects. Continuous projects ranging from CIPP gravity, CIPP sewer mains, CIPP forced main distribution lines, CIPP pressurized water mains, CIPP gravity sewer laterals, CIPP irrigation lines, CIPP culverts, and CIPP storm drain lines
Projects sites in Oregon, Washington, and Montana

SAMPLE OF PROJECTS

QUINCY, WA
200 LF of 15 inch CIPP Lining sewer lateral

HOODRIVER, OR
200 LF of 12 inch CIPP Lining with robotic cutter to reinstate multiple laterals.
200 LF of 8 inch CIPP Lining of sewer lines with laterals. Project involved working with extreme grade.

TOPPENISH, WA
2,000 LF of 6 inch CIPP Lining sewer main.

KIRKLAND, WA
300 LF of 4 inch CIPP Lining of main sewer line.
100 LF of 6 inch CIPP Lining of main sewer line.

RENTON, WA
100 LF of 6 inch CIPP Lining of main sewer line.

Exhibit B (13 of 15)

EAST WENATCHEE, WA
600 LF of 6 inch CIPP gravity irrigation lines.
CIPP Lining of sewer pipe to city sewer.

WENATCHEE, WA
200 LF of 8 inch CIPP lining of multiple hospital lines.
400 LF of CIPP Lining of 4 inch cast iron sewer lines.
200 LF of CIPP Lining of 6 inch cast iron and clay sewer lines that are 14 feet deep and travel under the roadway.

MOSES LAKE, WA
500 LF of 4-6 inch CIPP Lining of main sewer line at several locations.

RICHLAND, WA
500 LF of 4-6 inch CIPP Lining of concrete sewer line at various locations.

LEAVENWORTH, WA
350 LF of 4 inch CIPP Lining of sewer lines.

CASHMERE, WA
250 LF of 18 inch CIPP Lining of storm drain
200 LF of 4 inch CIPP Linin of laterals and main sewer line.

YAKIMA, WA
2400 LF of 6 inch CIPP Lining of pressure sewer lines.
350 LF of 4 inch CIPP Lining of gravity sewer lines.

SPOKANE, WA
3000 LF of 8 inch CIPP Lining of sewer lines.
100 LF of 36'' CIPP Lining of culvert

TULALIP, WA
4000 LF of 8 inch CIPP Lining of sewer lines

HURRICANE RIDGE, WA
506 LF of 18'' storm drain lines
1360 LF of 24'' storm drain lines
265 LF of 36'' storm drain lines (will be completed by 8/1/18)
150 LF of 48'' storm drain lines (will be completed by 8/1/18)

Exhibit B (14 of 15)

TYLER ALLEN

TRENCHLESS CIPP LINING APPLICATION INSTALLER| ALLIED TRENCHLESS

SKILLS

Specializes using the latest technologies, wet out procedures, robotics, cutters and cameras.

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300 LF of 4 inch CIPP Lining of main sewer line.
100 LF of 6 inch CIPP Lining of main sewer line.

RENTON, WA
100 LF of 6 inch CIPP Lining of main sewer line.

Exhibit B (15 of 15)

EAST WENATCHEE, WA
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CIPP Lining of sewer pipe to city sewer.

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HURRICANE RIDGE, WA
506 LF of 18'' storm drain lines
1360 LF of 24'' storm drain lines
265 LF of 36'' storm drain lines (will be completed by 8/1/18)
150 LF of 48'' storm drain lines (will be completed by 8/1/18)

Addendum No. 5

Exhibit C (1 of 20)

BID FORM

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

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

1.02 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.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 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.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. 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	June 04, 2018
02	June 05, 2018
03	June 07, 2018
04	June 22, 2018
05	July 03, 2018

B. 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.

C. 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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D. 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.

E. 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.

F. 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.

ARTICLE 4 - BIDDER'S CERTIFICATIONS

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 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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Exhibit C (3 of 20)

Addendum No. 5

ARTICLE 5 - BASIS OF BID

5.01 Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the following price(s). Bids shall be evaluated on the total amount of the Schedule A Base Bid (which reflects significant installation of CIPP). Award of Schedule A Additive bid items shall depend on fund availability and shall be made at the sole discretion of GWA. The successful bidder shall be the lowest responsive responsible bidder for Schedule A Base Bid. If no bids are received for Schedule A Base Bid (CIPP), GWA reserves the right to then award to the lowest responsive responsible bidder for the Alternate Schedule B Base Bid (non-CIPP Open cut). Award of Schedule B Additive bid items shall depend on fund availability and shall be made at the sole discretion of GWA. Bidders shall insert Schedule A and Schedule B bids in separate envelopes. Bid opening shall include only Schedule A submissions. **If there are no Schedule A submissions,** GWA shall open Schedule B submissions.

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Exhibit C (4 of 20)

SCHEDULE A - Base Bid Description of Work:

Line A Work (SMH 1399Asan to Asan Pump Station)

Work consists of replacement of 18-inch and 20-inch diameter asbestos cement pipe (ACP) gravity sewer lines with new 18-inch and 20-inch diameter polyvinyl chloride (PVC) sewer lines, respectively, reconnecting sewer laterals after new pipe installation is complete, removing and disposing of 18-inch and 20-inch diameter ACP, abandoning 12-inch PVC sewer lines, cleaning existing 14-inch, 16-inch, 18-inch, and 20-inch diameter gravity sewer lines and rehabilitating those lines with cured-in-place pipe (CIPP) liner, reinstating sewer laterals after CIPP rehabilitation is complete, rehabilitating manholes, and providing temporary bypassing and traffic control as necessary to complete the replacement and rehabilitation work.

				Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	Lump Sum	$ 346,337.14	1	$ 346,337.14
2	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (0'-10' Depth)	Lin. Ft.	$ 348.69	458	$ 159,700.02
3	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (10'-20' Depth)	Lin. Ft.	$ 810.64	223	$ 180,772.72
4	Dewatering and dewatering effluent disposal	Lump Sum	$ 154,423.87	1	$ 154,423.87
5	Removal and disposal of existing 12-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 379.80	458	$ 173,948.40
6	Removal and disposal of existing 12-inch diameter polyvinyl chloride pipe, and all	Lin. Ft.	$ 68.65	152	$ 10,434.80

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Exhibit C (5 of 20)

	incidentals required to complete the work.				
7	Removal and disposal of existing 18-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 461.43	157	$ 72,444.51
8	Removal and disposal of existing 20-inch diameter asbestos cement pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 483.18	66	$ 31,889.88
9	Abandonment of 12-inch diameter PVC pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 77.63	321	$ 24,919.23
10	Abandonment of sewer manhole and all incidentals required to complete the work.	Ea.	$ 3,768.31	2	$ 7,536.62
11	Crushed rock bedding including compaction and woven geotextile fabric for 16-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 44.10	458	$ 20,197.80
12	Crushed rock bedding including compaction and woven geotextile fabric for 18-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 45.24	157	$ 7,102.68
13	Crushed rock bedding including compaction and woven geotextile fabric for 20-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 49.38	66	$ 3,259.08
14	Pipe Repair; install new 16" PVC pipe (AWWA C-905, DR 25) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (0'-10' Depth)	Lin. Ft.	$ 199.85	458	$ 91,531.30
15	Pipe Repair; install new 18" PVC pipe (AWWA C-905, DR 18) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in	Lin. Ft.	$ 366.99	157	$ 57,617.43

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Exhibit C (6 of 20)

Addendum No. 5

	place complete. (10'-20' Depth)				
16	Pipe Repair; install new 20" PVC pipe (AWWA C-905, DR 18) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (10'-20' Depth)	Lin. Ft.	$ 453.65	66	$ 29,940.90
17	A.C. Pavement Resurfacing, including pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 90.09	450	$ 40,540.50
18	Milling Asphalt Friction Course, including all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 141.99	126	$ 17,890.74
19	Asphalt Friction Course, including pavement transitions and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 108.42	261	$ 28,297.62
20	Sewer Line Cleaning of existing 14-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 18.95	1,153	$ 21,849.35
21	Sewer Line Cleaning of existing 16-inch Asbestos Cement Pipe (ACP) and 16-inch Polyvinyl Chloride (PVC) pipe sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 19.90	815	$ 16,218.50
22	Sewer Line Cleaning of existing 18-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 19.55	915	$ 17,888.25

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Addendum No. 5

23	Sewer Line Cleaning of existing 20-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 32.00	35	$ 1,120.00
24	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 14" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.02	1,153	$ 13,859.06
25	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.97	815	$ 10,570.55
26	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 18" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 12.61	915	$ 11,538.15
27	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 20" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 24.81	35	$ 868.35
28	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 14" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 970	2,306	$ 22,368.20

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29	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.65	1,630	$ 17,359.50
30	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 18" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 10.29	1,830	$ 18,830.70
31	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 20" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 14.95	70	$ 1,046.50
32	Installation of cured-in-place pipe (CIPP) lining in existing 14-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 361.15	1,153	$ 416,405.95
33	Installation of cured-in-place pipe (CIPP) lining in existing 16-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 408.29	815	$ 332,756.35
34	Installation of cured-in-place pipe (CIPP) lining in existing 18-inch sewer line, including wet	Lin. Ft.	$ 483.06	915	$ 441,999.90

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	out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.				
35	Installation of cured-in-place pipe (CIPP) lining in existing 20-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 788.38	35	$ 27,593.30
36	Reinstatement of existing sewer laterals upon completion of CIPP lining installation, and all incidentals, in place complete.	Ea.	$ 4,337.67	20	$ 86,753.40
37	Rehabilitation of Sewer Manholes with epoxy coating, including cleaning of manhole, bench repair, surface preparation, cementitious underlayment, epoxy topcoat, testing, and other items as necessary to complete the work.	Vert. Ft.	$ 766.46	18	$ 13,796.28
38	Rehabilitation of Sewer Manholes; patching surface defects and other items as necessary to complete the work.	Ea.	$ 4,578.33	4	$ 18,313.32
39	Cast iron manhole frame and cover, 25-inch diameter, including grade adjustment rings where required, and other items as necessary to complete the work.	Ea.	$ 4,747.44	18	$ 85,453.92
40	Cast iron manhole frame and cover, 30-inch diameter, including grade adjustment rings where required, and other items as necessary to	Ea.	$ 5,895.33	1	$ 5,895.33

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	complete the work.				
41	Sewer manhole concrete collar, including reinforcing steel, borrow material where required, and other items as necessary to complete the work.	Ea.	$ 5,251.09	19	$ 99,770.71
42	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Lump Sum	$ 294,146.34	1	$ 294,146.34
43	Traffic Control Work, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 145,982.52	1	$ 145,982.52
44	Point Repair for 14-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals	Ea.	$ 23,602.76	5	$ 118,013.80

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	required to complete the work. (4 LF pipe section or less, per line segment) (0'-10' Depth)				
45	Extra Length Point Repair for 14-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,568.59	321	$ 503,517.39
46	Point Repair for 16-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (4 foot pipe segment) (0'-10' Depth)	Ea.	$ 13,747.56	4	$ 54,990.24
47	Extra Length Point Repair for 16-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,705.88	305	$ 520,293.40
48	Point Repair for 18-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. Maximum of 20 LF. (10'-20' Depth)	Ea.	$ 33,399.22	5	$ 166,996.10
49	Extra Length Point Repair for 18-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 1,670.24	351	$ 586,254.24

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50	Sewer Flow Control for Point Repairs of 14-inch, 16-inch, and 18-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Ea.	$ 14,582.88	14	$ 204,160.32
51	Traffic Control Work for Point Repairs, including traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Ea.	$ 13,186.06	14	$ 184,604.84
BASE BID (TOTAL Items 1 through 51, inclusive)					$ 5,920,000.00

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Exhibit C (13 of 20)

Addendum No. 5

SCHEDULE A - Additive Bid #1 Description of Work:

Line B Work (SMH 13ASAN to SMH 350AHAGA)

Work consists of cleaning existing 16-inch and 24-inch diameter gravity sewer lines, rehabilitating approximately 16-inch and 24-inch diameter sewer lines with cured-in-place pipe (CIPP) liner, reinstating sewer laterals after CIPP rehabilitation is complete, replacing sewer manhole concrete collars, and providing temporary bypassing and traffic control as necessary to complete the rehabilitation work.

Line C Work (SMH 398Asan to 355AAsan)

Work consists of abandoning an existing 12-inch ACP sewer line, installing a new 12-inch diameter polyvinyl chloride (PVC) sewer line, and providing temporary bypassing and traffic control as necessary to complete the work.

Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization (For costs associated with bonding, insurance and permits for Additive Bid #1)	Lump Sum	$ 96,843.00	1	$ 96,843.00
2	Unclassified Trench Excavation for Pipe Repair Work, including pavement demolition, shoring, or bracing, underpinning, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (10'-20' Depth)	Lin. Ft.	$ 499.16	80	$39,932.80
3	Dewatering and dewatering effluent disposal for Additive Bid #1	Lump Sum	$ 53,509.26	1	$ 53,509.26
4	Crushed rock bedding including compaction and woven geotextile fabric for 12-inch PVC sewer pipe, in place complete.	Lin. Ft.	$ 62.24	80	$ 4,979.20
5	Abandonment of 12-inch diameter ACP pipe, and all incidentals required to complete the work.	Lin. Ft.	$ 228.21	123	$ 28,069.83

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Addendum No. 5

6	Pipe Repair; install new 12" PVC pipe (AWWA C-900, DR 25) by open trenching, including piping, fittings, testing, warning/identification tape, and all incidentals, in place complete. (10'-20' Depth)	Lin. Ft.	$ 260.46	80	$ 20,836.80
7	A.C. Pavement Resurfacing, including pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 51.66	74	$ 3,822.84
8	Milling Asphalt Friction Course, including all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 50.36	109	$ 5,489.24
9	Asphalt Friction Course, including pavement transitions and all necessary labor, materials and equipment, in place complete.	Sq. Yds.	$ 24.24	183	$ 4,435.92
10	Sewer Line Cleaning of existing 16-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 17.16	1,324	$ 22,719.84
11	Sewer Line Cleaning of existing 18-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to complete the inspection and rehabilitation work.	Lin. Ft.	$ 21.60	248	$ 5,356.80
12	Sewer Line Cleaning of existing 24-inch Asbestos Cement Pipe (ACP) sewer lines, including removal and disposal of debris, and other items as necessary to	Lin. Ft.	$ 19.44	408	$ 7,931.52

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Addendum No. 5

	complete the inspection and rehabilitation work.				
13	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 16.54	646	$ 10,684.84
14	Closed-Circuit Television (CCTV) inspections for initial assessment of existing 24" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 14.74	144	$ 2,122.56
15	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 16" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 9.93	1,292	$ 12,829.56
16	Closed-Circuit Television (CCTV) inspections for pre- and post-rehabilitation of existing 24" sewer line and sewer manholes, including reports, documentation, and other items as necessary to complete the work.	Lin. Ft.	$ 17.49	288	$ 5,037.12
17	Installation of cured-in-place pipe (CIPP) lining in existing 16-inch sewer line, including wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.	Lin. Ft.	$ 285.09	646	$ 184,168.14
18	Installation of cured-in-place pipe (CIPP) lining in existing 24-inch sewer line, including	Lin. Ft.	$ 448.83	144	$ 64,631.52

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	wet out, preparation, testing of installed liner, sealing at manholes, reconstructing manhole transition sections and benches, and other items as necessary to complete the work.				
19	Reinstatement of existing sewer laterals upon completion of CIPP lining installation, and all incidentals, in place complete.	Ea.	$ 2,193.00	3	$ 6,579.00
20	Sewer manhole concrete collar, including reinforcing steel, borrow material where required, and other items as necessary to complete the work.	Ea.	$ 4,743.71	3	$ 14,231.13
21	Install new Plain Precast Concrete Manhole, including plugging or bypass pumping, excavation and backfill, crushed rock base, reinforced concrete base, precast concrete riser(s) and cone, flexible pipe seals and connectors, grade adjustment ring(s), Type "SA" frame and cover, channelized invert, testing, incidentals, and all necessary labor, materials, and equipment, in place complete.	Ea.	$ 19,189.50	1	$ 19,189.50
22	Sewer Flow Control for new pipe installation and rehabilitation, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and	Lump Sum	$ 154,328.91	1	$ 154,328.91

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Addendum No. 5

	concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.				
23	Traffic Control Work for new pipe installation and rehabilitation, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 115,556.62	1	$ 115,556.62
24	Point Repair with 16-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals required to complete the work. (0'-10' Depth)	Ea.	$ 37,609.90	4	$ 150,439.60
25	Extra Length Point Repair with 16-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 2,322.87	311	$ 722,412.57
26	Point Repair with 24-inch diameter PVC sewer pipe, including pavement demolition, shoring, or bracing, underpinning, positive groundwater control, protection and support of structures and utilities, removal of trench support, select fill, flowable fill, traffic covers, and all incidentals	Ea.	$ 35,207.54	3	$ 105,622.62

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	required to complete the work. (0'-10' Depth)				
27	Extra Length Point Repair with 24-inch diameter PVC sewer pipe, all depths; in excess of 4 LF (Typ.)	Lin. Ft.	$ 2,715.02	260	$ 705,905.20
28	Sewer Flow Control for Point Repairs of 16-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Ea.	$ 38,806.19	4	$ 155,224.76
29	Sewer Flow Control for Point Repairs of 24-inch sewer pipe for every 4 LF of point repair, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in	Ea.	$ 20,350.75	3	$ 61,052.25

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Addendum No. 5

	place complete.				
30	Traffic Control Work for Point Repairs, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 114,854.86	1	$ 114,854.86
			ADDITIVE BID #1 (TOTAL Items 1 through 30, inclusive)		$ 2,898,797.81

SCHEDULE A - Additive Bid #2 Description of Work:
Line B Work (SMH 350AHAGA to SMH 350BHAGA)
Work consists of cleaning and inspecting one siphon consisting of two (2) - 18-inch barrels and providing temporary bypassing and traffic control as necessary to complete the rehabilitation work.

Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization (For costs associated with bonding, insurance and permits for Additive Bid #2)	Lump Sum	$ 27,398.66	1	$ 27,398.66
2	Sewer Line Cleaning of Inverted Siphon (2 - 18" Cast Iron Barrels, approximately 124 linear feet each, 22.5 degree bends), including removal and disposal of debris, and all incidentals necessary to complete work.	Lump Sum	$ 12,120.19	1	$ 12,120.19
3	Closed-Circuit Television (CCTV) inspections for assessment of existing inverted siphon (2 - 18" Cast Iron Barrels, approximately 124 linear feet each, 22.5 degree bends) and sewer manholes, including reports, documentation, and all incidentals necessary to complete the work.	Lin. Ft.	$ 14.45	248	$ 3,583.60

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Addendum No. 5

4	Sewer Flow Control for siphon inspection and cleaning, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement and concrete pavement), electrical and standby power/pumps, monitoring, spill containment/mitigation, additional traffic control, all related restoration work, in place complete.	Lump Sum	$ 250,822.56	1	$ 250,822.56
5	Traffic Control Work, including obtaining approvals, redesign/modification of traffic control plans for the contractor's convenience, traffic control work, all traffic control devices, placement and removal of devices and detours, cleanup, restoration, and incidentals.	Lump Sum	$ 61,857.87	1	$ 61,857.87
			ADDITIVE BID #2 (TOTAL Items 1 through 5, inclusive)		$ 355,782.88

BASE BID (BASIS OF AWARD) =	$ 5,224,389.99
BASE BID + ADDITIVE BID #1 =	$ 2,898,797.81
BASE BID + ADDITIVE BID #1 + ADDITIVE BID #2 =	$ 355,782.88

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.

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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 45-FY2018

Relative to Contract Modification for the Tumon No. 2, Hyundai, and Chaot No. 2 Reservoir Construction Contract

What is the projects objective and is it necessary and urgent?
The objective of the Contract Modification is to construct the Chaot No. 2 tank, Hyundai Booster Pump Station and water lines on North Sabana Street, South Sabana Street, Corenoso Street, and associated side streets.

Chaot No. 2 Reservoir
The 0.5 MG Chaot No. 2 reservoir will be constructed to bring the total storage onsite back to 1.0 MG. The current Chaot No. 1 is 0.5 MG capacity.

Hyundai Booster Pump Station and Off-Site Water Line Upgrades
The Hyundai Booster Pump Station and line upgrades will serve the Hyundai (705) Pressure Zone Upper. The pump station will serve customer that are outside of the Hyundai Reservoir service area.

This project is a Court Order project falls under the deadline requirements established. Currently under contract with AIC International is the construction of the Tumon No. 2 reservoir, Hyundai reservoir, and off-site system improvements.

Where is the project located?
Chaot No. 2 is located at the end of Dero Road.

Hyundai Booster Pump Station will be located at the Hyundai Reservoir. The water line upgrades will be along North Sabana Street, South Sabana Street, Corenoso Street, and side streets.

How much will it cost?
The additive bid price provided by AIC International was $5,953,963.00.

Breakdown
- Chaot No. 2 Reservoir: $3,728,901.00
- Hyundai Booster Pump Station: $1,213,635.00
- 8-in and 12-in water line on North and South Sabana, Corenoso, and side street: $1,011,427.00

GWA Management also seeks approval of a 10% contingency for the Contract Modification fee proposal in the amount of $595,396.30.

When will it be completed?

1. Hyundai Additive Bid Items Substantial Completion: Additive Bid Item #8 if awarded will add 60 calendar days to the Hyundai Base Bid Substantial Completion. Additive Bid Item #9 if awarded will add zero (0) calendar days to the Hyundai Base Bid Substantial Completion. Additive Bid Item #10 if awarded will add 60 calendar days to the Hyundai Base Bid Substantial Completion.
2. Chaot No. 2 Additive Bid Item Substantial Completion: Additive Bid Item #5 if awarded will add 185 calendar days to the Chaot No. 2 Base Bid Substantial Completion. Additive Bid Item #6 if awarded will add zero (0) calendar days from NTP to the Chaot No. 2 Base Bid Substantial Completion. Additive Bid Item #7 if awarded will add zero (0) calendar days from NTP to the Chaot No. 2 Base Bid Substantial Completion.

What is the funding source?

1. PW 09-11: Water System Reservoirs 2005 Improvements and PW 12-04: Agana Heights & Chaot Tanks

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. 45-FY2018

RELATIVE TO CONTRACT MODIFICATION FOR THE TUMON NO. 2, HYUNDAI, AND CHAOT NO. 2 RESEVOIRS CONSTRUCTION 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 currently has a number of critical Court Order ("CO") Projects, including the construction (i.e. repair, rehabilitate, replace or relocate) of the Tumon No. 2, Hyundai, and Chaot No. 2, as stated in Paragraph 29 (b) (4), (5), and (6) of the Court Order; and

WHEREAS, GWA has advertised an Invitation for Bid (IFB-09-ENG-2017) soliciting bid proposal from experienced, responsible, and responsive bidders to construct the Tumon No. 2 reservoir, Hyundai reservoir, and Chaot-Agana Heights reservoir off-site work in the Base Bid and an Additive Bid to construct the Chaot No. 2 reservoir (Bid Schedule Table C – Item No. 5, 6, and 7), Hyundai booster pump station (Bid Schedule Table B – Item No. 8), and Hyundai off site water line improvements (Bid Schedule Table B – Item No. 9) (See Exhibit A – Bid Schedule); and

WHEREAS, Resolution No. 05-FY2018 (See Exhibit B – Resolution No. 05-FY2018) approved GWA to award the contract to AIC International, Inc. for the Base Bid; and

WHEREAS, in compliance with the Court Order, GWA has executed a construction contract with AIC International, Inc. for the Base Bid work to address the following:

1. The construction of the new Tumon No. 2 reservoir (1.0 MG) to replace the existing Tumon No. 2 steel tank; and
2. The construction of the new Hyundai reservoir (1.0 MG) to replace the existing Hyundai steel tank; and
3. The disconnection of the A-series well from the Sinajana-Agana Heights distribution lines, Chaot and Agana Heights central chlorination system modifications, and Dero Road PRV rehabilitation to improve the Sinajana-Agana Heights water system;

WHEREAS, GWA seeks to issue a contract modification with AIC International, Inc. for portions of the Additive Bid work as noted in the Bid Schedule Tables above to construct the 0.5 MG Chaot No. 2 Reservoir that will bring the Chaot site capacity back to 1.0 MG capacity, the new Hyundai booster pump station, and the Hyundai off site water line improvements that will service Hyundai (705) Pressure Zone Upper; and

WHEREAS, the contract modification work shall consist of Bid Schedule Table C – Item No. 5, Bid Schedule Table B – Item No. 8, and Bid Schedule Table C – Item No. 9 describe below:

1. Contractor furnishing all labor, tools, equipment and material necessary to complete the construction of the second 0.5 MG pre-stressed concrete tank to include, but not limited to: foundation, earthwork, pipework, retaining wall, storm water detention basin, fences, gates, improves to access roads, protective coatings, disinfection, testing and start-up, under the provision of the bid documents and in accordance with applicable GWA standards; and

2. Contractor furnishing all labor, tools, equipment and material necessary to complete the construction of the Hyundai Booster Pump Station and waterlines on North Sabana Street, South Sabana Street, Corenoso Street, and associated side streets, under the provision of the bid documents and in accordance with applicable GWA standards; and

WHEREAS, the current contract awarded to AIC International, Inc. is in the amount of

Fourteen Million Eight Hundred Twenty-Eight Thousand One Hundred Ninety-Four Dollars and Zero Cents ($14,828,194.00) with a total authorized funding for the awarded Base Bid work is Sixteen Million Three Hundred Eleven Thousand Thirteen Dollars and Forty Cents ($16,311,013.40); and

WHEREAS, GWA management seeks approval to execute Contract Modification No. 1 to include the construction of Chaot No. 2 Reservoir, Hyundai Booster Pump Station, and water lines in the amount of Five Million Nine Hundred Fifty-Three Thousand Nine Hundred Sixty-Three Dollars and Zero Cents ($5,953,963.00), plus a 10% contingency of Five Hundred Ninety-Five Thousand Three Hundred Ninety-Six Dollars and Thirty Cents ($595,396.30), to bring Contract Modification No. 1 authorized funding to Six Million Five Hundred Forty-Nine Thousand Three Hundred Fifty-Nine Dollars and Thirty Cents ($6,549,359.30); and

WHEREAS, GWA management seeks CCU approval to bring the total authorized funding for the construction project with AIC International, Inc. to Twenty-Two Million Eight Hundred Sixty Thousand Three Hundred Seventy-Two Dollars and Seventy Cents ($22,860,372.70); and

WHEREAS, the funding source for the construction project will be from the CIP PW 09-11: Water System Reservoirs 2005 Improvements and PW 12-04: Agana Heights & Chaot Tanks; 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 AIC International, Inc. are fair and reasonable.
3. The CCU hereby authorizes GWA management to execute Contract Modification No. 1 in the amount of Five Million Nine Hundred Fifty-Three Thousand Nine Hundred Sixty-Three Dollars and Zero Cents ($5,953,963.00), to bring the total contract amount

to Twenty Million Seven Hundred Eighty-Two Thousand One Hundred Fifty-Seven Dollars and Zero Cents ($20,782,157.00).

4. The CCU hereby approves a 10% contingency for the Contract Modification No. 1 work, which brings the authorized Contract Modification No. 1 funding to Six Million Five Hundred Forty-Nine Thousand Three Hundred Fifty-Nine Dollars and Thirty Cents ($6,549,359.30).
5. The CCU hereby further approves the total authorized construction funding including contingencies to Twenty-Two Million Eight Hundred Sixty Thousand Three Hundred Seventy-Two Dollars and Seventy Cents ($22,860,372.70).
6. The CCU hereby approves the use of Bond funding from CIP PW 09-11: Water System Reservoirs 2005 Improvements and PW 12-04: Agana Heights & Chaot Tanks.

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

DULY AND REGULARLY ADOPTED, this 28th day of August 2018.

Certified by: Attested by:

_____ _____

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

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 (1 OF 19)

BID FORM

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

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

1.02 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.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 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.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. 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
Addendum No. 1	September 26, 2017
Addendum No. 2	October 5, 2017
Addendum No. 3	October 17, 2017
Addendum No. 4	October 24, 2017

B. 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.

C. 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.

D. 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.

E. 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.

F. 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.

ARTICLE 4 - BIDDER'S CERTIFICATIONS

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 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.

ARTICLE 5 - BASIS OF BID

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

EXHIBIT A (4 OF 19)

BID SCHEDULE

Interested Bidders must complete Table A, Table B, and Table C. All blanks in the tables must be filled out.

Definitions:

LS = lump sum

TABLE A
TUMON NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 8)

Item No.	Description	Quantity	Unit	Extended Amount
1.	Mobilization, as specified in the Contract Documents.	1	LS	$ 331,354.00
2.	Demolition of existing facilities, including the steel tank and foundation, paving, chain link fences and gates, piping, concrete vaults, headwall, and appurtenances, as shown and specified in the Contract Documents.	1	LS	$ 97,952.00

EXHIBIT A (5 OF 19)

TABLE A
TUMON NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 8)

Item No.	Description	Quantity	Unit	Extended Amount
3.	Construction of Tumon No. 2 Reservoir, including a 1.0 million gallon (MG) nominal capacity pre-stressed concrete tank, earthwork, yard piping, fences and gates, coatings, control building, electrical, instrumentation and controls, disinfection, testing, startup, and all appurtenant work, complete and operable, as shown and specified in the Contract Documents.			
	Item 3 Breakdown			
	3.1 Earthwork			$ 152,139.00
	3.2 Tank Foundation			$ 149,581.00
	3.3 Tank Piping & Valving			$ 60,904.00
	3.4 Pre-stressed Concrete Tank			$ 3,267,643.00
	3.5 Tank Appurtenances			$ 3,616.00
	3.6 Tank Coating			$ 62,181.00
	3.7 Tank & Piping Disinfection			$ 17,957.00
3.	Item 3 Breakdown (Cont.)			
	3.8 Testing & Startup			$ 2,035.00
	3.9 Electrical System			$ 99,572.00
	3.10 Instrumentation and Control			$ 134,743.00
	3.11 Yard Piping & Valving			$ 371,620.00
	3.12 Five Vaults, Piping, Valving and Overflow Discharge Basin			$ 288,571.00
	3.13 Fencing and Gates			$ 48,237.00
	3.14 All other appurtenant work			$ 245,848.00
	Subtotal	1	LS	$ 4,904,647.00
4.	Site Grading and pavement including curbs, concrete gutters, headwall, sidewalk, stormwater swales, and riprap.	1	LS	$ 355,310.00

EXHIBIT A (6 OF 19)

TABLE A
TUMON NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 8)

Item No.	Description	Quantity	Unit	Extended Amount
5.	Construction of Control Building, including electrical and controls, earthwork, and all appurtenant work, complete and operable as shown and specified in accordance with the Contract Documents.	1	LS	$ 70,008.00
6.	Construction of PRV Vault and Meter Vault on the 12-inch waterline on Pale San Vitores Road. Including construction of concrete vaults, manhole covers, piping, valves, meters, pressure reducing valves, protective coating, connection to existing pipes, connection of 12-inch and 16-inch waterlines, earthwork, testing and disinfection, electrical and SCADA, and all appurtenant work, complete and operable, as shown and specified in accordance with the Contract Documents.	1	LS	$ 359,696.00
7.	Construction of PRV replacement and Meter Vault on the 16-inch waterline on Pale San Vitores Road. Including construction of concrete vault, manhole cover, piping, valves, meters, pressure reducing valve, protective coating, connection to existing pipes, earthwork, testing and disinfection, electrical and SCADA, and all appurtenant work, complete and operable, as shown and specified in accordance with the Contract Documents.	1	LS	$ 264,494.00

EXHIBIT A (7 OF 19)

TABLE A
TUMON NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 8)

Item No.	Description	Quantity	Unit	Extended Amount
8.	Construction of PRV replacements and Meter Vault at St. John's on Marine Corps Drive. Including construction of concrete vault, manhole covers, piping, valves, meters, pressure reducing valves, protective coating, connection to existing pipes, 14-inch connection of 24-inch and 14-inch waterlines, earthwork, electrical, testing and disinfection, and all appurtenant work, complete and operable, as shown and specified in accordance with the Contract Documents.	1	LS	$ 314,782.00
Table A Base Bid Subtotal				$ 6,698,243.00

EXHIBIT A (8 OF 19)

TABLE B
HYUNDAI SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 7, ADDITIVE BID ITEMS NO. 8 – 10)

Item No.	Description	Quantity	Unit	Extended Amount
1.	Mobilization, as specified in the Contract Documents.	1	LS	$ 570,933.00
2.	Demolition of existing facilities, including the steel tank, foundation, paving, electrical building, chain link fences and gates, power pole, piping, concrete vaults, headwall, and appurtenances, as shown and specified in the Contract Documents.	1	LS	$ 294,877.00
3.	Construction of Hyundai Reservoir, including a 1.0 million gallon (MG) nominal capacity pre-stressed concrete tank, earthwork, yard piping, fences and gates, protective coating, electrical, instrumentation and controls, disinfection, testing, startup, and all appurtenant work, complete and operable, as shown and specified in the Contract Documents.			
	Item 3 Breakdown			
	3.1 Earthwork			$ 123,071.00
	3.2 Tank Foundation			$ 431,508.00
	3.3 Tank Piping & Valving			$ 53,521.00
	3.4 Pre-stressed Concrete Tank			$ 3,135,529.00
	3.5 Tank Appurtenances			$ 206,711.00
	3.6 Tank Coating			$ 61,605.00

EXHIBIT A (9 OF 19)

TABLE B
HYUNDAI SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 7, ADDITIVE BID ITEMS NO. 8 – 10)

Item No.	Description	Quantity	Unit	Extended Amount
3.	Item 3 Breakdown (Cont.)			
	3.7 Tank & Piping Disinfection			$ 17,968.00
	3.8 Testing & Startup			$ 10,182.00
	3.9 Electrical System			$ 273,146.00
	3.10 Instrumentation and Control			$ 100,681.00
	3.11 Yard Piping & Valving			$ 309,728.00
	3.12 Three Vaults, Piping, Valving, Overflow Discharge Basin and Piping			$ 247,161.00
	3.13 Fencing and Gates			$ 54,659.00
	3.14 All other appurtenant work			$ 50,918.00
	Subtotal	1	LS	$ 5,076,388.00
4.	Site Grading and pavement including curbs, concrete gutters, sidewalks, stormwater swales, headwalls, riprap, and stormwater infiltration basin and outlet structure and piping.	1	LS	$ 386,009.00
5.	Construction of 380,000 gallon temporary bolted steel tank, including earthwork, piping, electrical, instrumentation and controls, disinfection, testing, startup, and all appurtenant work, complete and operable, as shown and specified in the Contract Documents.	1	LS	$ 501,896.00
6.	Construction of Control Building, same as Tumon No. 2 Control Building if additive bid for pump station is not awarded. Locate at pump northeast corner of pump building. Complete and operable, as shown and specified in accordance with the Contract Documents.	1	LS	$ 151,149.00

EXHIBIT A (10 OF 19)

TABLE B
HYUNDAI SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 7, ADDITIVE BID ITEMS NO. 8 – 10)

Item No.	Description	Quantity	Unit	Extended Amount
7.	Improvements to the Barrigada Pump Station including piping, meters, pumps, valves, earthwork, testing and startup, door replacement, retaining wall, and all appurtenant work, complete and operable as shown and specified in accordance with the Contract Documents. Include the painting of Barrigada Reservoir No. 2 GWA logo.	1	LS	$ 392,056.00

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EXHIBIT A (11 OF 19)

TABLE B
HYUNDAI SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 7, ADDITIVE BID ITEMS NO. 8 – 10)

Item No.	Description	Quantity	Unit	Extended Amount
8.	Additive Bid Item: Construction of Hyundai Booster Pump Station, including triplex booster pumps, fire pump, electrical and controls, generators, fuel tank, hoist, piping, valves, meters, earthwork, testing and startup, and all appurtenant work, complete and operable as shown and specified in accordance with the Contract Documents.			
	Item No. 8 Breakdown			
	8.1 Proposed Booster Pump Building			$ 326,235.00
	8.2 Triplex Pump System			$ 71,564.00
	8.3 Fire Pump System			$ 109,398.00
	8.4 Piping and Valving			$ 356,696.00
	8.5 Flow Meters			$ 27,701.00
	8.6 Hoist System			$ 6,971.00
	8.7 Generators			$ 215,122.00
	8.8 Diesel Fuel Tank			$ 70,520.00
	8.9 Electrical System			$ 24,282.00
	8.10 Fire Sprinkler System			$ 44,295.00
	8.11 SCADA System			$ 67,052.00
	8.12 All other appurtenant work			$ 44,948.00
	8.13 Deletion of Control Building			($ 151,149.00)
	Subtotal	1	LS	$ 1,213,635.00

EXHIBIT A (12 OF 19)

TABLE B
HYUNDAI SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 7, ADDITIVE BID ITEMS NO. 8 – 10)

Item No.	Description	Quantity	Unit	Extended Amount
9.	Additive Bid Item: Installation of 8-inch and 12-inch PVC AWWA C900, transmission and distribution waterlines on North and South Sabana Drives and sides streets as shown on sheets C-201 through C-209. Installation of inline valves shown on sheet C-228. The work will include: valves, valve boxes and valve covers, fire wet barrel hydrants, blow-off assemblies, combination air release valves, fittings, installation of service line materials and fittings, disinfection and testing, and pavement restoration complete and operable as shown and specified in accordance with the Contract Documents.	1	LS	$ 1,011,427.00
10.	Additive Bid Item: Installation of 8-inch and 12-inch PVC AWWA C900, waterlines on Bello Road, and farther west as shown on sheets C-210 through C-227. The work will include: construction of PRV concrete vault, manhole covers, piping, electrical and SCADA, pressure reducing valves, protective coating, valves, valve boxes and valve covers, fire wet barrel hydrants, blow-off assemblies, combination air release valves, fittings, installation of service line materials and fittings, disinfection and testing, and pavement restoration complete and operable as shown and specified in accordance with the Contract Documents.	1	LS	$ 1,864,644.00

EXHIBIT A (13 OF 19)

Table B Base Bid Subtotal	$	7,377,308.00
Table B Base Bid and Additive Bid Subtotal	$	11,467,014.00

EXHIBIT A (14 OF 19)

TABLE C
CHAOT NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 4, ADDITIVE BID ITEMS NO. 5 – 7)

Item No.	Description	Quantity	Unit	Extended Amount
1.	Mobilization, as specified in the Contract Documents.	1	LS	$ 222,631.00
2.	Well improvements including analyzer relocations, piping disconnections, door hardware replacement, fencing replacement, and all appurtenant work, complete and operable, as shown and specified in the Contract Documents.	1	LS	$ 106,423.00
3.	Construction of PRV Vault in front of Well A-12. Including construction of concrete vault, manhole covers, piping, valves, pressure reducing valves, protective coating, connection to existing pipes, earthwork, testing and disinfection, and all appurtenant work, complete and operable, as shown and specified in accordance with the Contract Documents.	1	LS	$ 182,283.00
4.	Chlorination and analyzer improvements to Chaot and Agana Heights Reservoir Sites, including partition wall, chlorine system reduction, electrical, instrumentation and controls, and all appurtenant work, complete and operable as shown and specified in accordance with the Contract Documents.	1	LS	$ 245,306.00

EXHIBIT A (15 OF 19)

TABLE C
CHAOT NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 4, ADDITIVE BID ITEMS NO. 5 – 7)

Item No.	Description	Quantity	Unit	Extended Amount
5.	Additive Bid Item: Construction of Chaot Reservoir No. 2, including a 0.5 million gallon (MG) nominal capacity pre-stressed concrete tank, earthwork, yard piping, fences, protective coating, electrical, instrumentation and controls, disinfection, testing, startup, and all appurtenant work, complete and operable, as shown and specified in the Contract Documents.			
	Item 5 Breakdown			
	5.1 Earthwork			$ 111,060.00
	5.2 Tank Foundation			$ 280,566.00
	5.3 Tank Piping & Valving			$ 45,618.00
	5.4 Pre-stressed Concrete Tank			$ 2,219,954.00
	5.5 Tank Appurtenances			$ 323,892.00
	5.6 Tank Coating			$ 46,936.00
	5.7 Tank & Piping Disinfection			$ 4,148.00
	5.8 Testing & Startup			$ 1,125.00
	5.9 Electrical System			$ 53,299.00
	5.10 Instrumentation and Control			$ 110,265.00
	5.11 Yard Piping & Valving			$ 116,250.00
	5.12 Drain Vault, Inlet Vault, Piping and Overflow Manhole			$ 114,181.00
	5.13 Fencing			$ 15,061.00
	5.14 All other appurtenant work			$ 6,170.00
	Subtotal	1	LS	$ 3,448,525.00
6.	Additive Bid Item: Site Grading and pavement including concrete gutters, headwalls, retaining wall, stormwater swales, riprap, outlet control structure and stormwater detention basin.	1	LS	$ 160,664.00

EXHIBIT A (16 OF 19)

TABLE C
CHAOT NO. 2 SITE BID SCHEDULE

(BASE BID ITEMS NO. 1 – 4, ADDITIVE BID ITEMS NO. 5 – 7)

Item No.	Description	Quantity	Unit	Extended Amount
7.	Additive Bid Item: Grading of gravel access road from end of pavement on Dero Road to the Chaot Reservoirs east property line, including gabion repairs of culvert outlet and all appurtenant work, complete and operable as shown and specified in accordance with the Contract Documents.	1	LS	$ 119,712.00

Table C Base Bid Subtotal $ 756,643.00

Table C Base Bid and Additive Bid Subtotal $ 4,485,544.00

Table A, B, and C Base Bid Total $ 14,832,194.00

Table A, B, and C Base Bid and Additive Bid Total $ 22,650,801.00

TOTAL BASE BID PRICE FOR THE BID SCHEDULE (Table A, B and C)

For the lump sum of

$ 14,832,194.00
(Price in Figures)

FOURTEEN MILLION EIGHT HUNDRED THIRTY TWO THOUSAND ONE HUNDRED NINETY FOUR DOLLARS
(Price in Words)

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.

EXHIBIT A (17 OF 19)

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of 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 attached to and made a condition of this Bid:

A. Required Bid security in the form of Bid Bond.

B. List of Proposed Major Suppliers;

C. Required Bidder Qualification Statement with Supporting Data.

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

9.01 This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): N/A

By: _____

(Individual's signature)

Doing business as: _____

Business address: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____ _____

EXHIBIT A (18 OF 19)

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: AIC International, Inc.

State of Incorporation: Guam

Type (General Business, Professional, Service, other): General Contractor

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): Henry Stewart

Title: President

(CORPORATE SEAL)

Attest _____

(Signature of Corporate Secretary)

Business address: Route 2A, Agat Guam 96928

P.O. Box DR, Hagatña, Guam 96932

Phone: 671-565-9142 Facsimile: 671-565-9145

E-mail address: henry@aicconstruction.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: _____

_____

Phone: _____ Facsimile: _____

E-mail address: _____

EXHIBIT A (19 OF 19)

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.)

Exhibit B (1 of 4)

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. 05-FY2018

RELATIVE TO APPROVING THE CONSTRUCTION CONTRACT FOR THE TUMON NO. 2, HYUNDAI, AND CHAOT NO. 2 RESEVOIRS

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 currently has a number of critical Court Order ("CO") Projects, including the construction (i.e. repair, rehabilitate, replace or relocate) of the Tumon No. 2, Hyundai, and Chaot No. 2, as stated in Paragraph 29 (b) (4), (5), and (6) of the Court Order; and

WHEREAS, in compliance with the Court Order, GWA intends to execute a construction project to address the following:

1. The construction of the new Tumon No. 2 reservoir (1.0 MG) to replace the existing Tumon No. 2 steel tank; and
2. The construction of the new Hyundai reservoir (1.0 MG) to replace the existing Hyundai steel tank; and
3. The disconnection of the A-series well from the Sinajana-Agana Heights distribution lines, Chaot and Agana Heights central chlorination system modifications, and Dero Road PRV rehabilitation to improve the Sinajana-Agana Heights water system;

WHEREAS, GWA has advertised an Invitation for Bid (IFB) soliciting bid proposal from experienced, responsible, and responsive bidders to construct the Tumon No. 2 reservoir, Hyundai reservoir, and Chaot-Agana Heights reservoir off-site work in the Base Bid and to

EXHIBIT B (2 OF 4)

construct the Chaot No. 2 reservoir, Hyundai booster pump station, and Hyundai off site water line improvements in the Additive Bid; and

WHEREAS, the Base Bid work consists of the Contractor furnishing all labor, tools, equipment and materials necessary to complete the construction of the Tumon No. 2 and Hyundai reservoirs to include, but not limited to foundation, earthwork, pipework, retaining wall, storm water detention basin, off-site PRVs, concrete work, electrical work, fences and gates, protective coatings, SCADA, disinfection, testing and start-up under the provisions of the bid documents and in accordance with applicable GWA standards; and

WHEREAS, the Base Bid work will also consist of disconnection of the A-Series wells to the distribution lines, modification to the Chaot and Agana Heights reservoir central chlorination system, and rehabilitation of the Dero Road PRV; and

WHEREAS, IFB packages were picked up by 12 interested parties, from which GWA received bid proposals from 2 of the 12 parties before the bid proposal deadline (See EXHIBIT A – Abstract of Bids); and

WHEREAS, GWA engineering and the design team analyzed all bid proposals received on November 1st, 2017 and determined that AIC International, Inc., who submitted the lowest Base 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 AIC International, Inc. Base Bid proposal of Fourteen Million Eight Hundred Twenty Eight Thousand One Hundred Ninety Four Dollars ($14,828,194.00) to be acceptable (See EXHIBIT C – Bid Proposal); and

WHEREAS, GWA Management will assess any additional funding availability from the latest Capital Improvements Plan to ascertain if any or all the Additive bid items as part of this IFB can be awarded later through a change order or via a subsequent CCU approval process as a means of maximizing system improvements efficiently; and

EXHIBIT B (3 OF 4)

WHEREAS, GWA Management is seeking approval to enter into contract with AIC International, Inc. for IFB-09-ENG-2017 in the amount of Fourteen Million Eight Hundred Twenty Eight Thousand One Hundred Ninety Four Dollars ($14,828,194.00), along with a ten percent (10%) contingency of One Million Four Hundred Eighty Two Thousand Eight Hundred Nineteen Dollars and Forty Cents ($1,482,819.40), bringing the total requested funding amount to Sixteen Million Three Hundred Eleven Thousand Thirteen Dollars and Forty Cents ($16,311,013.40); and

WHEREAS, the funding source for the construction project will be from the CIP PW 09-11: Water System Reservoirs 2005 Improvements, PW 12-04: Agana Heights and Chaot Tank Construction, PW 12-06: Tank Replacement Piti and Hyundai Tanks, PW 09-03: Water Distribution System Pipe Replacement and Upgrades; and PW 09-04: Pressure Zone Realignment; 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 AIC International, Inc. are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept the bid from AIC International, Inc. attached hereto as EXHIBIT C, and which is also incorporated into this Resolution in its entirety.
4. The CCU hereby further authorizes the management to enter into a contract with AIC International, Inc. in the amount of Fourteen Million Eight Hundred Twenty Eight Thousand One Hundred Ninety Four Dollars ($14,828,194.00).
5. The CCU hereby approves the funding total of Fourteen Million Eight Hundred Twenty Eight Thousand One Hundred Ninety Four Dollars ($14,828,194.00), along with a ten percent (10%) contingency of One Million Four Hundred Eighty Two Thousand Eight Hundred Nineteen Dollars and Forty Cents ($1,482,819.40), bringing the total requested funding amount to

EXHIBIT B (4 OF 4)

Sixteen Million Three Hundred Eleven Thousand Thirteen Dollars and Forty Cents ($16,311,013.40.)

6. The CCU hereby approves the use of funding from CIP PW 09-11: Water System Reservoirs 2005 Improvements, PW 12-04: Agana Heights and Chaot Tank Construction, PW 12-06: Tank Replacement Piti and Hyundai Tanks, PW 09-03: Water Distribution System Pipe Replacement and Upgrades; and PW 09-04: Pressure Zone Realignment.

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

DULY AND REGULARLY ADOPTED, this 22nd day of November 2017.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

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: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

///

///

4

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. 46-FY2018
Relative to Funding Source Approval for the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Construction Contracts

What is the project's objective and is it necessary and urgent?
The objective of the resolution is to seek CCU approval to expand the available funding sources for the construction contracts related to the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Construction project. CCU resolutions that previously authorized and approved the construction contracts for the subject project may have had language relative to a single funding source, or specific funding sources (relevant to the Baza Gardens WWTP), but have omitted funding sources applicable to the improvements contemplated under the project (sewer pump stations, wastewater collection system). This omission unfortunately limits GWA management's flexibility to address additional project funding needs that may arise at a later date as a result of unforeseen circumstances, and which may impact Management's ability to meet Court-Ordered deadlines.

Where is the location?
The Baza Gardens Wastewater Cross-Island Pumping and Conveyance Construction project starts from the existing Baza Gardens WWTP, runs along Route 17, Route 5 and Route 2A and ends at the new Agat WWTP.

How much will it cost?
Resolution does not specify amount of fund but sources of funds.

When will it be completed?
The Baza Gardens Wastewater Cross-Island Pumping and Conveyance Construction project is expected to be completed December 2018 thus the additional funding source may be required until then.

What is the funding source?
GWA management seeks CCU approval to include as a funding source for any of the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Projects Phases I, II and III construction contracts, all CIP bond funds applicable to the Baza Gardens WWTP facility being converted to a pumping facility, any CIP bond funds applicable to wastewater collection and sewer pump stations, Internally Funded CIP and System Development funds

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

RESOLUTION NO. 46–FY2018

RELATIVE TO FUNDING SOURCE APPROVAL FOR THE BAZA GARDENS WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE CONSTRUCTION CONTRACTS

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 is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, the CCU has approved via Resolution 01-FY2017 (See Exhibit A), Resolution 13-FY2017 (See Exhibit B) and Resolution 29-FY2017 (See Exhibit C) construction contracts for the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Projects Phases I, II and III respectively; and

WHEREAS, the resolutions noted above may have had language relative to a single source or specific funding sources relevant to the Baza Gardens WWTP, but omitted funding sources applicable to the improvements contemplated under the final project (such as sewer pump stations and wastewater collection system CIP line items), which unfortunately limits GWA management's flexibility to address additional project funding needs that may arise at a later date; and

WHEREAS, GWA management seeks CCU approval to include as a funding source for any of the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Projects Phases I, II and III construction contracts, all CIP bond funds applicable to the Baza Gardens WWTP facility being converted to pumping and conveyance facilities, any CIP bond funds applicable to

wastewater collection and sewer pump stations, Internally Funded CIP and System Development funds; 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 hereby approves funding source for any of the Baza Gardens Wastewater Cross-Island Pumping and Conveyance Projects Phases I, II and III construction contracts, to be from all CIP bond funds applicable to the Baza Gardens WWTP facility being converted to a pumping facility, any CIP bond funds applicable to wastewater collection and sewer pump stations, Internally Funded CIP and System Development funds.

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

DULY AND REGULARLY ADOPTED, this 28th day of August 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: _____

DRAFT

Exhibit A (1 of 1)

GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 01–FY2017

RELATIVE TO APPROVAL OF THE BAZA GARDENS WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE PHASE I CONSTRUCTION PROJECT

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 currently has a number of critical Court Order ("CO") projects including a complete evaluation of the Baza Gardens WWTP to determine what improvements are necessary at the plant to achieve compliance with the WWTP's NDPES permit, as stated in Paragraph 13 of the 2011 Court Order as well as the completion of construction activities that were identified in the approved plan resulting from the evaluation noted above as stated in Paragraph 14 of the 2011 Court Order; and

WHEREAS, the system evaluation report required under Paragraph 13 and completed in April of 2014 by GWA's Program Management Office (PMO), Brown and Caldwell, resulted in a recommendation to GWA and the USEPA that transferring/conveying the Baza Gardens WWTP effluent flow across the Route 17 (Cross Island Road) to a new Agat-Santa Rita WWTP site was the recommended conceptual alternative to which this recommendation was found to be acceptable by all parties; and

WHEREAS, Paragraph 14, subsection (b) of the 2011 Court Order required that GWA "execute a contract and issue a notice to proceed with construction" by October 31, 2016; and

WHEREAS, in September of 2015 GWA began the procurement process to find a consulting engineering team to design the wastewater conveyance system and via Resolution 06-FY2016, approved by the CCU in October of 2015, GWA management was authorized to enter

Exhibit A (2 of 4)

into a contract with Duenas Camacho and Associates to design the wastewater conveyance and pumping system which would include new Sewer Pump Station (SPS), gravity mains, force mains and all incidentals and appurtenances to these man components; and

WHEREAS, GWA has determined that in an effort to comply with the intent of the Court Order deadline of October 31, 2016 the most expedient process was to break the construction activities into phases with the first phase covering the construction of one sewer pump station, 14,643 linear feet of gravity and 2,767 linear feet of force main which is considered approximately one third of the overall project requirements; and

WHEREAS, GWA has advertised the Invitation For Bid (IFB-08-ENG-2016) for Baza Gardens Wastewater Conveyance and Pumping Phase I Construction project wherein GWA is soliciting bid proposals from experienced and responsive bidders to construct a sewer pump station, sewer gravity and force mains; and

WHEREAS, this phase of work consists of furnishing all labor, tools, equipment and materials including coordination with GWA Wastewater Operations and Engineering and the Construction Manager to construct all components described in the 100% design drawings and technical specifications which include but are not limited to a sewer pump station with generator and wet well, 14,643 linear feet of gravity line with sizes ranging from 12" to 15" in diameter, 2,767 linear feet of 10" diameter gravity main, pavement restoration in affected areas, SPS perimeter fencing, SPS retaining walls, as well as a communication conduit for future by GWA and GPA; and

WHEREAS, IFB packages were picked up by ten (10) interested parties, from which GWA received bid proposals from two (2) of the ten (10) (SEE EXHIBIT A – Abstract of Bids) before the bid proposals deadline of September 30, 2016; and

WHEREAS, GWA's design consultant for the project along with GWA Engineering analyzed the bid proposals received, particularly the lowest bid received and determined that "BME & Son Inc." successfully submitted the lowest bid as a responsive and responsible bidder and met all the bid requirements set forth by GWA (SEE EXHIBIT B – Bid Evaluation); and

Exhibit A (3 of 4)

WHEREAS, GWA management finds BME & Son Inc.'s bid proposal acceptable and now seeks CCU approval of the bid proposal amount of Seven Million Eight Hundred Eighty Eight Thousand One Hundred Fifty One Dollars and Nineteen Cents ($7,888,151.19) attached hereto (SEE EXHIBIT C – Bid Proposal),

WHEREAS, GWA management further seeks CCU approval of a five percent (5%) contingency to the bid proposal amount or Three Hundred Ninety Four Thousand Four Hundred Seven Dollars and Fifty Six Cents ($394,407.56) to bring the total authorized funding amount to Eight Million Two Hundred Eighty Two Thousand Five Hundred Fifty Eight Dollars and Seventy Five Cents ($8,282,558.75); and

WHEREAS, funding for this project will be from the 2016 Bond Funds under the line items CIP WW 11-03 "Baza Gardens STP Replacement"; 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 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).
3. The CCU hereby authorizes the management of GWA to accept the bid proposal from "BME & Son Inc." attached hereto as Exhibit C and which is incorporated into this Resolution in its entirety.
4. The CCU hereby further authorizes the management of GWA to enter into a contract with "BME & Son Inc." in the amount Seven Million Eight Hundred Eighty Eight Thousand One Hundred Fifty One Dollars and Nineteen Cents ($7,888,151.19).
5. The CCU hereby further approves the funding total of Seven Million Eight Hundred Eighty Eight Thousand One Hundred Fifty One Dollars and Nineteen Cents ($7,888,151.19) plus a five percent (5%) contingency of Three Hundred Ninety Four Thousand Four Hundred Seven Dollars and Fifty Six

Exhibit A (4 of 4)

Cents ($394,407.56) for a total amount of Eight Million Two Hundred Eighty Two Thousand Five Hundred Fifty Eight Dollars and Seventy Five Cents ($8,282,558.75).

6. The CCU hereby further approves funding for this project to be from the 2016 Bond Funds under the line items CIP WW 11-03"Baza Gardens STP Replacement".

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

DULY AND REGULARLY ADOPTED, this 25th day of October 2016.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

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: 4

NAYS: 0

ABSTENTIONS: 0

ABSENT: 1

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Exhibit B (1 of 4)

GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 13–FY2017

RELATIVE TO APPROVAL OF THE BAZA GARDENS WASTEWATER CROSS-ISLAND PUMPING AND CONVEYANCE PHASE II CONSTRUCTION PROJECT

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 currently has a number of critical Court Order ("CO") projects including a complete evaluation of the Baza Gardens WWTP to determine what improvements are necessary at the plant to achieve compliance with the WWTP's NDPES permit, as stated in Paragraph 13 of the 2011 Court Order as well as the completion of construction activities that were identified in the approved plan resulting from the evaluation noted above as stated in Paragraph 14 of the 2011 Court Order; and

WHEREAS, the system evaluation report required under Paragraph 13 and completed in April of 2014 by GWA's Program Management Office (PMO), Brown and Caldwell, resulted in a recommendation to GWA and the USEPA that transferring/conveying the Baza Gardens WWTP effluent flow across the Route 17 (Cross Island Road) to a new Agat-Santa Rita WWTP site was the recommended conceptual alternative to which this recommendation was found to be acceptable by all parties; and

WHEREAS, in September of 2015 GWA began the procurement process to find a consulting engineering team to design the wastewater conveyance system and via Resolution 06-FY16, approved by the CCU in October of 2015, GWA management was authorized to enter into a contract with Duenas Camacho and Associates to design the wastewater conveyance and pumping system which would include new Sewer Pump Station (SPS), gravity mains, force mains and all incidentals and appurtenances to these man components; and

Exhibit B (2 of 4)

WHEREAS, GWA has determined that in an effort to comply with the intent of the Court Order deadline of executing "a construction contract and issue a notice to proceed with construction" by October 31, 2016 the most expedient procurement process was to break the construction activities into phases; and

WHEREAS, GWA started procurement of Phase I construction (IFB-08-ENG-2016) on September 9, 2016 which allowed GWA to issue a contract and notice to proceed on October 25, 2016 to BME & Sons Inc., meeting the intent of Court Order deadline; and

WHEREAS, GWA has further moved on the second phase of construction by advertising on November 14, 2016 the Invitation For Bid (IFB-02-ENG-2017) for Baza Gardens Wastewater Conveyance and Pumping Phase II Construction project wherein GWA solicited bid proposals from experienced and responsive bidders to construct a sewer pump station, sewer gravity and force mains; and

WHEREAS, this phase of work consists of furnishing all labor, tools, equipment and materials including coordination with GWA Wastewater Operations and Engineering and the Construction Manager to construct all components described in the 100% design drawings and technical specifications which include but are not limited to a sewer pump station with generator and wet well, 1,767 linear feet of 15" diameter gravity line, 14,298 linear feet of 12" diameter gravity main, pavement restoration in affected areas, SPS perimeter fencing, SPS retaining walls, as well as a communication conduit for future use by GWA and GPA; and

WHEREAS, IFB packages were picked up by seven (7) interested parties, from which GWA received bid proposal from four (4) of the seven (7) (SEE EXHIBIT A – Abstract of Bids) before the bid proposals deadline of December 6, 2016; and

WHEREAS, GWA's design consultant for the project along with GWA Engineering analyzed the bid proposals received, particularly the lowest bid received and determined that "BME & Son Inc." successfully submitted the lowest bid as a responsive and responsible bidder and met all the bid requirements set forth by GWA (SEE EXHIBIT B – Bid Evaluation); and

Exhibit B (3 of 4)

WHEREAS, GWA management finds BME & Sons bid proposal acceptable and now seeks CCU approval of the bid proposal amount of Five Million Nine Hundred Nineteen Thousand Forty Five Dollars and Forty Three Cents ($5,919,045.43) (SEE EXHIBIT C – Bid Proposal); and

WHEREAS, GWA management further seeks CCU approval of a five percent (5%) contingency to the bid proposal amount or Two Hundred Ninety Five Thousand Nine Hundred Fifty Two Dollars and Twenty Seven Cents ($295,952.27) to bring the total authorized funding amount to Six Million Two Hundred Fourteen Thousand Nine Hundred Ninety Seven Dollars and Seventy Cents ($6,214,997.70); and

WHEREAS, funding for this project will be from the 2016 Bond Funds under the line items CIP WW 11-03 "Baza Gardens STP Replacement" and Internally Funded CIP; 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 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).
3. The CCU hereby authorizes the management of GWA to accept the bid proposal from "BME & Son Inc." attached hereto as Exhibit C and which is incorporated into this Resolution in its entirety.
4. The CCU hereby further authorizes the management of GWA to enter into a contract with "BME & Son Inc." in the amount Five Million Nine Hundred Nineteen Thousand Forty Five Dollars and Forty Three Cents ($5,919,045.43).
5. The CCU hereby further approves the funding total of Five Million Nine Hundred Nineteen Thousand Forty Five Dollars and Forty Three Cents ($5,919,045.43) plus a five percent (5%) contingency of Two Hundred Ninety Five Nine Hundred Fifty Two Dollars and Twenty Seven Cents ($295,952.27)

Exhibit B (4 of 4)

for a total amount of Six Million Two Hundred Fourteen Nine Hundred Ninety Seven Dollars and Seventy Cents ($ 6,214,997.70).

6. The CCU hereby further approves funding for this project to be from the 2016 Bond Funds under the line items CIP WW 11-03 "Baza Gardens STP Replacement" and Internally Funded CIP.

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

DULY AND REGULARLY ADOPTED, this 24th day of January 2017.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

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: 4

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

NO RESPONSE TO POLL 1

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. 47- FY2018
RELATIVE TO APPROVAL AND ADOPTION OF GWA's ASSET MANAGEMENT POLICY

What is the project's objective and is it necessary and urgent?
GWA has implemented a formal asset management program, and has implemented a Computerized Maintenance Management System (CMMS) to protect the investment GWA has made in our infrastructure assets as part of the adopted Capital Improvement Program.

The objective of this resolution is to formally adopt a written Asset Management Policy to reinforce the Authority's commitment to the proper maintenance, management and risk-based decision-making as part of a properly developed Asset Management System.

The adoption of this Asset Management Policy is necessary and important to achieving the following:

- Development of an Asset Management Program that conforms to and can be accredited in compliance with the ISO 55001 Asset Management Standard.
- Improved Levels of Service
- Informed asset investment decisions
- Managed risk
- Improved organizational sustainability
- Improved efficiency and effectiveness

Where is the location?
N/A.

How much will it cost?
No direct costs incurred. The adoption of the Asset Management Policy supports the development of proper operations and maintenance budgets through an effective Asset Management System which tracks maintenance costs, plans needed maintenance, and utilizes risk-based management decisions for GWA's assets.

When will it be completed?
The adoption of the Policy supports continuous improvement of an established asset management program, thus, its effectivity is continuous and without end.

What is the funding source?
N/A

The RFP/BID responses (if applicable):
N/A.

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. 47-FY2018

RELATIVE TO APPROVAL AND ADOPTION OF GWA's ASSET MANAGEMENT POLICY

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 invested millions of dollars under its Capital Improvement Program for new infrastructure assets as part of Water Resource Master Plan, and U.S. District Court Order requirements; and

WHEREAS, the CCU has emphasized the importance of protecting those new assets as well as maximizing the useful life of all of its infrastructure assets through a program of proper maintenance and operation; and

WHEREAS, GWA has implemented an Asset Management Program and deployed a Computerized Maintenance Management System (CMMS) in furtherance of proper management of these infrastructure assets; and

WHEREAS, GWA seeks to continuously improve its Asset Management Program and conform to industry standards in the development of the Program; and

WHEREAS, compliance with and accreditation to the ISO 55001 Asset Management Standard will best serve the interest of GWA ratepayers, for accountability, sustainability, risk management, service management and financial efficiency; and

WHEREAS, one of the requirements for accreditation to the ISO 55001 Asset Management Standard is to have an "Asset Management Policy" implemented within the GWA; and

WHEREAS, GWA developed its **Asset Management Policy dated 15 August 2018** authored by its Utility Services Administrator (Operations) and approved by the General Manager, attached as **EXHIBIT "1";** 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 continued improvement of the Asset Management Program is essential to protecting the investment in GWA's Capital Improvements, improving its Levels of Service, providing informed asset investment decisions, managing risk improving organizational sustainability, improving efficiency and effectiveness of GWA.
3. The CCU finds that the adoption of the "Asset Management Policy" is indeed necessary to confirm and reinforce the CCU's commitment to effective asset management.
4. The CCU supports the continued development of the Asset Management Program to industry standards and accreditation to the ISO 55001 Asset Management Standard.
5. The CCU hereby authorizes the management of GWA to adopt and implement the attached Asset Management Policy

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

DULY AND REGULARLY ADOPTED, this 28th day of August 2018.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
Chairperson	Secretary

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

Asset Management Policy

Document Status: **Draft**

Date Issued: **August 15, 2018**

Lead Author: **Ma. Teogenesa Q. Salayon, Utility Services Administrator - Asset Management**

Approved by: **Miguel C. Bordallo, P.E. General Manager**

Record of Policy Review:

Date Policy was Issued	Date of Review	Reason for Review	Lead Reviewer	Additional Comments

1. Purpose and Scope

The purpose of this policy is to establish the priority and commitment the Governance and Management of Guam Waterworks Authority assign to responsible management of all of its assets, specifically to maximize the useful life and minimize life-cycle costs of all relevant assets. The scope of this policy covers all identified assets within the asset management system, and as documented in the asset inventory and accounted for in the valuation of the assets.

2. Policy

It is and shall be the Policy of the Consolidated Commission on Utilities, and the Executive Management of the Guam Waterworks Authority, to develop, implement, maintain and continuously improve the GWA Asset Management System, and to promote amongst its employees, stakeholders and vendors, an effective and efficient, collaborative culture of asset management at Guam Waterworks Authority. In establishing and implementing this Policy, the CCU and GWA will:

- Develop, adopt and periodically review, revise and improve Guam Waterworks Authority's (GWA's) Strategic Asset Management Plan;
- Plan for, develop and adopt an operating budget which provides for sufficient resources to carry out necessary maintenance activities, actively monitor and replenish critical parts inventory, and acquire needed replacements or renewals;
- Require, promote, and support effective and efficient work processes and risk-based decision making in alignment with GWA's mission.
- Implement, maintain and continuously improve asset management consistent with international standard ISO 55001: 2014 *Asset Management- Management Systems-Requirements*

Further, the following shall be goals to be incorporated into the GWA Asset Management System:

- Optimizing O&M activities: GWA shall seek to achieve the most effective and efficient maintenance approaches and strategies, such as mixing preventive and predictive maintenance, as operational risk reduction options.
- Utilizing asset risk assessments: GWA shall utilize risk of failure/consequence of failure assessments and analysis to drive asset management decisions, such that those assets representing the highest risks receive the appropriate risk mitigation actions, such as capital renewal or operational enhancements.

- Utilizing life cycle cost analysis: GWA shall identify and evaluate risk mitigation options on the basis of life cycle costs, operational risk reduction, and their ability to be effectively implemented.

- Cost tracking and analysis: GWA shall implement comprehensive maintenance labor, material and equipment cost tracking to develop sufficient data for analyzing and prioritizing maintenance options for efficient funding within available budgets.

- Data collection and management: GWA shall achieve effective management of maintenance related data and information, and employ decision support tools to improve operations, maintenance, and capital investment decisions.

- Continual improvement: GWA shall obtain organizational coordination and commitment through the adoption of new business processes and implement effective change management, with respect to data integration, process improvement and decision making.

3. Responsibilities

The Utility Services Administrator is accountable for the Asset Management System.

The Operations & Maintenance Managers for the various operational divisions (Water Production and Treatment, Water Distribution, Wastewater Collections, and Wastewater Treatment) are accountable for operation and maintenance of GWA's assets in accordance with this Policy and the Asset Management Program.

The Chief Financial Officer is responsible for utilizing the cost data from the Asset Management Program to develop budgets and provide analysis in accordance with this Policy.

The General Manager is responsible for implementing this Policy.

4. Policy Review

The Policy will be reviewed every three years or following significant changes to the operational context of GWA to ensure the policy is current, effective and continuously improved.

Associated References

- GWA Water Resources Master Plan

- ISO 55001:2014 – Asset Management- Management Systems- Requirements

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. 48-FY2018
Relative to Approval of Purchases Under Indefinite Quantity Contract with JMI Edison for Submersible Pump and Motor Inventory for Deep Wells

What is the project's objective and is it necessary and urgent?
The objective is to provide for adequate operational inventory of critical spares for the Water Production and Treatment Division. This requested approval will allow for purchasing pumps and motors to improve reliability of GWA's water supply system. The project is to provide submersible pumps and motors to GWA Deep Wells to ensure adequate stock is available at all times and bring back online existing down wells.

Where is the location?
GWA Island-wide Deep-well Production Facilities.

How much will it cost?
Seven Hundred Thirty-Six Thousand Eight Hundred Sixty-Six and Fifty-Five Cents ($ 736,866.55).

Actual Total Purchases	Motors	Pumps	Total	Ave / Qtrly	Start Date	End Date
	91	123	214			
3 Year contract	$679,389.14	$403,511.28	$1,082,900.42	$120,322.27	5-Jun-15	4-Jun-18

Revised Estimated Pump and Motor Purchase

	Motors	Pumps	Total	Ave / Qtrly	Start date	End Date
1 Year Renewal	53	96	149		10-Aug-18	9-Aug-19
	$415,860.18	$321,006.37	$736,866.55	$184,216.64		

*2019 Estimated Order	Est Qty Qtrly Order	Estimated Qtrly Order	One Year Order
2019 Motor Spares	4	$110,803.49	$443,213.96
2019 Pump Spares	8	$102,600.08	$410,400.32
TOTAL AMOUNT		**$213,403.57**	**$853,614.28**

*PUC Docket 18-02, Approved Nov. 30, 2017.

**2019 Estimated Order (REVISED)	Est Qty Qtrly Order	2019 Revised Order	One Year Order
2019 Motor Spares	13	$103,965.05	$415,860.18
2019 Pump Spares	24	$80,251.59	$321,006.37
TOTAL AMOUNT		**$184,216.64**	**$736,866.55**

**CCU Resolution No. 42-2018, Request for Approval.

When will it be completed?
The indefinite quantity contract was in place for an initial term of 3 years and two (2) years one-year option to renew. Purchases will be ongoing on an as-needed basis over the life of the contract term.

Contract Term	Three (3) years.
Notice to Proceed	Vendor Acceptance of Notice Dated June 4, 2015
Start of 3 Year Contract	June 5, 2018
End of 3 Year Contract	June 4, 2018
1 Year Renewal	
Start of 1 Year Renewal	August 10, 2018
End of 1 Year Renewal	August 9, 2019

What is the funding source(s)?
FY 2019 Revenue Funded Capital Improvements.

The RFP / Bid Responses
IFB 2015-03 Submersible Motors, Pumps and Pump and Motor.

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. 48-FY2018

RELATIVE TO APPROVAL OF PURCHASES UNDER INDEFINITE QUANTITY CONTRACT WITH JMI-EDISON FOR SUBMERSIBLE PUMPS AND MOTOR INVENTORY FOR DEEPWELLS

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 advertised an Invitation for Bid (IFB) 2015-03 soliciting cost quotations from experienced and responsive bidders to provide Deepwell Submersible Pumps and Motors to provide adequate stock replenishment when needed; and

WHEREAS, there was one responsive and responsible bidder who met Submersible Pumps and Motors requirements of IFB 2015-03; and

WHEREAS, the IFB 2015-03 offers were evaluated by GWA's review committee; and

WHEREAS, GWA's review committee determined that the offer for Submersible Pumps and Motors made by JMI-Edison is fair and reasonable by the basis of past purchases made [ATTACHMENT 1 - EXHIBIT A]; and

WHEREAS, GWA accepted JMI-Edison's bid proposal of indefinite quantity bid of "All or None Bid for Franklin Electric Motors" and "All or None Bid for Franklin Electric and

DRAFT

Grundfos Pump" with an estimated total amount of Seven Hundred Six Thousand Six Hundred Eighty-Seven Dollars and Thirty Cents ($ 706,687.30) [ATTACHMENT 1 - EXHIBIT B]; and

WHEREAS, CCU approved the three (3) year contract with two (2) optional one-year extensions with JMI Edison for an estimated initial term amount of Seven Hundred Six Thousand Six Hundred Eighty-Seven Dollars and Thirty Cents ($706,687.30); and

WHEREAS, CCU further approved additional purchases for FY2017 and FY2018 to round out the initial 3-year term total of Nine Hundred Sixty-Three Thousand Eighteen Dollars and Sixty-Two Cents ($963,018.62) for Submersible Pump and Motor Purchases [ATTACHMENT 1]; and

WHEREAS, PUC approved the purchase of Submersible Pumps and Motors under existing contract with JMI-Edison for FY 2018, but required that GWA submit documentation of approval of additional purchases under the contract by the CCU, which GWA estimated at that time to be at a cost of Two Hundred Thirteen Thousand Four Hundred Three Dollars and Fifty-Seven Cents ($213,403.57) per quarter [ATTACHMENT 2]; and

WHEREAS, GWA Management renewed the contract for one-year term extension [ATTACHMENT 3]; and

WHEREAS, GWA Management has assessed its operational needs for the coming year, analyzed the information available and determined that for FY2019 GWA will need to purchase additional pumps and motors to maintain proper inventory levels of critical spares in accordance with established operations and maintenance practices, which averages out to be One Hundred Eighty-Four Thousand, Two Hundred Sixteen Dollars and Sixty-Four Cents($184,216.64) per quarter; and

WHEREAS, GWA Management seeks CCU approval to purchase fifty-three (53) submersible motors of various sizes in the amount of Four Hundred Fifteen Thousand Eight Hundred Sixty and Eighteen Cents ($ 415,860.18) and ninety-six (96) submersible pumps of various types or stages in the amount of Three Hundred Twenty-One Thousand Sixty Three and

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Thirty-Seven Cents ($321,006.37) which totals to Seven Hundred Thirty-Six Thousand Eight Hundred Thirty-Size and Fifty-Five Cents ($ 736,866.55) [ATTACHMENT 4] ; and

WHEREAS, the source of funding for the purchase of fifty-three (53) submersible motors and ninety-six (96) submersible pumps of various types or stages will FY 2019 Revenue Funded Capital Improvement Projects.

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 hereby authorizes the management of GWA to proceed based on the renewal for one year contract with IFB 2015-03.
3. The CCU hereby further authorizes the management of GWA to purchase Seven Hundred Thirty-Six Thousand Eight Hundred Sixty-six and Fifty Five Cents ($736,866.55) of pumps and motors.
4. The CCU hereby further approved the funding total of Seven Hundred Thirty-Six Thousand Eight Hundred Sixty-six and Fifty Five Cents ($736,866.55) of pumps and motors.

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

DULY AND REGULARLY ADOPTED, this 28th day of August, 2018.

Certified by:

_____

JOSEPH T. DUENAS
Chairperson

Attested by:

_____

J. GEORGE BAMBA
Secretary

DRAFT

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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GUAM CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 22-FY2017

RATIFICATION OF PURCHASES UNDER INDEFINITE QUANTITY CONTRACT WITH JMI-EDISON FOR SUBMERSIBLE PUMPS AND MOTORS FOR GWA DEEP WELLS

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 advertised an Invitation for Bid (IFB) 2015-03 soliciting cost quotations from experienced and responsive bidders to provide Deep Well Submersible Pumps and Motors and provide adequate stock replenishment when needed; and

WHEREAS, there was one responsive and responsible bidder who met the Submersible Pumps and Motors requirements of IFB 2015-03; and

WHEREAS, IFB 2015-03 offers were evaluated by GWA's review committee; and

WHEREAS, GWA's review committee determined that the offer for Submersible Pumps and Motors made by JMI-Edison was fair and reasonable by the basis of past purchases made [EXHIBIT A]; and

WHEREAS, GWA accepted JMI-Edison's bid proposal of indefinite quantity bid of "All or None Bid for Franklin Electric Motors" and "All or None Bid for Franklin Electric and Grundfos Pump" with an estimated total amount of Seven Hundred Six Thousand Six Hundred Eighty-Seven Dollars and Thirty Cents ($706,687.30) [EXHIBIT B]; and

WHEREAS, GWA management seeks CCU ratification of purchases related to IFB 2015-03 in the total amount of Seven Hundred Thirty-Six Thousand One Hundred Sixty-Four Dollars and Forty-Seven Cents ($736,164.47) [EXHIBIT C]; and

WHEREAS, GWA management seeks CCU approval to purchase additional pumps and motors for GWA Deep Wells in the total amount of Two Hundred Twenty-Six Thousand Eight Hundred Fifty-Four Dollars and Fifteen Cents ($226,854.15) [EXHIBIT D]; and

WHEREAS, GWA management seeks CCU approval and ratification of IFB 2015-03 for Submersible Pumps and Motors' indefinite quantity bid in total of Nine Hundred Sixty-Three Thousand Eighteen Dollars and Sixty-Two Cents ($963,018.62), the sum of Encumbered Purchase Orders ($736,164.47) and Purchase of Additional Pumps and Motors ($226,854.15); and

WHEREAS, the source of funding for the Submersible Pumps and Motors are Multiple Bond Fund Programs (PW 09-02 Water Wells, Bond 2013 and PW 09-08 Mechanical and Electrical Equipment Replacement Bond 2013) and Internally Funded Capital Improvement Projects.

NOW THEREFORE BE IT RESOLVED, the Consolidated Commission on Utilities does hereby approve and ratify 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 "JMI-Edison" are fair and reasonable.
3. There was no indication of bad faith or fraud in any of the procurements contained therein.
4. All of the procurement herein are in the best interest of the territory of Guam and Guam Waterworks Authority.
5. The CCU ratifies the encumbered purchases under the previously issued purchase orders relative to the Indefinite Quantity Contract with JMI-Edison

in the total amount of Seven Hundred Thirty-Six Thousand One Hundred Sixty-Four Dollars and Forty-Seven Cents ($736,164.47).

6. The CCU hereby further authorizes GWA management to purchase additional pumps and motors for GWA Deep Wells in the total amount of Two Hundred Twenty-Six Thousand Eight Hundred Fifty-Four Dollars and Fifteen Cents ($226,854.15).
7. The CCU hereby further approves the funding total of Nine Hundred Sixty-Three Thousand Eighteen Dollars and Sixty-Two Cents ($963,018.62) for the initial three-year contract term.
8. GWA management is hereby authorized to seek PUC approval in the event the contract value exceeds One Million Dollars ($1,000.000.00) as required by Docket 00-04.

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

DULY AND REGULARLY ADOPTED, this 21st day of February, 2017.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

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: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

EXHIBIT A (1 of 6)

GUAM WATERWORKS AUTHORITY

"Better Water. Better Lives."
Gloria B. Nelson Public Services Building
688 Route 15, Mangilao, Guam 96913

MEMORANDUM

TO: General Manager

VIA: Supply Management Administrator

FROM: Evaluation Committee Members

SUBJECT: Invitation to Bid No. GWA 2015-03
Ref: Submersible Motors, Pumps, and Pump & Motor

Invitation for Bid No: GWA 2015-03 was officially announced and advertised in the Pacific Daily News, Marianas Variety and Guam Waterworks Authority Website on January 29, 2015 and open as scheduled on March 04, 2015 @ 10:00 am. Twelve (12) prospective bidders expressed their interests by acknowledging receipt of the bid package thru GWA's website.

Bidders Register:

1. Z Enterprises, Inc
2. Frontier Supply
3. Hikhjkj
4. JMI Edison
5. Black Const. Corp
6. Benson Guam Ent
7. HDR, Inc
8. Guam Pacific Ent
9. JJ Global
10. Inland Builders
11. Xiong's Family
12. David Meinung

Of the twelve (12), one (1) submitted their bid package, namely:

- JMI Edison

An evaluation committee was formally assembled and met on March 17, 2015 @ 9:30 am in Procurement's office to review/discuss and evaluate the bid.

Committee members consist of:

- Ron Topasna
- Karen Grape
- Peter Salas

1

EXHIBIT A (2 of 6)

Ref: IFB 2015-03 Submersible Motors, Pumps, and Pump & Motor

The committee members reviewed the bid proposal and have determined JMI Edison being the only bidder, respectfully submitted a fair cost and are as followed:

ITEM NO.	DESCRIPTION	ESTIMATED QTY		UNIT COST	EXTENSION
"All or None Bid for Franklin Electric Motors"					
1.1A	SUBMERSIBLE MOTOR 10 H.P.	1	EA	$2,218.17	$2,218.17
B	SUBMERSIBLE MOTOR 20 H.P.	2	EA	$2,797.88	$5,595.76
C	SUBMERSIBLE MOTOR 30 H.P.	1	EA	$3,487.42	$3,487.42
D	SUBMERSIBLE MOTOR 40 H.P.	3	EA	$4,023.70	$12,071.10
E	SUBMERSIBLE MOTOR 50 H.P.	3	EA	$5,332.76	$15,998.28
F	SUBMERSIBLE MOTOR 60 H.P	37	EA	$6,110.36	$226,083.32
G	SUBMERSIBLE MOTOR 75 H.P.	3	EA	$11,171.65	$33,514.95
H	SUBMERSIBLE MOTOR 100 H.P.	4	EA	$12,330.12	$49,320.48
I.	SUBMERSIBLE MOTOR 125 H.P.	2	EA	$16,179.37	$32,358.74
J.	SUBMERSIBLE MOTOR 150 H.P.	3	EA	$19,393.95	$58,181.85
				Total Cost:	**$438,830.07**

2

EXHIBIT A (3 of 6)

Ref: IFB 2015-03 Submersible Motors, Pumps, and Pump & Motor

ITEM NO.	DESCRIPTION	ESTIMATED QTY		UNIT COST	EXTENSION
"All or None Bid for Franklin Electric & Grundfos Pumps"					
2.1 A.	SUBMERSIBLE PUMP 70SR7, 6" X 8 STAGE	1	EA	$1,020.24	$1,020.24
B.	SUBMERSIBLE PUMP 70SR15, 6" X 15 STAGE	1	EA	$1,395.34	$1,395.34
C.	SUBMERSIBLE PUMP 150SR30, 6" X 14 STAGE	1	EA	$1,484.16	$1,484.16
D.	SUBMERSIBLE PUMP 150SR40, 6" X 19 STAGE	1	EA	$1,885.65	$1,885.65
E.	SUBMERSIBLE PUMP 175SR20, 6" X 8 STAGE	1	EA	$1,843.65	$1,843.64
F.	SUBMERSIBLE PUMP 175SR25, 6" X 10 STAGE	2	EA	$2,147.92	$4,295.84
G.	SUBMERSIBLE PUMP 175SR30, 6" X 12 STAGE	1	EA	$2,459.99	$2,459.99
H.	SUBMERSIBLE PUMP 175SR40, 6" X 14 STAGE	10	EA	$2,714.46	$27,144.60
I.	SUBMERSIBLE PUMP 175SR40, 6" X 16 STAGE	3	EA	$2,981.52	$8,944.56
J.	SUBMERSIBLE PUMP 175SR50, 6" X 18 STAGE	1	EA	$3,253.38	$3,253.38
K.	SUBMERSIBLE PUMP 250SR25, 6" X 9 STAGES	1	EA	$1,578.98	$1,578.98
L.	SUBMERSIBLE PUMP 250SR30, 6" X 10 STAGES	3	EA	$1,674.40	$5,023.20
M.	SUBMERSIBLE PUMP 250SR40, 6" X 12 STAGES	3	EA	$1,937.27	$5,811.81
N.	SUBMERSIBLE PUMP 250SR40, 6" X 14 STAGES	4	EA	$2,349.56	$9,398.24

3

Ref: IFB 2015-03 Submersible Motors, Pumps, and Pump & Motor

EXHIBIT A (4 of 6)

O.	SUBMERSIBLE PUMP 250SR50, 6" X 15 STAGES	10	EA	$2,327.96	$23,279.60
P.	SUBMERSIBLE PUMP 250SR50, 6" X 18 STAGES	2	EA	$2,942.51	$5,885.02
Q.	SUBMERSIBLE PUMP 250SR60, 6" X 20 STAGES	3	EA	$3,223.97	$9,671.91
R.	SUBMERSIBLE PUMP 325SR25, 6" X 7 STAGES	1	EA	$1,541.17	$1,541.17
S.	SUBMERSIBLE PUMP 325SR40, 6" X 9 STAGES	2	EA	$1,842.45	$3,684.90
T.	SUBMERSIBLE PUMP 325SR40, 6" X 11 STAGES	1	EA	$2,236.14	$2,236.14
U.	SUBMERSIBLE PUMP 325SR50, 6" X 13 STAGES	13	EA	$2,552.42	$33,181.46
V.	SUBMERSIBLE PUMP 325SR60, 6" X 18 STAGES	2	EA	$3,319.40	$6,638.80
W.	SUBMERSIBLE PUMP 325SR75, 6" X 21 STAGES	1	EA	$4,905.58	$4,905.58
X.	SUBMERSIBLE PUMP 400SR50, 8" X 7 STAGES	1	EA	$3,494.64	$3,494.64
Y.	SUBMERSIBLE PUMP 400SR75, 8" X 10 STAGES	2	EA	$4,736.93	$9,473.86
Z.	SUBMERSIBLE PUMP 400SR100, 8" X 13 STAGES	3	EA	$5,418.10	$16,254.30
AA.	SUBMERSIBLE PUMP 475SR100, 8" X 11 STAGES	3	EA	$5,426.50	$16,279.50
AB.	SUBMERSIBLE PUMP 475SR125, 8" X 14 STAGES	2	EA	$6,226.49	$12,452.98
AC.	SUBMERSIBLE PUMP 625S-1500, 8" x 7A STAGES	2	EA	$9,468.84	$18,937.68

4

AD.	SUBMERSIBLE PUMP 625S-1500, 8" x 7 STAGES	2	EA	$9,468.84	$18,937.68
AE.	SUBMERSIBLE PUMP 800S-1000, 8" x 4A STAGES	1	EA	$5,462.38	$5,462.38
				Total Cost:	**$267,857.23**

[Grand Total Cost: $706,687.30]

After a thorough evaluation, the committee members clarified and confirmed with JMI Edison on Item No: 1.1a the submitted Total Cost indicated $212,746.75. JMI responded dated on March 26, 2015 and advised the members it was a typographical error and the total cost should state $438,830.07. In closing, the committee members agreed to accept the bid offer from JMI Edison and have determined they submitted and complied with all specifications and requirements set forth in the IFB.

Summary:

This is an "Indefinite Quantity Bid" pursuant to the Guam Procurement Regulations. The quantities reflected are only estimated and not guarantee of amounts to be purchased. Quantities may increase or decrease thru the duration of the contract and continued purchase is subject to the availability of funds. No guarantee or other commitment is made to vendors in terms of purchasing quantity and the amounts set forth in this bid are only estimates of needs for the near term.

Please note: This is an Indefinite Quantity Bid so the grand total cost stated above does not mean it's a guaranteed cost that GWA will be issuing.

Contract Term:

GWA and the lowest responsible bidder may enter into a contract (which may be in the form of a Purchase Order) on terms acceptable to GWA which shall commence upon vendor's acknowledged receipt of a Notice to Proceed from GWA. The initial term of the contract is three (3) years with two (2) one year options to renew, subject to availability of funds and agreement between the parties.

Concurred and accepted by the committee members:

Ron Topasna, Water Plant Superintendent

5

Ref: IFB 2015-03 Submersible Motors, Pumps, and Pump & Motor

Karen Cheryl C. Grajo, Management Analyst III, Operations

Peter Salas, Buyer II, Procurement

Your approval is greatly appreciated.

Antonio Camacho

In consideration of the foregoing, please indicate your approval of this recommendation by your signature below.

[✓] CONCURRED [ ] UNCONCURRED

VINCENT ED. GUERRERO, SMA

[✓] APPROVED [ ] DISAPPROVED

3/30/2015

MARK G. MILLER, GENERAL MANGER, INTERIM

01 33 03p m 03-31-2015 | 2 | 6716493750

6716493750 GWA Procurement Supply 01:22:59 p.m. 03-31-2015 2 /3

EXHIBIT B

GUAM WATERWORKS AUTHORITY

"Better Water. Better Lives."
Gloria B. Nelson Public Services Building
688 Route 15, Mangilao, Guam 96913
Tel: (671) 300-6026/27 Fax: (671) 649-3750

MAR 3 1 2015

JMI Edison
125 North Marine Drive
P.O. Box 6577
Tamuning, Guam 96931
Ph: 646-6400 Fax: 649-4835

RE: Notice of Award for GWA Bid No. 2015-03
For: Submersible Motors, Pumps, and Pump & Motor

Hafa Adai!

The Guam Waterworks Authority ("GWA") has considered the bid submitted by JIM Edison for the above described reference in response to its Advertisement for Bids dated January 29, 2015.

Therefore, JMI Edison is hereby notified the proposal for the Indefinite Quantity Bid has been accepted by GWA. Please be advised the Bid Bond must remain in full force and effect until all performance periods have ended **(e.g., until warranty period has ended as any warranty is a service provided in conjunction with the delivery of goods).**

You are hereby advised that any obligations incurred by JMI Edison prior to execution of the contract are at your own risk. GWA shall have no obligation to reimburse costs incurred prior to execution of the contract.

You are required to return an acknowledged copy of this Notice of Award to the Procurement & Supply Administrator.

Sincerely,

3/30/2015

Mark G. Miller
General Manager, Interim

01:33:03 p.m. 03-31-2015	3	6716493750

Ref: IFB 2015-03 Submersible Motors, Pumps, and Pump & Motor

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

Dated this 31st day of March 2015.

By JEFFREY PAESTE
Title Operations Manager

******* END OF NOTICE OF AWARD *******

EXHIBIT C

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

Encumbered Purchase Orders Relative to IFB 2015-13

PO No	PO Amount	PO Date	Funding Source
297992	$42,772.51	04/16/15	PW 09-08 Mechanical and Electrical Equipment Replacement, Bond 2013
298208	$59,887.34	06/05/15	PW 09-08 Mechanical and Electrical Equipment Replacement, Bond 2013
298218	$165,918.18	06/05/15	PW 09-08 Mechanical and Electrical Equipment Replacement, Bond 2013
298345	$21,462.24	07/14/15	PW 09-08 Mechanical and Electrical Equipment Replacement, Bond 2013
298695	$32,426.64	11/18/15	PW 09-08 Mechanical and Electrical Equipment Replacement, Bond 2013
298783	$88,111.79	12/16/15	Internally Funded CIP
299504	$160,047.56	05/20/16	PW 09-02 Water Wells, Bond 2013
299589	$141,981.34	06/14/16	PW 09-02 Water Wells, Bond 2013
300204	$23,556.87	11/14/16	Internally Funded CIP
Total Amount	**$736,164.47**		

Copies of all Purchase Orders attached.

EXHIBIT D

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

Additional Purchases

Submersible Motors	Qty	Unit Cost	Amount
150 hp. Franklin Motor	2	$19,393.95	$38,787.90
125 hp. Franklin Motor	1	$16,179.37	$16,179.37
100 hp. Franklin Motor	1	$12,330.12	$12,330.12
75 hp. Franklin Motor	2	$11,171.65	$22,343.30
60 hp. Franklin Motor	5	$6,110.36	$30,551.80
50 hp. Franklin Motor	6	$5,332.76	$31,996.56
40 hp. Franklin Motor	4	$4,023.70	$16,094.80
Total Submersible Motors	**21**		**$168,283.85**
Submersible Pumps	**Qty**	**Unit Cost**	**Amount**
175 SR-40F66- 1463 (6"x 14 stage)	8	$2,714.46	$21,715.68
250 SR-50F66-1563 (6"x 15 stage)	4	$2,327.96	$9,311.84
250 SR-40F66- 1263 (6"x 11 stage)	1	$1,937.27	$1,937.27
250SR-50F66-1863	1	$2,942.51	$2,942.51
250SR-40F66-1463	1	$2,349.56	$2,349.56
400 SR-100F86-1384 (8"x 13 stages)	1	$5,418.10	$5,418.10
475 SR-100F86- 1186 (8"x 13 stages)	1	$5,426.50	$5,426.50
NFPA-625S-1500 (Stages 7A)	1	$9,468.84	$9,468.84
Total Submersible Motors	**18**		**$58,570.30**
Total Pumps and Motors	**39**		**$226,854.15**

RECEIVED
NOV 3 0 2017
Public Utilities Commission
GUAM

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION

IN RE: PETITION FOR APPROVAL OF INCREASED SPENDING UNDER EXISTING CONTRACT WITH JMI-EDISON FOR SUBMERSIBLE PUMPS & MOTORS	)	**GWA DOCKET 18-02**
	)	**ORDER**

INTRODUCTION

This matter comes before the Guam Public Utilities Commission (the "PUC" or the "Commission") pursuant to the Petition for Increased Spending Under An Existing Contract for Submersible Pumps and Motors to JMI-Edison (the "Petition"), filed by the Guam Waterworks Authority ("GWA") on October 18, 2017.

In January of 2015, GWA issued Invitation for Bid Number GWA 2015-03 ("IFB 2015-03") soliciting the purchase of submersible pumps and motors for GWA's drinking wells.[1] In March of 2015, GWA's procurement team evaluated and selected JMI-Edison's indefinite quantity bid.[2] Thereafter, GWA awarded the bid to JMI-Edison and entered into a three-year contract with JMI-Edison, with two (2) yearlong options to renew.

On July 28, 2017, in GWA Docket 17-08, the Commission issued an Order ratifying the underlying procurement and approving the contract between JMI-Edison for the purchase of submersible pumps and motors, for an estimated cost of $1,300,282.92.

On November 28, 2017, the Administrative Law Judge of the PUC Joephet R. Alcantara (the "ALJ") filed a report regarding the instant Petition, which included his

[1] Application to Award an Indefinite Quantity Contract for Submersible Pumps and Motors to JMI-Edison ("Docket 17-08 Petition"), p. 1 (July 12, 2017).

[2] Docket 17-08 Petition, p. 1.

findings and recommendations based on the administrative record before the PUC. The ALJ made the following findings.

DETERMINATIONS

When the PUC ratified the procurement for submersible pumps and motors, and approved the contract between GWA and JMI-Edison for the purchase of submersible pumps and motors back in July, 2017, the PUC also considered additional purchases in 2018 under the contract. With respect to the purchase of additional pumps and motors in 2018, GWA was required to return to the PUC with a listing, itemizing such additional purchases.

In this Petition, GWA submitted that "[i]n an effort to build-up the deep well pump and motor inventory, GWA management reviewed historical inventory, critical production numbers and empirical well repair schedules to create an on-hand purchase schedule and associated quarterly replenishment guidelines."[3] GWA requested PUC approval of $612,778.13 for FY2018, as well as quarterly purchases of $213,403.57 for the remainder of the contract. In support of its request, GWA provided the PUC with an inventory of its deep well submersible pumps and motors, which indicates purchases for 2017, 2018, plus three additional quarters after 2018.

The ALJ found that for FY2018, GWA intends on purchasing fifty (50) motors and around seventy (70) pumps, for a total cost of $612,778.13. Under the JMI-Edison contract, the submersible motors range from $2,218.17 to $19,393.95, depending on the strength and horsepower of the motor. The submersible pumps range from

[3] Petition for Increased Spending Under an Existing Contract with JMI-Edison for Submersible Pumps and Motors, p. 2 (Oct. 18, 2017).

$1,020.24 to $9,468.84, depending on the size of, and number of stages contained in, the pump. Back in July, GWA initially indicated that it would purchase $597,847.18 worth of pumps and motors for 2018.

With respect to purchases after FY2018, based on the listing provided by GWA, GWA will purchase on average one (1) of each pump and motor required for its wells, per quarter.

As noted in the administrative record in GWA Docket 17-08, GWA purchases submersible pumps and motors on an as needed basis, and periodically replenishes its inventory of spare parts. And it is clear that these pumps and motors are necessary to operate GWA's one hundred and four (104) deep wells.

Based on the documentation provided by GWA in this docket, and for the other reasons set forth herein, the ALJ recommended that the PUC authorize GWA's purchase of submersible pumps and motors for FY2018, at an estimated cost of $612,778.13. With respect to purchases after FY2018, GWA should be required to submit to the PUC documentation of approval of the additional purchases under the contract by the Consolidated Commission on Utilities, which GWA estimates at $213,403.57 per quarter.

ORDERING PROVISIONS

Upon careful consideration of the record herein, the November 28, 2017 ALJ Report, and for good cause shown, on motion duly made, seconded and carried by the affirmative vote of the undersigned Commissioners, the Commission hereby ORDERS the following:

1. The instant Petition is hereby APPROVED and GWA is authorized to purchase submersible pumps and motors under the existing contract with JMI-Edison for FY2018, at a cost not to exceed $612,778.13.

2. With respect to purchases after FY2018, GWA is required to submit to the PUC documentation of approval of the additional purchases under the contract by the Consolidated Commission on Utilities, which GWA estimates at $213,403.57 per quarter. The PUC shall thereafter review the need for such purchases and funding at that time.

3. GWA is ordered to pay the PUC's regulatory fees and expenses, including and without limitation, consulting and counsel fees, and the fees and expenses associated with the instant contract review proceedings. Assessment of the PUC's regulatory fees and expenses is authorized pursuant to 12 G.C.A. §§ 12103(b) and 12125(b), and Rule 40 of the Rules of Practice and Procedure before the PUC.

[SIGNATURES TO FOLLOW ON NEXT PAGE]

SO ORDERED this 30th day of November, 2017.

JEFFREY C. JOHNSON
Chairman

ROWENA E. PEREZ
Commissioner

JOSEPH M. MCDONALD
Commissioner

FILOMENA M. CANTORIA
Commissioner

MICHAEL A. PANGELINAN
Commissioner

PETER MONTINOLA
Commissioner

ANDREW L. NIVEN
Commissioner

P173040.JRA

GUAM WATERWORKS AUTHORITY
"Better Water. Better Lives."
Gloria B. Nelson Public Services Building
688 Route 15, Mangilao, Guam 96913
Tel: (671) 300-6027 Fax: (671) 649-3750

JUN 0 1 2018

JMI Edison
125 North Marine Drive
P.O. Box 6577
Tamuning, Guam 96931
Ph: 646-6400 Fax: 649-4835

Project No: GWA IFB 2015-03
Project Name: Submersible Pumps and Motors
Ref: Contract Renewal

Hafa Adai Mr. Oriondo,

We would like to inform you IFB 2015-03 Submersible Pumps, Motors, Cables and Booster Pump bid contract is up for renewal. As stated on the bid under Contract Term: The initial term of the contract is three (3) years with two (2) one-year options to renew, subject to availability of funds and agreement between the parties.

If JMI Edison agrees to renew this contract, please acknowledge by signing below;

FOR: Romeo Oriondo,
Operations Manager.

Date: 08/10/18

Your response on this matter will be greatly appreciated

Sincerely,

FOR

Vince Guerrero, CPM
Supply Management Administrator

ATTACHMENT 4

GUAM WATERWORKS AUTHORITY
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Tel: (671) 300-6846

2019 MOTOR PURCHASE

Submersible Motor	1st Quarter Motor Qty	1st Quarter Motor Cost	2nd Quarter Motor Qty	2nd Quarter Motor Cost	3rd Quarter Motor Qty	3rd Quarter Motor Cost	4rth Quarter Motor Qty	4rth Quarter Motor Cost	2019 Motor Spare Inventory	2019 Motor Cost
10HP									0	
20HP									0	
30 HP	1	$3,487.42			1	$3,487.42			2	$6,974.84
40 HP	1	$4,023.70			1	$4,023.70	1	$4,023.70	3	$12,071.10
50 HP (critical)	5	$26,663.80	7	$37,329.32	5	$26,663.80	6	$31,996.56	23	$122,653.48
60 HP	4	$24,441.44			3	$18,331.08	3	$18,331.08	10	$61,103.60
75 HP	1	$11,171.65	1	$11,171.65	1	$11,171.65	1	$11,171.65	4	$44,686.60
100 HP (critical)	2	$24,660.24	2	$24,660.24		$0.00	1	$12,330.12	5	$61,650.60
125 HP (critical)			2	$32,358.74	1	$16,179.37		$0.00	3	$48,538.11
150 HP (critical)			1	$19,393.95	1	$19,393.95	1	$19,393.95	3	$58,181.85
TOTAL	**14**	**$94,448.25**	**13**	**$124,913.90**	**13**	**$99,250.97**	**13**	**$97,247.06**	**53**	**$415,860.18**

2019 PUMP PURCHASE

Submersible Pumps	1st Quarter Pump Qty	1st Quarter Pump Cost	2nd Quarter Pump Qty	2nd Quarter Pump Cost	3rd Quarter Pump Qty	3rd Quarter Pump Cost	4rth Quarter Pump Qty	4rth Quarter Pump Cost	2019 Pump Spare Inventory	2019 Pump Cost
250SR-50F66-1863	1	$2,942.51	1	$2,942.51	1	$2,942.51	1	$2,942.51	4	$11,770.04
250SR-40F66-1263	1	$1,937.27	1	$1,937.27	1	$1,937.27	1	$1,937.27	4	$7,749.08
250SR-30F66-1063	1	$1,674.40	1	$1,674.40	1	$1,674.40	1	$1,674.40	4	$6,697.60
400SR-75F86-1084	1	$4,736.93	0	$0.00	1	$4,736.93	1	$4,736.93	3	$14,210.79
400SR-100F86-1384 (critical)	1	$5,418.10	1	$5,418.10	1	$5,418.10		$0.00	3	$16,254.30
70SR-15F66-1763	1	$1,395.34		$0.00		$0.00	1	$1,395.34	2	$2,790.68
150SR-40F66-1963	1	$1,885.65		$0.00	1	$1,885.65	1	$1,885.65	3	$5,656.95
175SR-25F66-1063	1	$2,459.99	1	$2,459.99	1	$2,459.99		$0.00	3	$7,379.97
250SR-25F66-0963	1	$1,578.98		$0.00	1	$1,578.98	1	$1,578.98	3	$4,736.94
250SR-60F66-2063	1	$3,223.97		$0.00	1	$3,223.97	1	$3,223.97	3	$9,671.91
325SR-40F66-1164	1	$2,236.14	1	$2,236.14	1	$2,236.14		$0.00	3	$6,708.42
475SR-125F86-1486 (critical)	1	$6,226.49		$0.00	1	$6,226.49	1	$6,226.49	3	$18,679.47
NFPA-625S-1500-7 (critical)	1	$9,468.84	1	$9,468.84	1	$9,468.84		$0.00	3	$28,406.52
150SR-30F66-1463	1	$1,484.16		$0.00	1	$1,484.16	1	$1,484.16	3	$4,452.48
175SR-20F66-0863	1	$1,843.65	1	$1,843.65	1	$1,843.65		$0.00	3	$5,530.95
175SR-50F66-1863	1	$3,253.38		$0.00	1	$3,253.38	1	$3,253.38	3	$9,760.14
325SR-40F66-0964	1	$1,842.45	1	$1,842.45	1	$1,842.45		$0.00	3	$5,527.35
325SR-75F66-2184	1	$4,905.58		$0.00	1	$4,905.58	1	$4,905.58	3	$14,716.74
400SR-50F86-0764	1	$3,494.64	1	$3,494.64	1	$3,494.64		$0.00	3	$10,483.92
NFPA-800S-1000-4A (critical)	1	$5,462.38		$0.00	1	$5,462.38	1	$5,462.38	3	$16,387.14
175SR-40F66-1463	1	$2,714.46	1	$2,714.46	1	$2,714.46		$0.00	3	$8,143.38
250SR-50F66-1563	3	$6,983.88	3	$6,983.88	2	$4,655.92	3	$6,983.88	11	$25,607.56
250SR-40F66-1463	1	$2,349.56	1	$2,349.56	1	$2,349.56	2	$4,699.12	5	$11,747.80
325SR-50F66-1364			2	$5,104.84	1	$2,552.42	1	$2,552.42	4	$10,209.68
475SR-100F86-1186 (critical)			2	$10,853.00		$0.00	1	$5,426.50	3	$16,279.50
NFPA-625S-1500-7A (critical)			2	$18,937.68		$0.00	1	$9,468.84	3	$28,406.52
325SR-60F66-1864			1	$3,319.40	1	$3,319.40	1	$3,319.40	3	$9,958.20
325SR-25F66-0763			1	$1,541.17		$0.00	1	$1,541.17	2	$3,082.34
TOTAL	**25**	**$79,518.75**	**23**	**$85,121.98**	**25**	**$81,667.27**	**23**	**$74,698.37**	**96**	**$321,006.37**

2019 TOTAL (REVISED)	1st Quarter Qty	1st Quarter Cost	2nd Quarter Qty	2nd Quarter Cost	3rd Quarter Qty	3rd Quarter Cost	4rth Quarter Qty	4rth Quarter Cost	2019 TOTAL Qty	2019 TOTAL COST (REVISED)
2019 Motor Spares	14	$94,448.25	13	$124,913.90	13	$99,250.97	13	$97,247.06	53	$415,860.18
2019 Pump Spares	25	$79,518.75	23	$85,121.98	25	$81,667.27	23	$74,698.37	96	$321,006.37
	39	**$173,967.00**	**36**	**$210,035.88**	**38**	**$180,918.24**	**36**	**$171,945.43**	**149**	$736,866.55

2019 Estimated Order	Est Qty Order	Estimated Qtrly Order	One Year Order
2019 Motor Spares	4	$110,803.49	$443,213.96
2019 Pump Spares	8	$102,600.08	$410,400.32
TOTAL AMOUNT		**$213,403.57**	**$853,614.28**

2019 Estimated Order (REVISED)	Est Qty Order	2019 Revised Order	One Year Order
2019 Motor Spares	13	$103,965.05	$415,860.18
2019 Pump Spares	24	$80,251.59	$321,006.37
TOTAL AMOUNT		**$184,216.64**	**$736,866.55**

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Issues for Decision

Resolution No. 49- FY2018

Relative to Approving the Guam Waterworks Authority Fiscal Year 2019 Budget

What is the project's objective and is it necessary and urgent?

The purpose is to approve GWA's Fiscal Year 2019 Budget.

How much will it cost?

The Fiscal Year 2019 Budget totals $89 million. O&M expenses are comprised of $24 million in salaries and benefits; $15 million in power purchases; $9 million in water purchases; $11 million in administrative and general expenses; $5 million in contractual expenses; $21 million in depreciation and $4 million in retiree supplemental annuities and health care.

When will it be completed?

The FY2019 Budget represents anticipated revenues and expenditures for the fiscal period of October 1, 2018 through September 30, 2019.

What is the funding source?

The funding source is derived from water, wastewater and other sources of revenues estimated at $113 million: $69 million in water sales; $39 million in wastewater; $4 million from the legislative surcharge; and $460 thousand in other revenues.

GUAM CONSOLIDATED COMMISSION ON UTILITIES
RESOLUTION NO 49-FY2018

RELATIVE TO APPROVING THE GUAM WATERWORKS AUTHORITY FISCAL YEAR 2019 BUDGET

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 has formulated and thoroughly reviewed the Fiscal Year 2018 projected year end results in conjunction with the development of Management's proposed Fiscal Year 2019 (FY2019) Budget and does hereby submit said budget to the CCU for their approval as detailed in Exhibit A as attached; and

WHEREAS, the budget encompasses projections for revenues, operating expenditures, debt service, capital outlay and other cash flow requirements needed to meet financial and obligatory covenants; and

WHEREAS, after careful evaluation of several factors that include among others, recent financial data, known and measurable changes in operating conditions, financial policies, existing obligations and developing plans, the FY2019 Budget Plan recommended by Management for approval by the CCU assumes no rate relief; and

WHEREAS, operating revenue for FY2019 are predicated on this assumption and are projected to reach $113 million derived from approximately $69 million in water sales, $39 million in wastewater; $3 million from the legislative surcharge; $460 thousand in Other revenues and $1 million in System Development Charges; and

DRAFT

WHEREAS, operating costs are earmarked at $24 million in salaries and benefits; $15 million in power purchases; $9 million in water purchases; $11 million in administrative and general expenses; $5 million in contractual expenses; $21 million in depreciation and $4 million in retiree supplemental annuities and health care for a combined Fiscal 2019 total of $89 million; and

WHEREAS, the budget, as recommended, allows GWA a staff level of 400 full time employees (FTE) to meet O&M activities; and

WHEREAS, the FY2019 Budget represents Management's best estimates of resources necessary to carry out its strategic objectives consonant with the Authority's mission; and

WHEREAS, it is the General Manager's desire to be granted budget transfer authority to modify or adjust budget amounts among and between budget expense categories, with the exception of salaries and benefits, in the event of changed conditions unanticipated in the FY2019 Budget request; and

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

Section 1. The foregoing recitals hereby constitute the findings of the CCU.

Section 2. The CCU affirms management's recommendation to maintain current rates for basic, and non-lifeline rates across all rate structures and customer classes and legislative surcharges.

Section 3. The Fiscal Year 2019 Proposed Budget of $113 million and $89 million of operating revenues and expenses, respectively, in addition to other cash flow requirements such as debt service, bond reserves, working capital and conforming to the rate covenants for the bond indenture (1.25) and PUC (1.75) are just and reasonable.

Section 4. The General Manager is authorized a staff level not to exceed 400 Full- time employees for FY2019.

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Section 5. The General Manager is authorized to transfer funds up to 10% between and among O&M Budget expenses, excluding Salaries and Benefits categories, as necessary to meet the mission of GWA. Any transfer(s) greater than 10% requires CCU approval.

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

DULY AND REGULARLY ADOPTED, this 28th day of August 2018.

Certified by: Attested by:

_____ _____

JOSEPH T. DUENAS
Chairperson

J. GEORGE BAMBA
Secretary

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

Resolution 49-FY2018

FISCAL YEAR 2019 BUDGET

GUAM WATERWORKS AUTHORITY

GUAM WATERWORKS AUTHORITY
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HIGHLIGHTS

Presented within is the Guam Waterworks Authority Fiscal Year 2019 Budget Proposal for the approval of GWA's governing board, the Consolidated Commission on Utilities (CCU).

The 2011 Federal Court Order, advancing GWA's asset management program, improving core functions, ensuring continued financial progress, a robust debt service coverage, funding preventative maintenance and improving liquidity are the thrust of the FY2019 Budget Plan recommended by GWA management.

2011 Federal Court Order

Momentum continues to complete capital improvement projects mandated by the Federal Court Order. Ninety-eight percent (98%) of court-ordered tasks have been completed to date. The remaining projects are actively in progress at different phases of design or construction and include projects such as rehabilitating and constructing water storage tanks, deep wells and upgrading wastewater plants and conveyance systems. Regular weekly communication is ongoing with the U.S. Environment Protection Agency to report on the status of the projects.

Asset Management Program

GWA rolled out its computerized maintenance management system (CMMS) that supports a risk-based approach to drive the prioritization of maintenance spending. Funds will continue to be allocated on the basis of specific risks to assets with the highest potential of failure and having the biggest impact on levels of service, the environment and community.

To complement the functionality of the CMMS, GWA will also implement critical training intended to raise and refine the skill levels of essential operations and maintenance personnel. To realize this effort, a matching grant was recently awarded for specialized training in the maintenance of pumps and motors, predictive maintenance skills, and leak detection.

Financial Progress

The outlook for FY2019 continues to look strong. Operating income (excluding depreciation) is forecasted to reach approximately $46 million. Nominal increases are projected for revenues, operating expenses and annual debt service, however no rate relief is requested in FY2019.

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GWA will continue to strategically set priorities and allocate resouces to appropriately sustain and improve service in FY2019. GWA will continue to embark on preserving current entitlements such as federal grants and explore alternative sources of funding to help defray capital costs for unfunded mandates. Cash flow will continue to be the modus operandi for FY2019 to ensure sufficiency and liquidity in order to meet all financial obligations.

It remains paramount however that GWA continues to sustain it's historical collection ratios of 95%-99% and execute it's core fundamental functions in order to achieve the financial projections presented in the Budget Plan.

Debt Service

Debt service continues to be the largest line item in the Budget Plan and accounts for 32% of base revenues projected for FY2019. Approximately $500 million in debt is outstanding and consist largely of revenue bonds and a subordinate loan. GWA's revenue bonds are rated BBB-, Baa2 and A- by Fitch Rating, Moody's and Standard and Poors respectively.

Annual debt service in FY2019 is approximately $35 million and represents a $2 million increase from FY2018's level. Debt service coverage is estimated at 1.45 and 1.81 times respectively pursuant to the methodology established by GWA's Revenue Bond Indenture and the Guam Public Utilities Commision (PUC). These coverage levels exceed the 1.25 and 1.75 ratios set by the Bond Indenture and PUC.

No new debt is forecasted in FY2019.

Liquidity

The Budget Plan assumes revenues are adequate to continue funding cash reserves in FY2019. GWA administers two (2) reserves authorized by the CCU, an Operations and Maintenance Reserve equivalent to 180 days of budgeted operating expenses and a Debt Service Reserve equivalent to an amount sufficient to cause debt service coverage for senior long term bonds to be equal to or greater than 1.75 times. Approximately $3.3 million is identified in the Budget Plan to fund the O&M reserve. The Debt Service Reserve is presently fully funded therefore will not require additional deposits in FY2019.

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Proposed Budget

The Budget Plan encompasses projections for revenues, operating expenditures, debt service, paygo and other cash flow requirements needed to meet financial and obligatory covenants. Several factors were taken into consideration that include among others, recent financial data, known and measurable changes in operating conditions, financial policies, existing obligations and developing plans.

Alongside capital improvement projects that are replacing aged water lines and rebuilding supply and storage capacity, there are day-to-day operational schedules that require an equal balance of human and financial resources. The Budget Plan intends to achieve continuity and stability in supporting capital projects without compromising key components in operations and levels of service.

Table I on the following pages represents the Authority's financial blueprint for FY 2019. As noted earlier, all rates remain unchanged for basic, lifeline, non-lifeline and legislative surcharge and base-rate revenue projections are predicated under these assumptions.

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Table I

	Audited 2017	Annualized 2018	Projection 2019
OPERATING REVENUES			
Water Revenues	$ 63,976,842	$ 65,581,775	$ 69,758,957
Wastewater Revenues	37,194,332	38,363,960	38,967,180
Legislative Surcharge	3,207,226	3,359,312	3,536,002
Other Revenues	435,514	450,809	459,046
System Development Charge	871,946	1,099,526	1,173,270
Total Operating Revenues	**105,685,861**	**108,855,382**	**113,894,455**
O & M EXPENSES			
Power Purchases	12,076,262	14,574,680	14,775,781
Water Purchases	7,309,125	9,081,405	9,167,696
Salaries and Benefits	19,543,661	22,926,713	24,435,234
Administrative and General Expenses	10,302,366	10,679,611	10,777,027
Depreciation Expense	16,824,455	18,338,100	21,108,780
Contractual Expense	4,087,430	4,536,161	5,111,471
Retiree Supplemental Annuities/Health care costs	3,376,745	3,451,848	3,622,150
Total Operating Expenses	**73,520,044**	**83,588,518**	**88,998,140**
Earnings (Loss) from Operations	**32,165,817**	**25,266,864**	**24,896,315**
Interest Income-Bond 2013,2014 Refunding,2016,2017 Refunding	784,252	2,491,439	1,019,316
Interest Income-Other Funds	120,382	418,255	166,274
Interest Income-SDC	12,717	89,492	24,862
Interest Expense-Bond 2013,2014 Refunding,2016,2017 Refunding	(26,648,925)	(26,288,346)	(28,653,415)
Interest Expense-BOG	(524,835)	(364,643)	(237,144)
AFUDC	14,066,891	7,500,000	13,887,666
Amortization of Discount, Premium and Issuance Costs	742,328	(372,892)	(213,575)
Grants & other contributions (net of federal expenditures)	21,301,013	10,366,651	66,398,461
Deferred outflows from Pension	-	391,104	(194,412)
Recoveries of bad debts/ Miscellaneous Revenue	(217,999)	-	-
Loss on Defeasance Bond- Refunding	(182,621)	(149,323)	-
Loss on Asset Disposal	(755,256)	-	-
Loss on Inventory write-down	217,999	-	-
Prior Year Adjustment	(321,068)	61,077	-
Net Income (Loss)	**40,760,696**	**19,409,678**	**77,094,349**

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Table I - Continued

	Audited	Annualized	Projection
	2017	2018	2019
INCREASE (DECREASE) in Capital	**40,760,696**	**19,409,678**	**77,094,401**
BOND DEBT SERVICE	**24,562,301**	**26,738,920**	**31,368,415**
DEBT SERVICE COVERAGE CALCULATION - Section 6.12			
Earnings (Loss) from Operations	**32,165,817**	**25,266,864**	**24,896,367**
Investment Income-Other funds	120,382	418,255	166,274
COLA	594,000	594,000	623,700
System Development Charge	(871,946)	(1,099,526)	(1,173,322)
Depreciation	16,824,455	18,338,100	21,108,780
Balance Available for Debt Service - Section 6.12	**48,832,707**	**43,517,693**	**45,621,800**
Debt Service Coverage (1.25X) - Section 6.12	**1.99**	**1.63**	**1.45**
DEBT SERVICE COVERAGE CALCULATION - PUC Debt Ratio			
Balance Available for Debt Service	**48,832,707**	**43,517,693**	**45,621,800**
Transfer - Reserve for O & M	-	1,000,000	
Available for Debt Service -Reserve for Debt Service	11,217,733	11,217,733	11,217,733
Balance Available for Debt Service - PUC	**60,050,441**	**55,735,426**	**56,839,533**
Debt Service Coverage (1.75X) - PUC	**2.44**	**2.08**	**1.81**
CASH FLOW STATEMENT			
Net Income (Loss)	**40,760,696**	**19,409,678**	**77,094,401**
Depreciation & Amortization	17,566,783	17,965,208	20,895,205
AFUDC	(14,066,891)	(7,500,000)	(13,887,666)
Principal Payments - Bonds	(5,040,000)	(5,200,000)	(5,715,000)
Principal Payments-Subordinate loan	(2,863,988)	(3,018,019)	(3,180,334)
Loss on Defeasance Bond and other deferred cost	(559,707)	(540,427)	407,987
System Development Charge	(871,946)	(1,099,526)	(1,173,322)
PayGo/CAPEX	(11,002,200)	(10,463,516)	(13,152,585)
Working Capital Reserve for O & M	(9,498,345)	(1,000,000)	(3,347,412)
Grants and Contributions	(21,301,013)	(10,366,651)	(66,398,461)
Transfer from Capitalized Interest Fund	7,165,500	1,771,471	-
Prior Year Adjustment & Loss on Asset Disposal/Invty writedown	1,076,324	(61,077)	-
Cash Surplus (Deficit)	1,365,212	(102,859)	(8,457,186)
Beginning Balance	8,157,430	9,522,644	9,419,785
Ending Balance	**$ 9,522,644**	**$ 9,419,785**	**$ 962,599**

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REVENUES

Revenues are projected to reach $113 million in FY2019. This compares to $109 million in FY2018 and represents a 5% or $4 million increase as shown in Table II below. This increase is attributable to anticipated growth in GWA's customer base along with improved meter management. Also illustrated in Table II, water revenues are estimated to reach $69 million and wastewater $39 million combined with $5 million from legislative surcharges, Other revenues and System Development Charges.

Table II

REVENUES	Audited	Annualized	Projection
COMPARATIVE	2017	2018	2019
Category			
Water	$ 63,976,842	$ 65,581,775	$ 69,758,957
Wastewater	37,194,332	38,363,960	$ 38,967,180
Legislative Surcharge	3,207,226	3,359,312	3,536,002
Other Revenues	435,514	450,809	459,046
System Development Charge	871,946	1,099,526	1,173,270
Total	**$ 105,685,861**	**108,855,382**	**$ 113,894,455**

Tables III and IV illustrate anticipated water demand and wastewater discharge respectively by customer classes. With anticipated improvements to GWA's meter management and replacement program, a moderate increase in water billed and or charged is expected to be realized in FY2019. Water kgal demand is expected to reach six (6) million thousand gallons (kgal) or approximately thirty-three (33) million kgal or 6% above levels projected for FY2018. Concurrently, a corresponding increase in wastewater discharge is anticipated from 4,085,191 million kgals in FY2018 to 4,434,470 million kgals in FY2019.

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Table III

WATER DEMAND	Audited	Annualized	Projection
	FY2017	FY2018	FY2019
Total Demand (Kgals)	**5,711,790**	**5,676,349**	**6,007,000**
Class Type			
Residential	3,206,811	3,253,920	3,538,561
Commercial	964,639	884,347	907,887
Federal	2,508	1,341	1,327
Government	448,430	454,351	465,345
Hotel	1,004,525	1,005,396	1,005,313
Golf	5,252	2,815	2,617
Agriculture	69,482	66,704	78,009
Irrigation	10,143	7,477	7,942
	5,711,790	**5,676,349**	**6,007,000**

Table IV

WASTEWATER DISCHARGE	Audited	Annualized	Projection
	FY2017	FY2018	FY2019
Total Demand (Kgals)	**4,073,060**	**4,131,508**	**4,434,470**
Class Type			
Residential	1,861,586	1,882,541	2,169,836
Commercial 1	451,470	434,209	447,163
Commercial 2 & Hotel	740,545	742,306	742,306
Commercial 3	147,306	138,573	140,004
Federal (Navy/Air Force)	532,428	577,658	577,658
Government	339,725	356,220	357,502
	4,073,060	**4,131,508**	**4,434,470**

OPERATION & MAINTENANCE

Table V presents a comparative overview of actual operating and maintenance expenses by fiscal year to projections for FY2019. As shown, operating expenses (net of depreciation) are projected to increase 4% above annualized expenses for FY2018. Table V also summarizes budget allocations by major expense categories: $15 million for power purchases; $9 million in water purchases; $24 million for salaries and benefits; $11 million in administrative and general expenses; $5 million in contractual services; and more than $3 million for retirees' supplemental annuities and health care costs funded by the legislative surcharge.

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Utilities

- Water purchases supplement GWA's water supply for residents in certain parts of the island. In FY2019 water purchases are anticipated to remain comparable to levels observed in FY2018.

- Power purchases are driven by water production, wastewater treatment and the conveyance of both. The projected demand for kilowatt hours remain relatively unchanged from the prior year for FY2019.

Salaries & Wages

- Personnel costs are projected at $24 million to fund 400 authorized full-time employees. This projected cost represents a 7% increase from Fiscal 2018 personnel costs of $23 million.

Administrative & General

- Administrative and General expenses include sludge, training, regulatory, advertising and other costs. Combined, these expenses remain relatively flat with a 1% increase from $10.6 million in FY2018 to $10.7 million in FY2019.

Contractual Services

- Contractual services is comprised of costs for building rental, equipment rental, financial and information technology support and laboratory testing among a mix of other services. This budget plan funds an additional $580,000 for outsourcing non-core services to expedite response time to line breaks, equipment failure and scheduled corrective and preventive maintenance.

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Table V

	Audited	Annualized	Projection
	2017	2018	2019
OPERATIONS & MAINTENANCE COSTS			
Power Purchases	$ 12,076,262	14,574,680	$ 14,775,781
Water Purchases	7,309,125	9,081,405	9,167,696
Salaries and Benefits	19,543,661	22,926,713	24,435,234
Administrative and General	10,302,366	10,679,611	10,777,027
Contractual	4,087,430	4,536,161	5,111,471
Retiree Benefits	3,376,745	3,451,848	3,622,150
Total Operating Expenses	**$ 56,695,590**	**65,250,418**	**$ 67,889,359**

Table VI presents the composition of personnel costs: net salaries of $18 million which includes all overtime, night differential and holiday pay, pay for performance and costs to migrate employees to the next market percentile. Retirement is calculated at the statutory rate of 28% of base salaries and comprises the largest portion of benefit costs. Medical, dental and life insurance coverage are based on prevailing rates.

Table VI

	Audited	Annualized	Projection
Salaries & Benefits	FY 2017	FY 2018	FY 2019
Salaries *	$ 14,540,080	16,781,877	$ 17,688,381
Benefits	5,003,581	6,144,836	6,746,853
Total Salaries & Benefits	**$ 19,543,661**	**22,926,713**	**$ 24,435,234**
FTEs	**395**	**395**	**400**

* Net of Capitalized Labor

Table VII summarizes the distribution of Administrative and General expenses. Combined, these costs increase by 1%. Individual expense categories with noted increases from FY2018 year-end totals include the following:

- Training and travel will more than double from $157,000 to $365,000; a major portion ($205,000) of which will cover GWA's matching requirements for a recently approved training grant. As noted earlier, more attention is being focused on refining and strengthening GWA's workforce. This grant will jump start a comprehensive and recurring operational training program intended to fully implement a sound asset management program. The remaining travel and training funds will be used to support other staff development opportunities.

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- Regulatory expenses are costs associated with the Guam Public Utilities Commission (PUC) and other professional services required for regulatory reviews. It includes annual assessments for PUC administration, specialized professional services such as rate consultants and attorney fees for local and federal mandates. GWA anticipates additional engagements with the PUC for ongoing capital improvement projects and the update of GWA's Water Resource Master Plan, increasing regulatory costs by $57,000 from $243,000 to $300,000.

- Advertising funds are used to expand GWA's outreach for a variety of public relations strategies to include among others, reinforcing public confidence and trust in GWA, and providing relevant and quality customer service and information. In FY2019, advertising increases by 6% to $150,000. These funds will be used across multi-media platforms from traditional electronic media, to social networks, public events and industry specific forums.

Table VII

	Audited	Annualized	Projection
	2017	2018	2019
Administrative and General Expenses			
Sludge	$ 1,685,842	1,342,658	$ 1,845,255
Chemicals	2,088,043	2,387,825	2,229,617
Materials & Supplies	1,545,452	2,197,346	2,263,266
Transportation Expense	644,933	659,175	463,771
Telephone & Communication	130,606	180,530	180,650
Claims	265,812	100,668	101,000
Insurance	1,087,233	910,478	953,530
Training & Travel	276,654	157,441	365,000
Advertising	107,853	141,740	150,000
Regulatory	289,613	243,101	300,348
Bad Debts Provision	1,316,397	1,316,347	813,009
Miscellaneous	863,959	1,042,301	1,111,581
Total A&G	**$ 10,302,397**	**10,679,611**	**$ 10,777,027**

Table VIII reflects the contractual expenses by type of service. The contractual budget increases to $5 million in FY2019 from $4 million in FY2018.

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Table VIII

	Audited 2017	Annualized 2018	Projection 2019
Contractual Expense			
Other	$ 1,880,966	2,150,680	$ 2,561,490
Rental (Building)	438,678	424,159	460,332
Rental (Equipment)	712,488	872,453	959,755
Finance & Information Technology	922,812	665,472	705,400
Lab Testing	127,518	416,197	418,349
Legal	4,969	7,200	6,145
Total Contractual	**$ 4,087,431**	**4,536,161**	**$ 5,111,471**

The increases are primarily attributable to the following categories:

- Other Contractual services classifies a myriad of services into a single budget category. This funds activites outsourced to perform grounds maintenance, road restoration, machining services, pump and motor rewinds and cover other expertise required to assess and repair equipment or instruments at facilities as well as engineering service support. Increasing funds for these particular areas will reduce any back-logs in work orders as GWA reforms its approach to preventive maintenance.

- Equipment Rental is intended to augment GWA's existing fleet. Outsourcing plans will require increase funding levels for rentals for more commonly used equipment like backhoes and dump trucks to prevent delays in line repairs when GWA-owned equipment is unavailable due to maintenance or in-use at other job sites. This plan provides a 10 percent increase for equipment rental to $960,000. Procurement of long-term leases are in progress to replace short-term rentals to provide cost benefits and equipment readiness.

- Finance and Information Technology includes costs for annual maintenance and support of computer hardware and software. Technological advances are introducing better ways to conduct business. Provisions for maintenance support of new technology that serve asset management, various reporting tools, and other computer solutions is included in this budget plan.

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CONCLUSION

While this fiscal year budget provides solely for the operational plans over the next 12 months, it sets the stage for developing GWA's next 5-year financial plan. The plan will consider all options to encompass CIP programs, enhance operating efficiencies to deliver optimal services for customers, the environment and the community.

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GUAM WATERWORKS AUTHORITY

APPENDICES

(A – G)

GUAM WATERWORKS AUTHORITY
PROPOSED FY2019 BUDGET

	Audited 2017	Annualized 2018	Projection 2019
Basic Charge -Water/Wastewater	3.50%	4.00%	0.00%
Lifeline Increase (discounted rate)	3.50%	0.00%	0.00%
Non-Lifeline Increase/Demand	3.50%	4.00%	0.00%
Legislative Surcharge	3.70%	3.75%	3.75%
Customer Growth	0.00%	0.00%	0.50%
OPERATING REVENUES			
Water Revenues	$ 63,976,842	$ 65,581,775	$ 69,758,957
Wastewater Revenues	37,194,332	38,363,960	38,967,180
Legislative Surcharge	3,207,226	3,359,312	3,536,002
Other Revenues	435,514	450,809	459,046
System Development Charge	871,946	1,099,526	1,173,270
Total Operating Revenues	105,685,861	108,855,382	113,894,455
O & M EXPENSES			
Power Purchases	12,076,262	14,574,680	14,775,781
Water Purchases	7,309,125	9,081,405	9,167,696
	19,385,388	23,656,086	23,943,477
Salaries and Benefits	19,543,661	22,926,713	24,435,234
Intentionally Left Blank			
Administrative and General Expenses	10,302,366	10,679,611	10,777,027
Intentionally Left Blank			
Depreciation Expense	16,824,455	18,338,100	21,108,780
Intentionally Left Blank			
Contractual Expense	4,087,430	4,536,161	5,111,471
Intentionally Left Blank			
Retiree Supplemental Annuities/Health care costs	3,376,745	3,451,848	3,622,150
Total Operating Expenses	73,520,044	83,588,518	88,998,139
Earnings (Loss) from Operations	32,165,817	25,266,864	24,896,316
Interest Income-Bond 2013,2014 Refunding,2016,2017 Refunding	784,252	2,491,439	1,019,316
Interest Income-Other Funds	120,382	418,255	166,274
Interest Income-SDC	12,717	89,492	24,862
Interest Expense-Bond 2013,2014 Refunding,2016,2017 Refunding	(26,648,925)	(26,288,346)	(28,653,415)
Interest Expense-BOG	(524,835)	(364,643)	(237,144)
AFUDC	14,066,891	14,750,000	13,887,666
Amortization of Discount, Premium and Issuance Costs	742,328	(372,892)	(213,575)
Grants & other contributions (net of federal expenditures)	21,301,013	10,366,651	66,398,461
Loss on Defeasance and other deferred outflows	(1,258,945)	302,858	(194,412)
Net Income (Loss)	40,760,696	26,659,677	77,094,350
INCREASE (DECREASE) in Capital	40,760,696	26,659,677	77,094,350
BOND DEBT SERVICE	**24,562,301**	**26,738,920**	**31,368,415**

GUAM WATERWORKS AUTHORITY
PROPOSED FY2019 BUDGET

	Audited 2017	Annualized 2018	Projection 2019
DEBT SERVICE COVERAGE CALCULATION - Section 6.12			
Earnings (Loss) from Operations	32,165,817	25,266,864	24,896,316
Investment Income-Other funds	120,382	418,255	166,274
COLA	594,000	594,000	623,700
System Development Charge	(871,946)	(1,099,526)	(1,173,270)
Depreciation	16,824,455	18,338,100	21,108,780
Balance Available for Debt Service - Section 6.12	48,832,707	43,517,693	45,621,800
Debt Service Coverage (1.25X) - Section 6.12	1.99	1.63	1.45
DEBT SERVICE COVERAGE CALCULATION - PUC Debt Ratio			
Balance Available for Debt Service	48,832,707	43,517,693	45,621,800
Available for Debt Service -Reserve for Debt Service	11,217,733	11,217,733	11,217,733
Balance Available for Debt Service - PUC	60,050,441	54,735,426	56,839,533
Debt Service Coverage (1.75X) - PUC	2.44	2.05	1.81
CASH FLOW STATEMENT			
Net Income (Loss)	40,760,696	26,659,677	77,094,350
Depreciation & Amortization	17,566,783	17,965,208	20,895,205
AFUDC	(14,066,891)	(14,750,000)	(13,887,666)
Principal Payments - Bonds	(5,040,000)	(5,200,000)	(5,715,000)
Principal Payments-Subordinate loan	(2,863,988)	(3,018,019)	(3,180,334)
Loss on Defeasance Bond and other deferred cost	(559,707)	(540,427)	407,987
System Development Charge	(871,946)	(1,099,526)	(1,173,270)
PayGo/CAPEX	(11,002,200)	(10,463,516)	(13,152,585)
Working Capital Reserve for O & M	(9,498,345)	(1,000,000)	(3,347,412)
Grants and Contributions	(21,301,013)	(10,366,651)	(66,398,461)
Transfer from Capitalized Interest Fund	7,165,500	1,771,471	-
Prior Year Adjustment & Loss on Asset Disposal/Invty writedown	1,076,324	(61,077)	-
Cash Surplus (Deficit)	1,365,212	(102,860)	(8,457,186)
Beginning Balance	8,157,430	9,522,642	9,419,782
Ending Balance	$ 9,522,642	$ 9,419,782	$ 962,596

GUAM WATERWORKS AUTHORITY Summary of Revenues	Audited FY 2017	Annualized FY 2018	Projection FY 2019
Water Revenues	**$ 63,976,842**	**$ 65,856,953**	**$ 69,758,957**
Residential	30,959,753	32,569,048	35,960,254
Basic Charge	10,168,845	10,617,782	**10,630,534**
Lifeline Demand Charge	4,869,888	5,061,294	**5,063,209**
Non-Lifeline Demand Charge	15,921,020	16,889,973	**20,266,511**
	30,959,753	32,569,048	**35,960,254**
Commercial	13,441,130	12,904,721	13,220,516
Basic Charge	1,055,168	1,094,120	**1,095,541**
Non-Lifeline Demand Charge	12,385,963	11,810,602	**12,124,976**
	13,441,130	12,904,721	**13,220,516**
Federal	38,059	24,038	23,862
Basic Charge	5,859	6,135	**6,135**
Non-Lifeline Demand Charge	32,201	17,903	**17,728**
	38,059	24,038	**23,862**
Government	6,012,974	6,337,425	6,485,491
Basic Charge	255,131	269,499	**270,737**
Non-Lifeline Demand Charge	5,757,844	6,067,926	**6,214,754**
	6,012,974	6,337,425	**6,485,491**
Hotel	13,009,693	13,543,555	13,542,663
Basic Charge	111,596	116,329	**116,550**
Non-Lifeline Demand Charge	12,898,098	13,427,226	**13,426,114**
	13,009,693	13,543,555	**13,542,663**
Golf	77,301	47,895	45,398
Basic Charge	9,865	10,305	**10,444**
Non-Lifeline Demand Charge	67,436	37,590	**34,953**
	77,301	47,895	**45,398**
Agriculture	383,460	386,344	434,782
Basic Charge	97,193	100,249	**100,196**
Non-Lifeline Demand Charge	286,267	286,096	**334,586**
	383,460	386,344	**434,782**
Irrigation	54,471	43,927	45,990
Basic Charge	11,161	10,736	**10,736**
Non-Lifeline Demand Charge	43,310	33,191	**35,254**
	54,471	43,927	**45,990**
Total	**$ 63,976,842**	**$ 65,856,953**	**$ 69,758,957**

GUAM WATERWORKS AUTHORITY Summary of Revenues	Audited FY 2017	Annualized FY 2018	Projection FY 2019
Wastewater Revenues	**$ 37,194,332**	**$ 38,212,328**	**$ 38,967,180**
Residential	**$ 8,834,033**	**$ 8,888,921**	**$ 9,041,603**
Lifeline Demand Charge	8,834,033	8,888,921	9,041,603
Non-Lifeline Demand Charge	-	-	-
	8,834,033	8,888,921	**9,041,603**
Commercial 1	**$ 3,245,023**	**$ 3,092,072**	**$ 3,292,551**
Lifeline Demand Charge	-	-	-
Non-Lifeline Demand Charge	3,196,409	3,092,072	3,292,551
	3,196,409	3,092,072	**3,292,551**
Commercial 2 & Hotel	**$ 12,767,000**	**$ 13,292,819**	**$ 13,309,258**
Lifeline Demand Charge	-	-	-
Non-Lifeline Demand Charge	12,767,000	13,292,819	13,309,258
	12,767,000	13,292,819	**13,309,258**
Commercial 3	**$ 3,522,087**	**$ 3,502,447**	**$ 3,481,390**
Lifeline Demand Charge	-	-	-
Non-Lifeline Demand Charge	3,522,087	3,502,447	3,481,390
	3,522,087	3,502,447	**3,481,390**
Navy/Airforce	**$ 5,388,168**	**$ 5,694,826**	**$ 6,079,738**
Lifeline Demand Charge	-	-	-
Non-Lifeline Demand Charge	5,388,168	5,694,826	6,079,738
	5,388,168	5,694,826	6,079,738
Government	**$ 3,438,021**	**$ 3,741,243**	**$ 3,762,640**
Lifeline Demand Charge	-	-	-
Non-Lifeline Demand Charge	3,438,021	3,741,243	3,762,640
	3,438,021	3,741,243	3,762,640
	$ 37,194,332	**$ 38,212,328**	**$ 38,967,180**

GUAM WATERWORKS AUTHORITY Legislative Surcharge	Audited FY 2017	Annualized FY 2018	Projection FY 2019
Water	2,166,056	2,279,837	2,413,793
Residential	944,424	1,031,541	1,146,341
Commercial	497,322	483,927	495,769
Federal	1,408	901	895
Government	222,480	237,653	243,206
Hotel	481,359	507,883	507,850
Golf	2,860	1,796	1,702
Agriculture	14,188	14,488	16,304
Irrigation	2,015	1,647	1,725
Total	2,166,056	2,279,837	2,413,793
Wastewater	1,041,170	1,099,628	1,122,209
Total	**3,207,226**	**3,379,465**	**3,536,002**

GUAM WATERWORKS AUTHORITY
Salaries & Benefits

	FY 2017	FY 2018	FY 2019
Wages (*)	13,291,184	16,808,619	19,443,381
Migration (10th & 15th Percentile)		750,000	700,000
Total Wages	**13,291,184**	**17,558,619**	**20,143,381**
Premium Pay			
Overtime	1,069,302	1,799,678	1,000,000
Night Differential	67,768	89,078	95,000
Holiday	111,827	134,502	150,000
Total Premium Pay	**1,248,896**	**2,023,258**	**1,245,000**
Gross Salaries & Premium Pay	**14,540,080**	**19,581,877**	**21,388,381**
Less Capitalized Labor		(2,800,000)	(3,700,000)
Net Salaries & Premium Pay	**14,540,080**	**16,781,877**	**17,688,381**
Benefits			
Insurance (Life, Medical & Dental)	1,017,460	1,236,887	1,409,645
Medicare	222,671	267,647	281,929
Retirement	3,763,450	4,640,302	5,444,147
Potential Savings (26%)			(388,868)
Total Benefits	**5,003,581**	**6,144,836**	**6,746,853**
Total Salaries & Benefits	**19,543,661**	**22,926,713**	**24,435,234**

* includes pay for performance

Full-Time Employee Count			
***Filled**	336	354	354
***Vacant**	59	41	41
New			5
TOTAL	**395**	**395**	**400**

* as of July 2018

PAYGO	ACTUAL FY2018	PROJECTED 2019
WATER		
1. Distribution		
PRV	$ 198,043	250,000
Valves - Main Lines	140,286	500,000
Hydrants	442,638	250,000
Pumps		500,000
Motors		300,000
Pipes		100,000
Pumping Equipments		100,000
	$ 780,967	**$ 2,000,000**
2. Production		
Submersible Pumps		$ 750,000
Submersible Motors		$ 500,000
Cables		$ 350,000
Pipes		$ 350,000
Deep Well Facility Improvements & Rehabilitation		472,585
	$ -	**$ 2,422,585**
WASTEWATER		
1. Maintenance Section		
Pump & Motor Rebuild/Rewind	250,000	-
Spare Parts Mgt.	77,272	-
Pumps		$ 450,000
Motors		300,000
Pipes		300,000
Pump Facility Equipment		200,000
Headworks		200,000
Metering Pump Polymer System		40,000
Centrifuge		65,000
Polyaluminum Chloride System Parts		40,000
Clarifiers		105,000
Coagulation/Floculation Chamber Parts		40,000
Main Water Booster Pump Parts		40,000
	327,272	**1,780,000**
2. Collection & Pumping		
Pump Station Operational Repairs and Maintenance	250,000	-
Emergency Responses	100,000	-
Rehabilitation of Sewer Lines	3,500,000	500,000
	3,850,000	500,000
3. Treatment		
Pumps		200,000
Motors		100,000
	-	**300,000**
Utility Services		
Meter Replacement - Small Meters	1,546,688	500,000
Replacement of Transponders/Transmitters	456,245	
Meter Replacement - Large Meters > 2"	-	200,000
	2,002,933	**700,000**
Transportation		
2WD Trucks (9)		360,000
Compact Cargo Van (2)		70,000
Ford, 2WD, U/T (1)		60,000
Ford, F350, U/T (2)		140,000
Dump Truck (16 cu.yd.)		120,000
Backhoe 4WD (w/Trailer)		300,000
Boom Truck (10 T)		300,000
Tractor Truck		200,000
		1,550,000

PAYGO	ACTUAL FY2018	PROJECTED 2019
Information Technology		
Network Switches-Core Switch/Cisco Switch compliance		350,000
New Computers & Software		300,000
CCB Cloud Disaster Recovery		350,000
Design Renovation Raised Floor		500,000
IBM OS Upgrade		350,000
Financial Application		500,000
		2,350,000
Other Projects		
Land Surveying/Property Delineation		200,000
Facilities Expansion(FMES & Warehouse)		500,000
Systems Planning & Facility Studies		500,000
Facility Security System- Different sites		350,000
		1,550,000
PayGo/(Master Plan)		
TOTAL	**$ 2,330,205**	**$ 13,152,585**

Guam Waterworks Authority
Schedule of Debt Service

	FY 2017	FY 2018	FY 2019
Senior Lien Debt Service			
Series 2010 Revenue Bonds - Principal	1,655,000	1,725,000	1,800,000
Series 2010 Revenue Bonds - Interest	6,410,600	262,375	184,750
Total	8,065,600	1,987,375	1,984,750
Series 2013 Revenue Bonds - Principal	-	-	-
Series 2013 Revenue Bonds - Interest	9,331,688	9,331,688	9,331,688
Total	9,331,688	9,331,688	9,331,688
Series 2014 Refunding Revenue Bonds - Principal	3,385,000	3,475,000	3,620,000
Series 2014 Refunding Revenue Bonds - Interest	3,780,014	3,694,847	3,588,477
Total	7,165,014	7,169,847	7,208,477
Series 2016 Revenue Bonds - Principal	-	-	-
Series 2016 Revenue Bonds - Interest	7,165,500	7,165,500	7,165,500
Total	7,165,500	7,165,500	7,165,500
Series 2017 Refunding Bonds - Principal	-	-	295,000
Series 2017 Refunding Bonds - Interest	-	2,855,981	5,383,000
Total	-	2,855,981	5,678,000
Bond Debt Service	**31,727,801**	**28,510,390**	**31,368,415**
Senior Lien - Bond Debt Service			
Principal	5,040,000	5,200,000	5,715,000
Interest	26,687,801	23,310,390	25,653,415
Less: Capitalized Interest	(7,165,500)	(1,771,471)	-
Interest Net of Cap I	19,522,301	21,538,920	25,653,415
Debt Service- Bonds Net of Cap I	**24,562,301**	**26,738,920**	**31,368,415**
Subordinate Loan			
Principal	2,863,988	3,018,019	3,180,334
Interest	553,489	399,458	237,144
Total Subordinate debt service	**3,417,477**	**3,417,477**	**3,417,477**
Grand Total Debt Service- Bonds and Subordinate	**27,979,778**	**30,156,397**	**34,785,892**

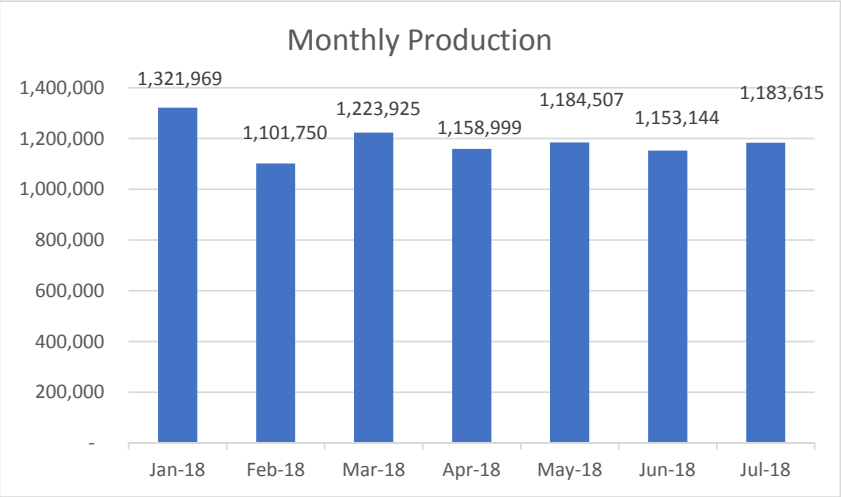
GUAM WATERWORKS AUTHORITY

General Manager's Report
CCU GWA Work Session, August 21, 2018

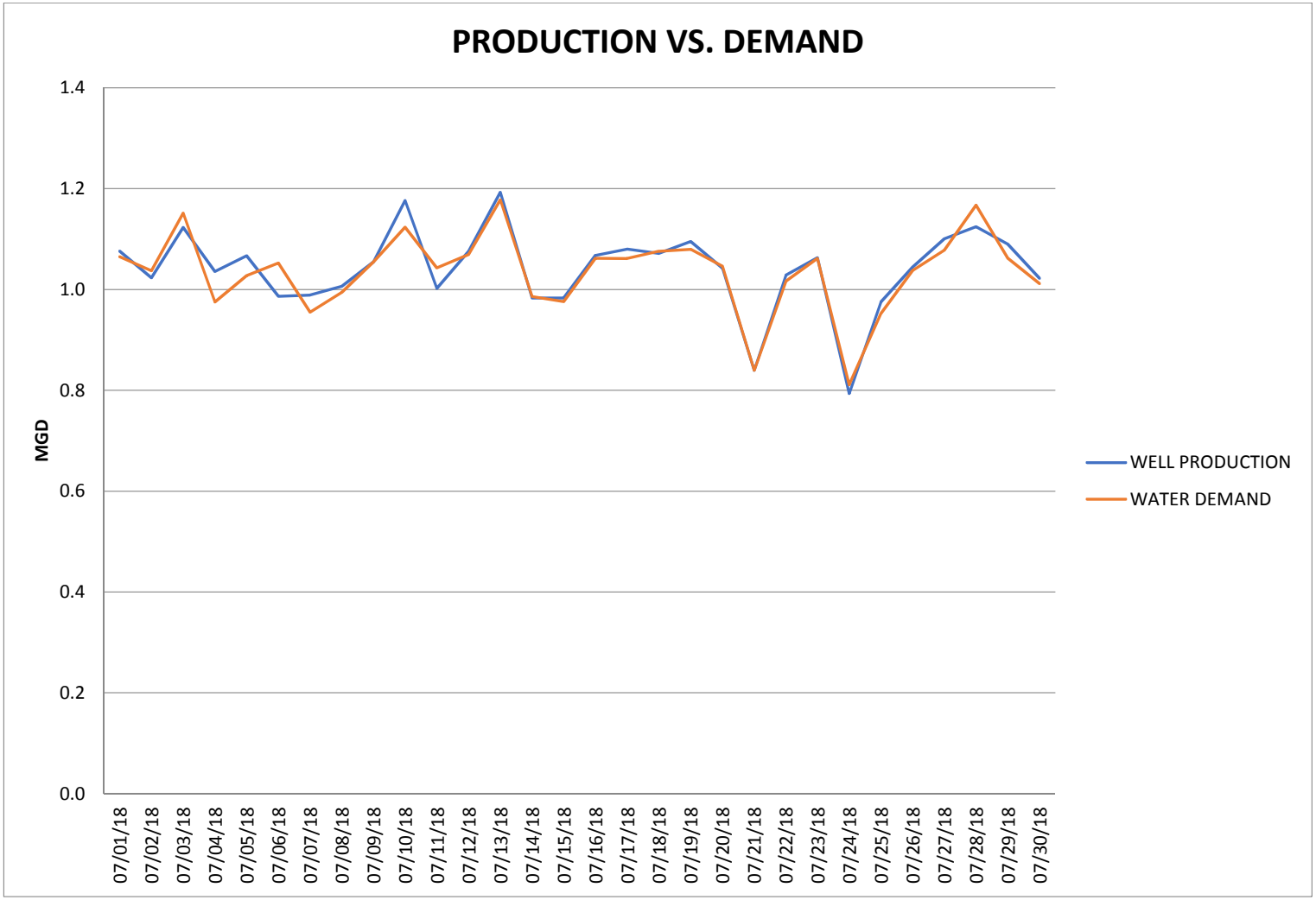
Operations Update

Production

Monthly Production Summary - July 2018					
Deep Wells				36.4	MGD
	Active wells =	95	of 120		
	Avg days in operation =	31	days		
	Total Production =	1,093,214	Kgals		
Springs				0.00	MGD
	Avg days in operation =	0	days	*placed on standby	
	Total Production =	0	Kgals		
Ugum Surface Water Plant				1.9	MGD
	Avg days in operation =	31	days		
	Total Production =	58,142	Kgals		
Tumon Maui Well				1.08	MGD
	Avg days in operation =	31	days		
	Total Production =	32,258	Kgals		
		1,183,615	Kgals	39.5	MGD

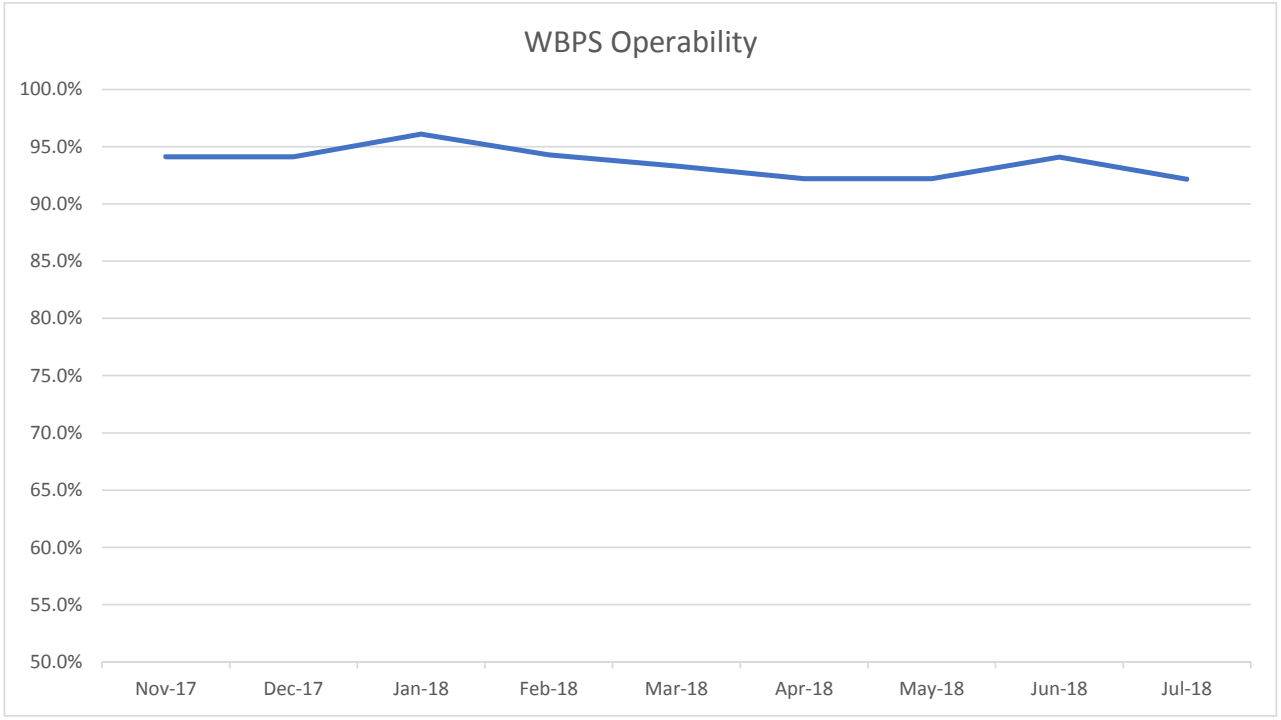


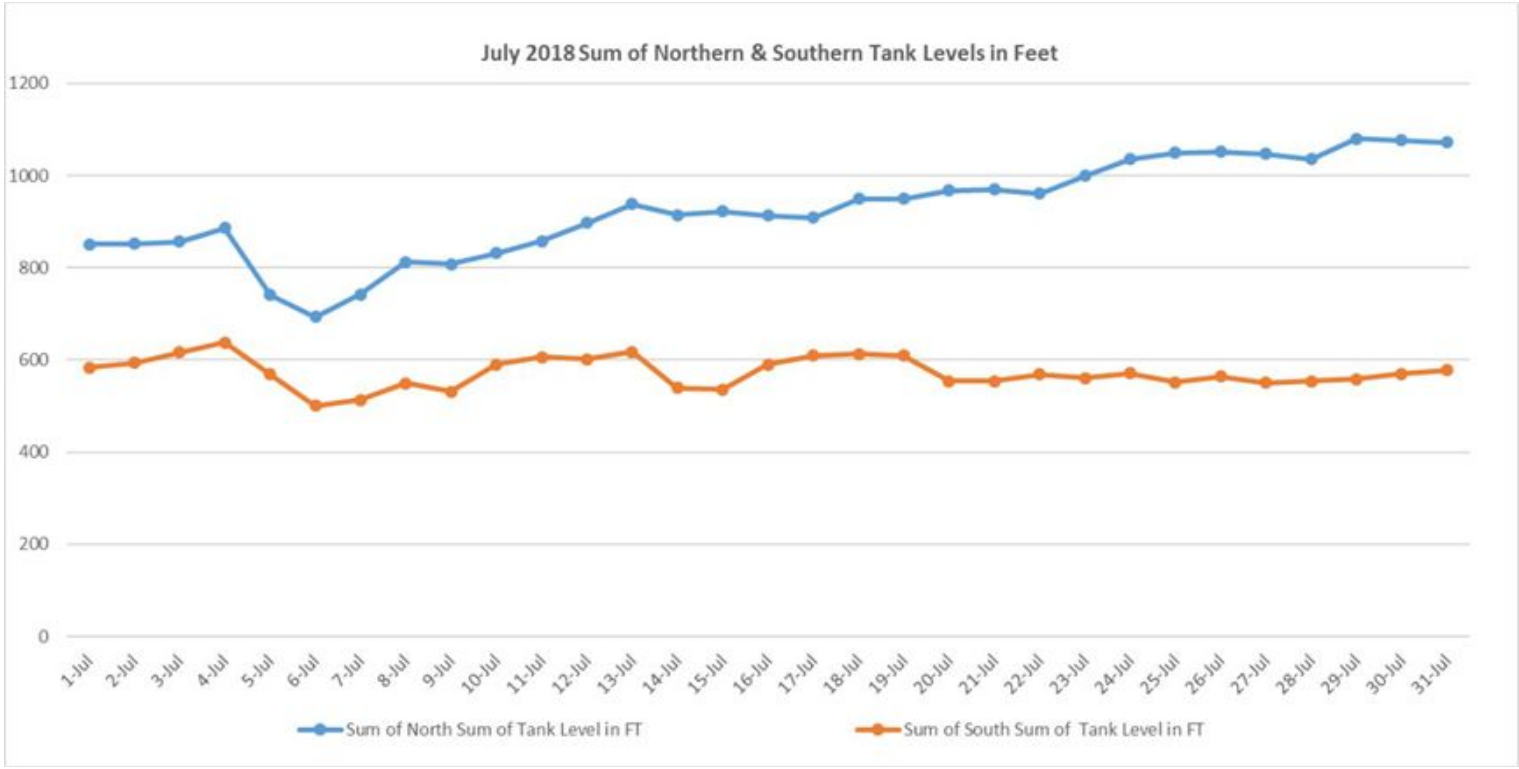
Tumon Maui Well Production vs. Demand for July 2018



Distribution

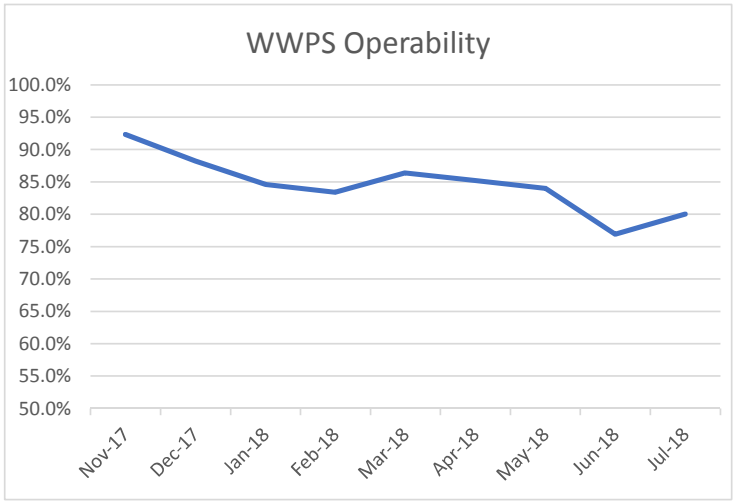
Monthly Distribution Summary - July 2018					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	21	19	90.5%
	Central	7	15	13	86.7%
	Southern	7	15	15	100.0%
		25	51	47	92.2%

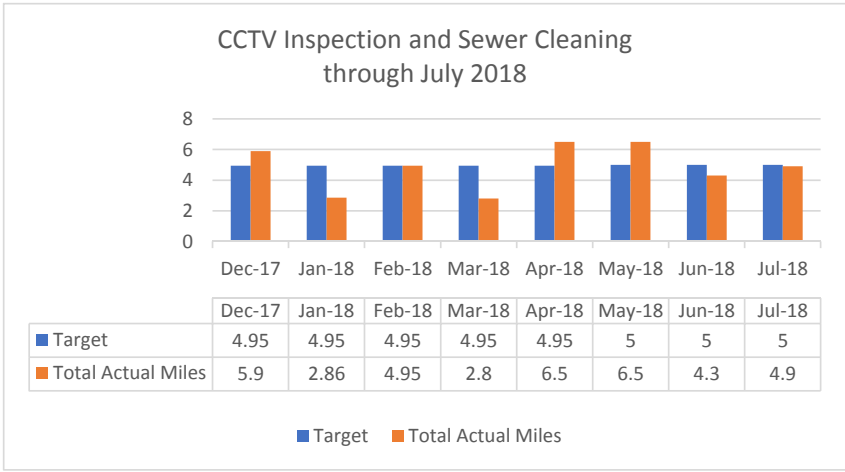



July 2018 Sum of Northern & Southern Tank Levels in Feet
1200
1000
800
600
400
200
0
1-Jul
2-Jul
3-Jul
4-Jul
5-Jul
6-Jul
7-Jul
8-Jul
9-Jul
10-Jul
11-Jul
12-Jul
13-Jul
14-Jul
15-Jul
16-Jul
17-Jul
18-Jul
19-Jul
20-Jul
21-Jul
22-Jul
23-Jul
24-Jul
25-Jul
26-Jul
27-Jul
28-Jul
29-Jul
30-Jul
31-Jul
Sum of North Sum of Tank Level in FT
Sum of South Sum of Tank Level in FT

Wastewater Collections

Monthly Collections Summary - July 2018					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	43	82.7%
	Central	29	63	48	76.2%
	Southern	27	55	45	81.8%
		78	170	136	80.0%

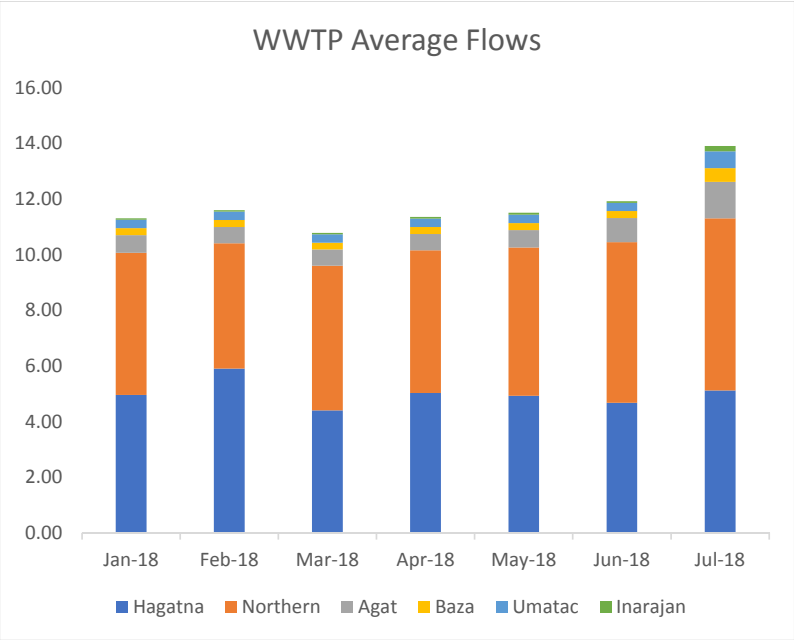




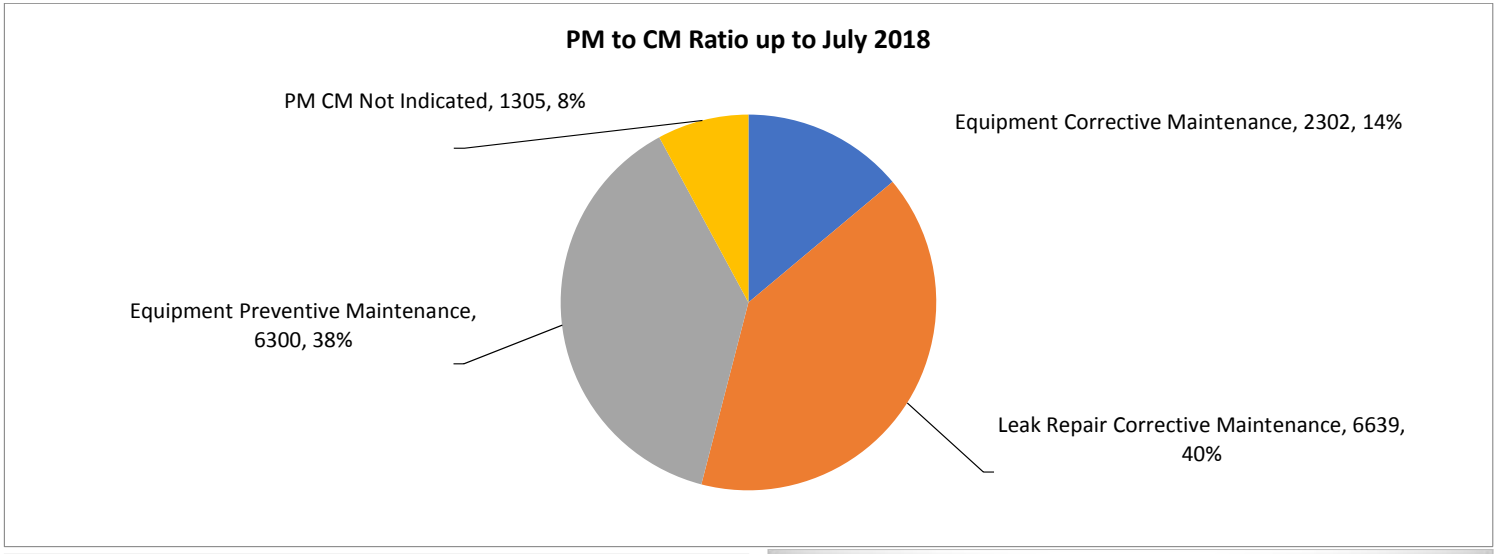
	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18
Target	4.95	4.95	4.95	4.95	4.95	5	5	5
Total Actual Miles	5.9	2.86	4.95	2.8	6.5	6.5	4.3	4.9

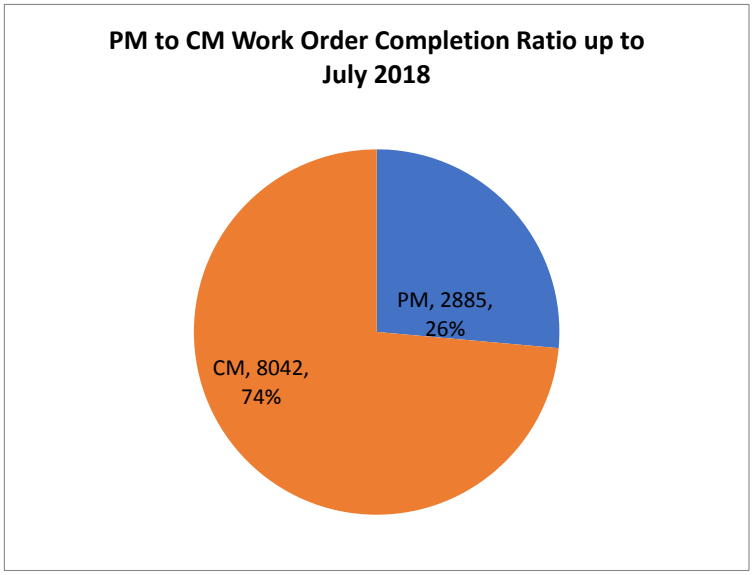
Wastewater Treatment

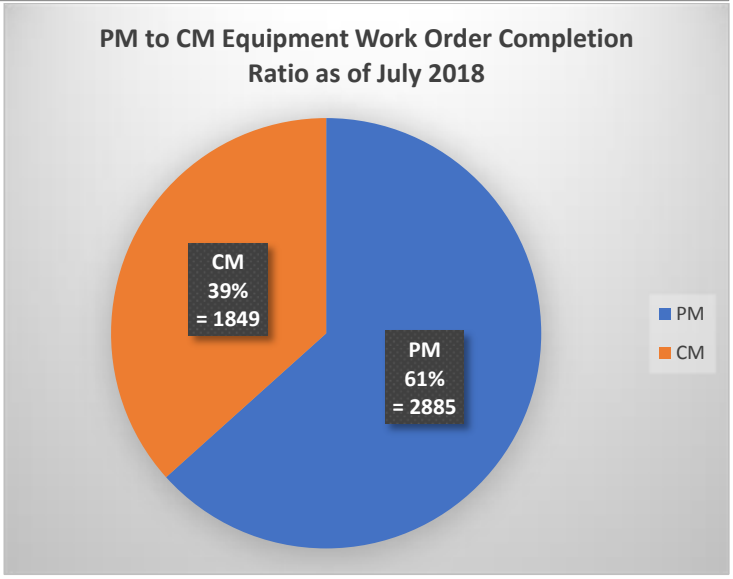
Monthly Wastewater Treatment Summary - July 2018					
WW Treatment Plants - Flows					
	Facility	**Avg. Daily Flows (MGD)**	**Sludge (lbs)**	**Sludge Disp. ($)**	
	Hagatna	5.12	596,520	$	53,687
	Northern	6.18	856,274	$	77,065
	Agat	1.31			
	Baza	0.50			
	Umatac	0.60			
	Inarajan	0.19			
		13.90	1,452,794	$	130,751



Asset Management for July 2018







Operational Issues

Production & Distribution

- Leak repair
  - Crews maintaining performance - As of July 31st, there were less than 24 pending repairs
    - 92% reduction from 2017-2018 Maximum of 283 pending
    - 87% reduction from 2018 Maximum of 179 pending
  - IFB for advanced remote leak detection services has been advertised
- WSCC –
  - SCADA equipment and installation requirements on-going
  - Have been coordinating the activation of new Yigo / Astumbo tanks
  - Reservoir levels have been steadily increasing
  - Deep wells placed on standby has increased to 10 (and 11 units out-of-commission).
- Pump and motor inventories okay; additional procurement up for CCU approval
- GWA Crane Repair –new cable installation complete – load test 8/22/18

Wastewater Collection & Treatment

- CCTV & Collections System:
  - Planning department assisting CCTV Crews to revise completed reports to meet appropriate industry standards
  - SSES and CCTV-based repairs to collection lines (95%) and SMHs (10%) are being conducted by Ops personnel
- Pump stations
  - Working to address pump operability issues
  - Minimum pump and motor inventory levels finalized (similar to effort with deep-wells)
  - Engineering providing support for specifications and performance points on all pumps prior to finalizing procurement
  - Critical spares and replacements procurement on-going
- Treatment Plants
  - Hagatna WWTP
    - Centrifuges: New PLC installed; programming on-going.
  - Northern WWTP
    - Both centrifuges back in operation
  - Agat-Santa Rita WWTP
    - Solids process commissioning completion pending – centrifuge #2
    - Critical process facilities all operating
  - U-M WWTP
    - Work on-going at the site

- Significant delays have occurred because of USF&W / EPA permitting issues

- Baza Gardens
  - Work on-going for all 3 phases
  - Anticipated completion is now Sep 30th
  - Delay letter has been sent to USEPA

Meters for month of July 2018

COMPLETED FIELD ACTIVITY JAN 2017 THRU JULY 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	#####	Jun-18	Jul-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	84	1299	797	11747	665
GWA - Meter Exchange	393	179	220	276	482	353	501	807	1526	1039	452	259	239	1086	2120	121	121	1056	1248	12478	501
GWA - Verify Zero Report	30	124	114	94	96	402	261	199	550	89	82	169	356	106	117	69	13	2	2	2875	0
GWA - Verify Low Usage	0	0	0	2	37	36	196	488	657	202	127	612	858	1122	1055	463	19	5	3	5882	0
TOTAL:	453	312	343	743	1360	878	1351	2237	3733	2337	1095	1418	2203	3283	4505	2082	237	2362	2050	32982	1166

# 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	671	544	1159	12377	
# OF BACKBILLINGS APPLIED AS PER FINANCE REPORTS:	0	0	0	20	122	84	29	111	219	80	77	4	136	23	323	48	75	20	30	1401	$ 928,379.83

# OF FIELD CREW PERFORMING CHANGE OUTS:	19	10	13	9	21	21	14	24	35	28	28 *	28 *	5	13	2	2	2	28	17
# 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	4	1	13	9
# 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	0	0	2	2
# OF TEST FACILITY PERSONNEL TESTING METERS:	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	1
# OF ACCOUNTANTS CALCULATING BACK BILLS:	0	0	0	2	3	2	2	3	3	2	2	2	2	2	2	2	2	2	2
TOTAL:	30	18	22	22	38	37	31	45	58	50	48	48	20	32	11	10	7	47	31

AS OF JULY 30 2018

ACTIVE LP MODELS - PURCHASE MO & YEAR	COUNT	
2012	8807	WARRANTY EXPIRED
Jan-13	2112	
Feb-13	731	
Mar-13	632	
May-13	1435	
Aug-13	752	ACTIVE WARRANTY
Feb-14	425	
Mar-14	1	
Apr-14	2418	
Jun-14	72	
Aug-14	1388	
TOTAL :	18773	

13717	WARRANTY EXPIRED
5056	ACTIVE WARRANTY

Marbo (Andy-South) Wells – Status

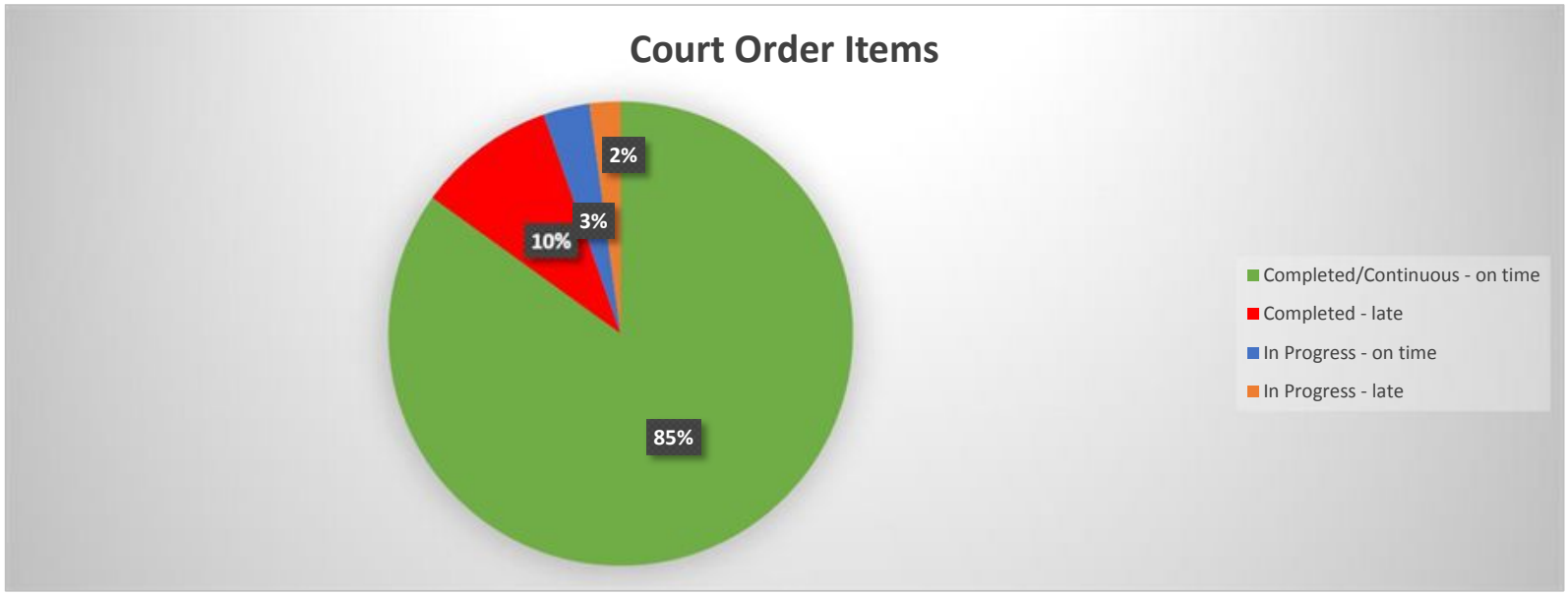
- Involuntary reversion appears imminent; GWA Counsel transmitted draft easement documents to GSA for consideration with DoD;
- No updates - Waiting on response from GSA
- Meeting requested by GWA for October 2018

One Guam Update

- Tumon Maui Well:
  - Quarterly Inspection conducted – no issues of concern.
- Santa Rosa Tank:
  - The temporary easement for the construction of the intertie is in progress. As soon as the maps are finalized, Navy will discuss the project with the Air Force
  - Navy Utilities prepared a briefing package for a meeting with the NAVFACMAR CO – Captain Dan Turner. He is on board and will brief the General at Andersen Air Force Base, but it may take 3 weeks to set the meeting
- Agat-Santa Rita WWTP
  - Maria Lewis stated the fee of $16k per annum in the Agat easement letter to GWA was supposed to be a one-time fee so the letter will be changed
  - The Grant of Easement will be amended to state Wastewater & Water
- OEA Projects
  - Observation Well coordination on-going;
  - Discussion on ownership of wells and maintenance responsibilities on going; MOU will be prepared to address maintenance cost sharing
- Training and Collaboration
  - GWA witnessed Navy "Smart Sahara" demonstration for Route 16 waterline: CCTV and sonic analysis for water pipes and leak detection
  - GWA offering CIPP training; DoD and their operators will be attending the training

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:
  - 07-26-18 RT-16 Tsai Building sewer back up – FOG – major – 10,000 gallons (90% recovered by GWA Operations)
  - 07-27-2018-Umatac Lower Lagoon Bypass (from 07/08/2018) Ends (2.4 MG bypassed – I&I – Weather Related)
  - 08-13-2018, Alupang street, Tamuning, MH overflow -- Rain
  - 08-16-2018, Rt Vietnam Veterans Highway, MH overflow - Rain
  - 08-16-2018, Umatac-Merizo PS 17 overflow - Rain
  - 08-16-2018, Umatac-Merizo Lagoon starts overflowing again – Rain
  - 08-20-2018, Harmon Lift Station - Rain

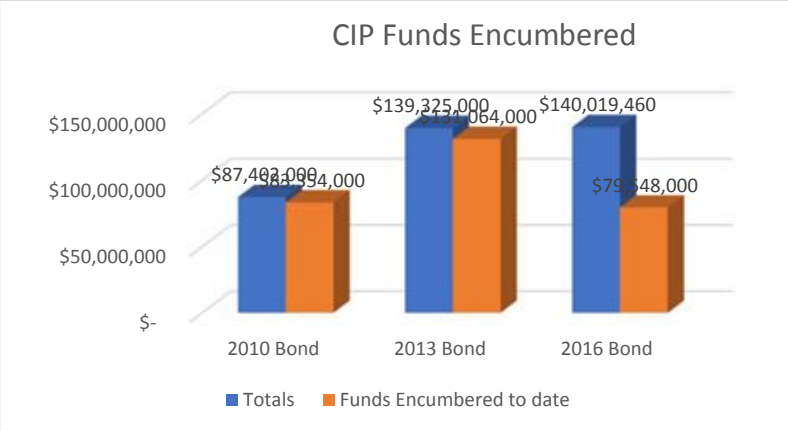
CIP Summary

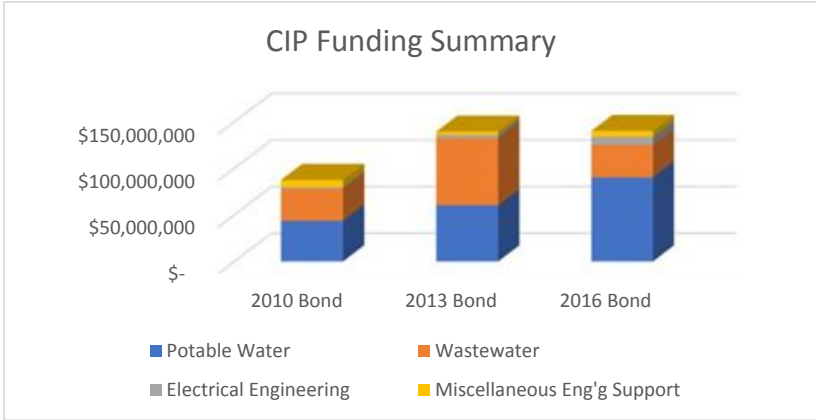
CIP Summary - Project Encumbrance

	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%			





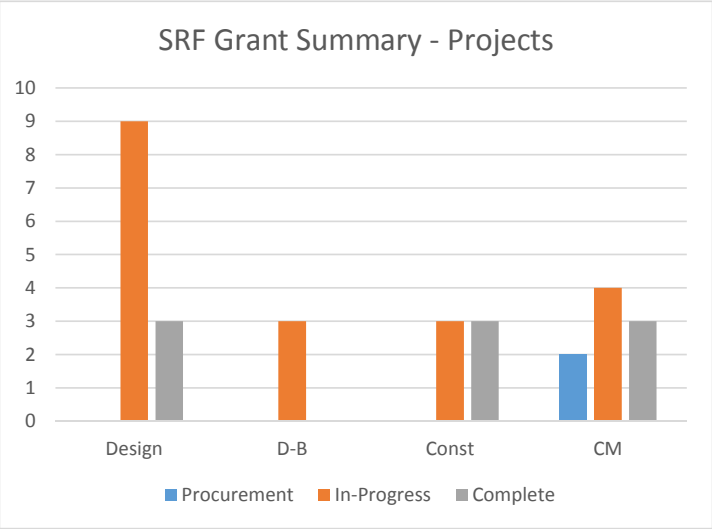
SRF Grant Summary

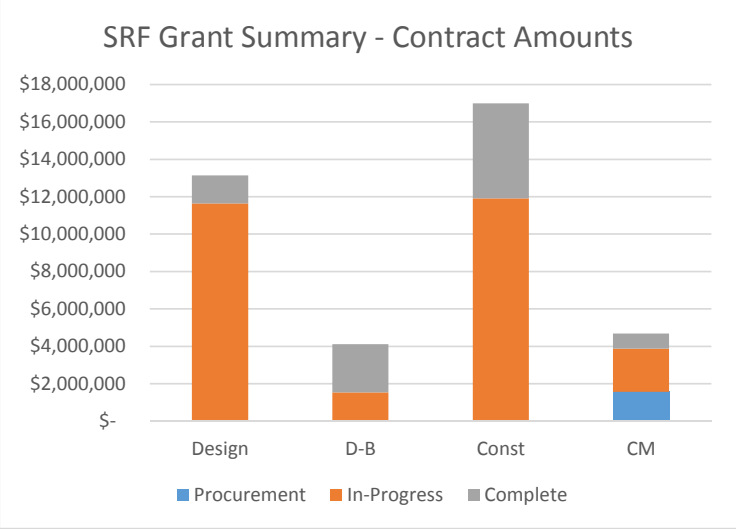
SRF Grant Summary - Projects

	Procurement	In-Progress	Complete	Totals	%
Design	0	9	3	12	40%
D-B	0	3		3	10%
Const	0	3	3	6	20%
CM	2	4	3	9	30%
Totals	2	19	9	30	
%	7%	63%	30%		

SRF Grant Summary - Contract Amounts

	Procurement	In-Progress	Complete	Totals	%
Design	$ -	$ 11,642,195	1,499,418	$ 13,141,613	34%
D-B	$ -	$ 1,542,979	$ 2,565,237	$ 4,108,216	11%
Const		$ 11,902,506	$ 5,086,129	$ 16,988,635	44%
CM	$ 1,572,000	$ 2,303,747	$ 802,243	$ 4,677,990	12%
Totals	$ 1,572,000	$ 27,391,427	$ 9,953,027	$ 38,916,454	
%	4%	70%	26%		





OEA Grant Summary

- NDWWTP Upgrades
  - 60% design submittal scheduled for Sep 24th.
  - Sitework bid package to be issued Sep 12th
  - Workshop on 60% Design – October 18th – 19th
  - Vertical bid package planned for issuance Mar 2019

- Outfall Diffuser:
  - Re-bid package issued
  - Pre-bid Conference August 22nd
  - Bids expected September 11th

- Sewer Line Interceptor Design-Build
  - Contract Award / NTP issued
  - Design and prep work has started
  - Design submittal expected in October
  - Construction start expected in January

- NGLA Observation wells – Design work completed
  - Bid package drawings and specs under review by GWA
  - Permitting issues being resolved and permits being obtained by PM/CM
  - Bid package to be issued once permits approved – expected in Mar 2019

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 – Deed circulated for signatures
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	30% - completed May 60% - expected Sep	On-target	Project design schedule has been revised / delayed
NEPA Analysis and Determination	Feb-17	Pending	Delayed	USEPA received SHPO concurrence; OEA to review EPA EA
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	

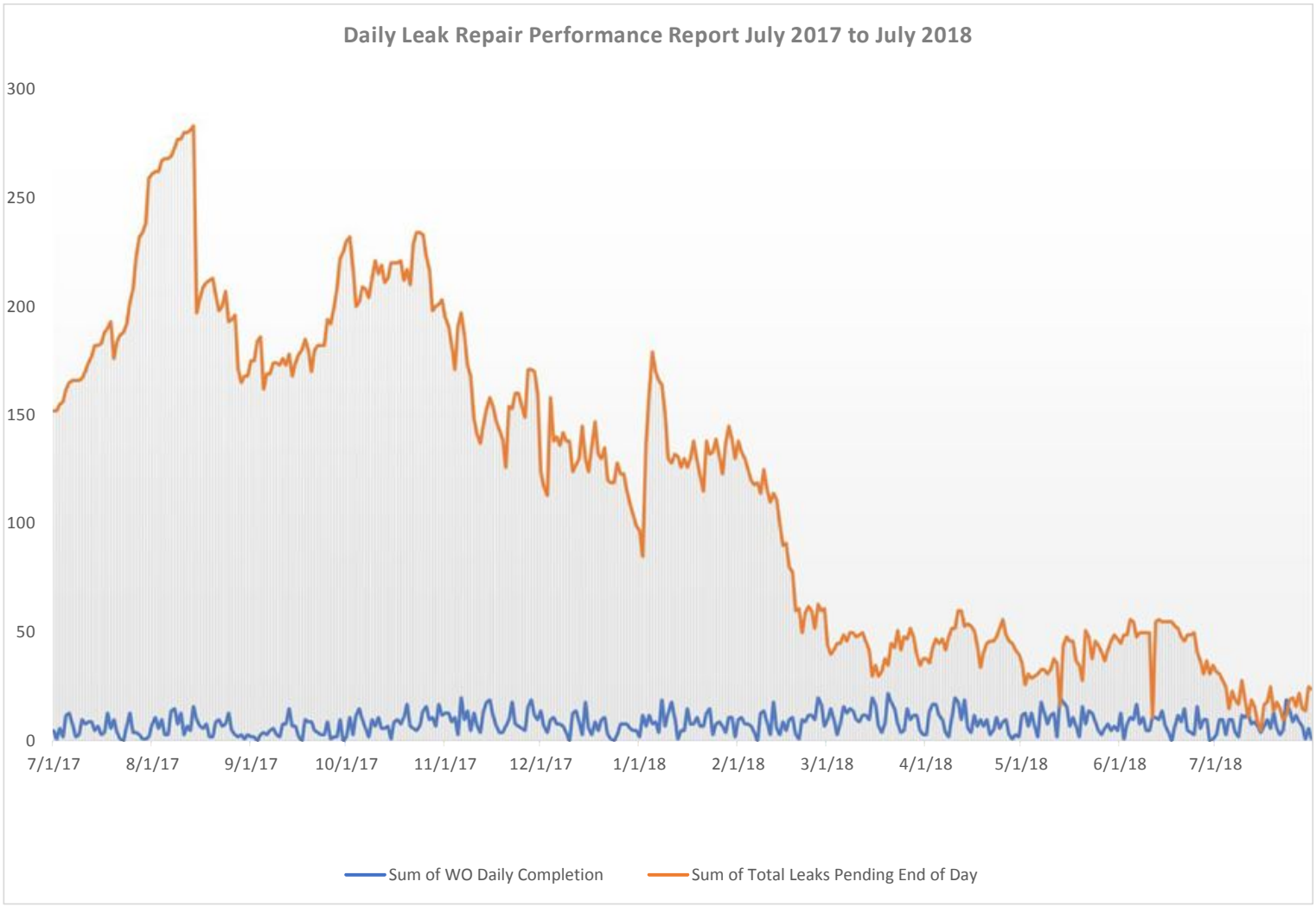
Land Acquisition Summary

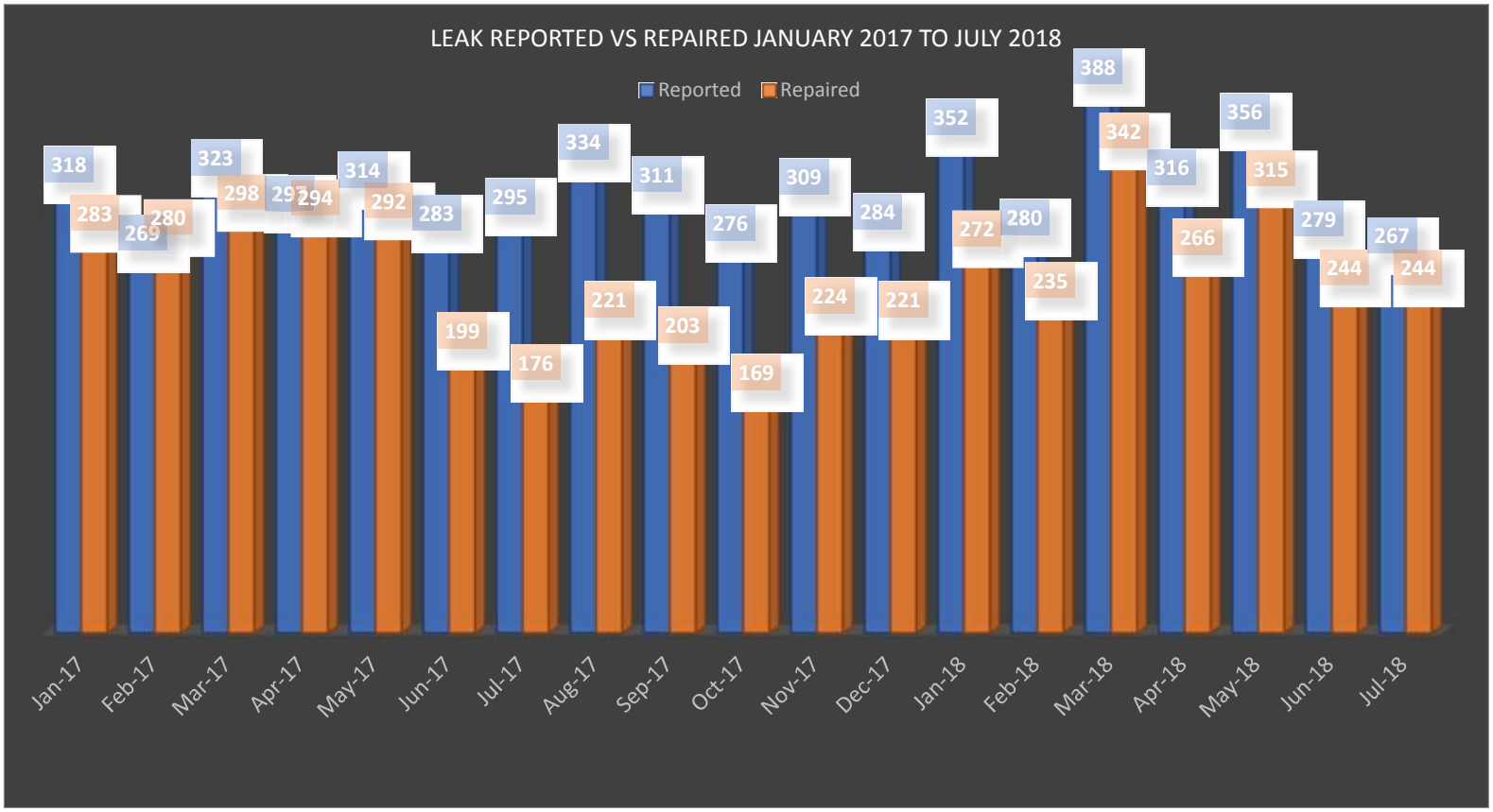
GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
Tanks	Ugum	Private	Appraisal Services completed 05/09/18.
	Astumbo	Gov't. - CLTC	GWA and DLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DLM
	Piti	Private	Preliminary geotechnical investigation and archaeological investigation in the process 05/01/18
Expansion of the Northern District Wastewater Treatment Plant (NDWWTP)	Dededo	Gov't - GALC	Grant Deed submitted to DLM for AG & Governor signature 08/01/18
Deep Well	A-12	Private	Property ownership vested in GWA 10/16/17
	AG-12	Dept. of Agriculture/Manhita Farms	Land Registration has been approved by Superior Court of Guam. Pending release and recordation of the Decree Establishing Title at DLM. DCA will be submitting Retracement Survey Check Print Map to DLM for review and comments 07/13/18
	Y-8	Gov't. - CLTC	Deed of Dedication approved by legal counsel 07/03/18
Booster Pump Station	Agfayan	Private	Denial Letter received from private property owner on Lot 61-R2, Inarajan 06/07/18. Sent 2nd follow up request to DLM Director on request for authorization on archeological testing for L28, B19, T3734, Inarajan 08/13/18
Sewer Pump Stations	Southern Link SPS	Private	GWA started acquisition process on 12/23/2016. Property ownership vested in GWA 08/11/2017
Asan Springs	Asan	Gov't/Private	GWA request currently is still under GHURA management review 08/07/18

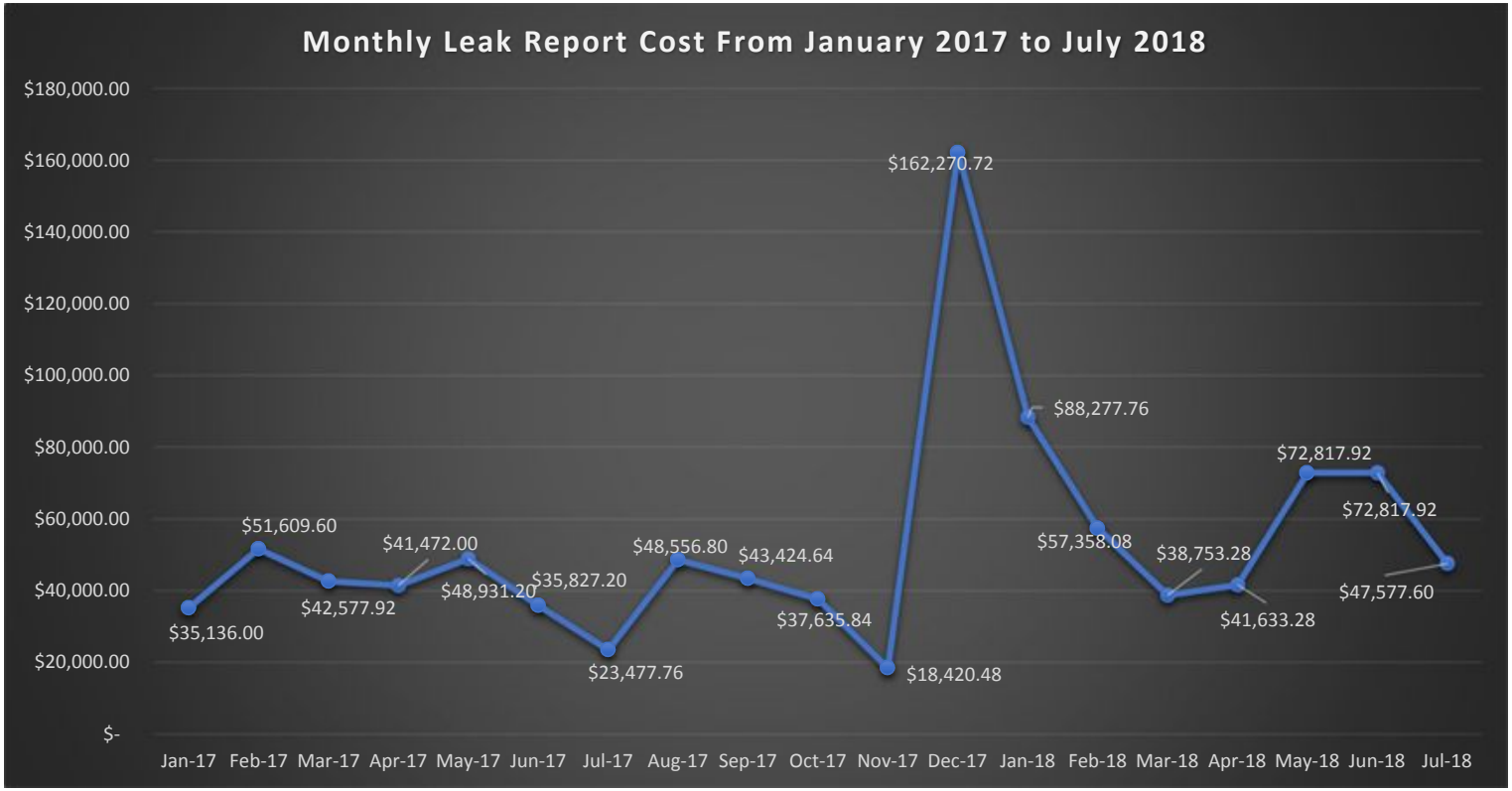
NRW – Update

- Water Loss Control Program activities are on-going
    - Review of latest numbers is underway.
    - Production meter replacement program is under design for 65 well sites. Portable flow meter is being procured to calibrate existing meters.
    - District Metering Areas are currently being developed for pilot project. Locations have been identified. Grant application was submitted for this pilot project
    - DOI Grant application has been approved for training and equipment.

Leak Repair Summary for July 2018




LEAK REPORTED VS REPAIRED JANUARY 2017 TO JULY 2018
Reported
Repaired
318
283
269
280
323
298
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
356
315
279
244
267
244
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



Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00

2011 Court Order Performance Report Card / Dashboard as of 07/30/2018

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 07/30/2018

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	**Done** 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)	N/A	**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	**Ongoing** 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 routine.
	5(a)	12	Scope and schedule	09/30/2011	@EPA	**Done.** CEPT is operational and routine.
	5(b)	13	Septage Handling Complete	06/30/2013	@EPA	**Done.** Septage Receiving at the NDWWTP (location option) reported 06/26/2013.
	5(b) 1	14	Septage handling design contract signed	12/31/2011	@EPA	**Done.** Septage Receiving at the NDWWTP (location option) reported 06/26/2013.
	5(b) 2	15	Septage handling construction notice to proceed	06/30/2012	@EPA	**Done.** Septage Receiving at the NDWWTP (location option) reported 06/26/2013.
	5(c)	16	Grit and FOG Complete	06/30/2013	@EPA	**Done** 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** Submitted 11/17/2011
	5(e)	20	O & M Plan	05/31/2013	@EPA	**Done** O & M Plan reported 05/31/2012
	5(f)	21	Effluent monitoring (calendar-year quarter)	**Completed**	@EPA	**COMPLETED Full year as of 01/08/2012**
	6	22	Prevent Effluent Back Surge	06/30/2013	@EPA	**Done** Old outfall decommissioned (plugged) 06/25/2013
	6	23	Effluent Back Surge Plan	12/30/2011	@EPA	**Done** Old outfall 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 Late** – Completed June 2, 2017
	8(e) 2	31	SSES Central Report	09/15/2015 EPA Disapproval Letter	@EPA	**Done Late** – 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	**Done Late 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	**Done** Reported 03/23/2016
	9(f)	37	Implement near term measures f – 75% Bypass Red.	03/23/2016	@EPA	**Done** Reported 03/23/2016
	10	38	System Evaluation	12/31/2013 response sent 09/29/2014	@EPA	**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	**Done Late** New Agat WWTP on line 03/14/2017
	11(a)	40	System Upgrades design	06/30/2014-NTP 10/13/2014	@EPA	**Done Late** 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	**Done Late** 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	**Done** Critical path need to complete I&I/SSES
	14(a)	48	System Upgrades, Design Starts	10/31/2015 NTP DCA 02/05/2016	@EPA	**Done Late** Linked to new Agat WWTP NTP DCA 02/05/2016
	14(b)	49	System Upgrades Construction (started on time)	10/31/2016	@EPA	**LATE:** US Fish and Wildlife Redesign for permit approvals have caused delays which will make completion like until the end of September

2011 Court Order Performance Report Card / Dashboard as of 07/30/2018

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	Status
Umatac-Merizo	15	50	Complete Evaluation	12/31/2013	@EPA	**Done** CO 15 **Done** Reported 12/31/2013 -- Critical path, completed I&I/SSES
	16	51	System Upgrades	12/31/2018	@EPA	**Ongoing** Design Build contract executed 06/29/2017
	16(a)	52	System Upgrades, Design Starts	06/30/2016	@EPA	**Done** Design Build contract executed 06/29/2017
	16(b)	53	System Upgrades, Notice to Proceed	06/30/2017	@EPA	**Done** NTP Issued 06/30/2017
Sewer Cleaning	17	54	Sewer Cleaning (in annual and quarterly reports)	2017-2022 Goal set: Complete Every 5 years	@EPA	**Done** 2017-2022 Goal set**. -** Entire System Every5 years **– Second cycle has begun**
Hot Spot Plan	18	55	Hot Spot Plan	EPA Revision letter o9/08/2015	@EPA	**Done** Last Revision submitted 10/23/2015 GWA WW Ops
CCTV	19	56	CCTV (in annual and quarterly reports)	2017-2022 Goal set: Complete Every 5 years	@EPA	**Done** 2017-2022 Goal set. Entire System Every5 years - **– Second cycle has begun**
Sewer Hook-Up	20	57	Sewer Hook-Up Revolving Loan Support	In Operation	@EPA	**Done –** available on GWA web site or at GWA Customer Service
GW Disinfection	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	**Done Late** Completed 07/31/2017
Water Metering	23(a)	63	Plan & schedule	180 days	@EPA	**Done Late** Reported 05/08/2012
	23(a)	64	All connections are metered and mapped	2 years	@EPA	**LATE:** 10/31/2016 Substantially complete-- **2** 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	**Done Late 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	**COMPLETED** GWA Compliance - **Start 09/01/2015 – end 08/31/2016**
	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	**COMPLETED - 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	**Ongoing**
	29(c)	87	In Quarterly / Annual Report	Quarterly / Annual Report	@EPA	**Ongoing** GWA Compliance **Repeats Quarterly**
Section III REPORTING REQUIREMENTS	31(a)(1)	88	Quarterly Report	Jan., April, July, Sept. Continuous	@EPA	**Ongoing** Due by the 30th of the specified months
	31(a)(2)	89	Reports on Non Compliance	Within 30 days from determination of delay	@EPA	**Ongoing** As determined by GWA
	31(b)	90	SSO and Bypass Report	Jan., April, July, Sept. Continuous	@EPA	**Ongoing** Due by the 30th of the specified months
	31(c)	91	Annual Report	January each year	@EPA	**Ongoing** Included with 31(a) each Year
Section IV NOTICES	35	92	CO contacts		@EPA	**Ongoing** GWA Compliance report 06/29/2016
	36	93	Formal notices of change in CO contacts	Whenever specified staffing changes	@EPA	**Ongoing** GWA Compliance report 06/29/2016

GUAM WATERWORKS AUTHORITY

Suite 200, Gloria B. Nelson Public Service Building, 688 Rt. 15. Mangilao, GU 96913-6203

Corrective Action Plan (CAP) (Approved 10/21/2014) Quarterly/Annual Update Report

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

Preface to the Corrective Action Plan

Reporting

Formal updates of the status of management of the Corrective Action Plan will be submitted on a regular basis to Region 9, USEPA.

The reports will be delivered on a quarterly basis beginning at the end of the next calendar-year quarter following the approval date of this Corrective Action Plan. Reporting will continue on a schedule by mutual agreement between GWA and Region 9 USEPA.

The vehicle to be used for this reporting will be an update of this document.

For Court Order updates/reporting, see the Court Order Submittals, e. g. Quarterly Reports.

1. Sources—Lack of routine maintenance (both corrective and preventative of sources).

- Potential bacteriological and/or chemical contamination of source
- Many wells found to have leaking pipes and valves

Recommendation:

- Lack of adequate site security—missing or damaged fencing and signs of vandalism (graffiti) on structures should be repaired or replaced.
- Begin routine and corrective maintenance of all wellhead appurtenances and well facilities—meters, valves, pumps, air relief valves, piping pressure gauges, etc.

Remove unnecessary items (old lines, gauges, meters, etc.)

Action Plan:
GWA is implementing new O&M SOPs, programs and systems on an on-going basis.

Proposed Action Item Schedule	Task Description
As of 06/25/2013.	55 new SOP's Implemented (assisted by CDM, EPA Grant)
Drafts and planed	CDM continues work, particularly on Asset Management
Average one a month by 06/30/2014	Complete new SOP's and implement
Semi-annually beginning 01/2014	**Training on SOP's Repeats Continuously, Managed for GWA by Ann Borja Supported by CDM Smith funded by EPA SRF.**
Updates (Reporting per Preface)	**Supported by CDM Smith funded by EPA SRF CMMS Is being implemented.**

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2.
Sources—No Wellhead Protection Plan

Many wells are located in close proximity to potential sources of fecal and other sources of contamination, and no wellhead protection plan in place for GWA wells.

- Potential bacteriological and/or chemical contamination of source
- Wells located near potential sources of contamination

Recommendation:

- Possible sewage source upstream (Talofofo Falls Park) - Should notify owner/operators of need to notify Ugum WTP if there is a spill or discharge
- Recreational activities on the Ugum River at the intake site which currently allow people in close proximity to the intake structure should be evaluated.

Action Plan:
GWA will build from the existing 1992 Guam Law, Ch. 7 section 7130 of the Water Resource Development and Operating Regulations (GEPA) entitled "Well Head Protection for Public Water Supply Well". BC to develop a plan to improve monitoring of the wellhead. Plan to be in accordance with existing Guam EPA Wellhead Protection.

Proposed Action Item Schedule	Task Description
05/30/2013	First Draft for GWA review
06/03/2014	First Draft submitted to USEPA
06/29/2015.	Final Submitted to USEPA; EA Engineering Science and Technology, Inc..
	Complete

3. Sources Ugum— Diesel fuel storage tank containment located near intake for Ugum Water Treatment Plant (WTP) is undersized;

Diesel fuel storage tank containment located near intake for Ugum Water Treatment Plant (WTP) is undersized; spill could contaminate the Ugum River. Potential chemical contamination of source

- Diesel fuel storage tank containment area at the intake was visibly undersized and was designed to discharge to the ground where it could flow downhill to the Ugum River

Comment: This item was incorrectly evaluated.
Tank is dual walled construction. Containment is adequate.

Proposed Action Item Schedule	Task Description
	Provide documentation verifying dual wall construction.
05/08/2013	Verification sent to EPA – Complete

4. Sources Well— Some wells have cracks and other openings in the well pads, well casings and improperly sealed sanitary seals.

Some wells have cracks and other openings in the well pads, well casings and improperly sealed sanitary seals. These are direct openings for contamination to enter wells. Potential bacteriological or chemical contamination of source.

- Cracks in well pads and well casings and improperly sealed sanitary seals
- Lack of well pads at some locations

Action Plan:
Initiate repair. Document completion of repair. Engage consultant for independent confirmation of repair work and production of report.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
2/1/2013	Engage consultant Brown and Caldwell
4/30/2013	Complete repair work
5/5/2013	Draft report to GWA
6/6/2013	Report sent to USEPA - Complete

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

5. Sources Well— Missing screens on well casing vents.

Potential contamination of source.

- Missing screens on well casing vents

Action Plan:

Initiate repair. Document completion of repair. Engage consultant for independent confirmation of repair work and production of report.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
2/1/2013	Engage consultant Brown and Caldwell
4/30/2013	Complete repair work
5/5/2013	Draft report to GWA
6/6/2013	Report to USEPA
5/13/2013	Report sent to USEPA - Complete

6. Sources Well— Wells have bypass lines that were routed into the ground and off-site without an air gap.

Wells have bypass lines that were routed into the ground and off-site without an air gap. Potential contamination of source. Many wells found to have bypass lines that were routed into the ground and off-site without an air gap

Action Plan:

Initiate repair. Document completion of repair. Engage consultant for independent confirmation of repair work and production of report.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
2/1/2013	Engage consultant Brown and Caldwell
4/30/2013	Complete repair work
5/5/2013	Draft report to GWA
6/6/2013	Report to USEPA
5/23/2013	Report sent to USEPA - Complete

7. Sources Spring--Lack of operating flow meter at spring source makes operation (including chlorine dosing) problematic.

Difficulty in ensuring adequate chlorination/disinfection

Recommendation:

Remove heavy vegetative growth around the clear well structure.

Implement routine and corrective maintenance at all spring appurtenances—meters, valves, pumps, piping, pressure gauges, etc.

Action Plan:

Initiate repair. Document completion of repair.

Proposed Action Item Schedule	Task Description
12/1/2013	Initiate repair work
4/30/2013	Complete repair work
6/6/2013	Report to USEPA
5/23/2013	Report sent to USEPA - Complete

8. Sources Spring-- Santa Rita Spring Box (Clear Well) –

– Gaps between corrugated metal roof and clear well walls allow entry by animals, birds and reptiles. Allow bacteriological contamination to enter source.

Action Plan:

Initiate repair. Document completion of repair.

Proposed Action Item Schedule	Task Description
05/08/2013	Reported to USEPA - Complete

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Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

9. Treatment-- Lack of operations and maintenance (Ugum, Santa Rita Spring)

Recommendation:

- Implement routine and corrective maintenance at all spring appurtenances—meters, valves, pumps, piping, pressure gauges, etc.

Ugum training on O&M will be regular refresher classes on annual basis.

Action Plan:

Proposed Action Item Schedule	Task Description
Santa Rita Spring (Ground Water)	
05/08/2013	Santa Rita Spring O&M training was completed an has been sent to USEPA.
05/08/2013	O&M is now under Production Section.
05/31/2014 etc.	Santa Rita Spring O&M training will have annual refreshers.
Ugum Surface Water Treatment Plant	
11/19-23/2012	Latest Training by Siemens/Smithbridge
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA
07/01/2014 and thereafter.	**O&M training will have annual refreshers.**
Completed under Court Order	See Court Order Section II C 26 Ugum SOP's - Complete

10. Treatment-- Lack of operating turbidimeter at Santa Rita Spring source.

Action Plan:
Initiate repair. Document completion of repair.

Proposed Action Item Schedule	Task Description
05/08/2013	Verification submitted to USEPA - Complete

11. Treatment-- Plant operators do not regularly conduct jar tests and do not optimize precursor removal at Ugum WTP.

Action Plan:
Prepare Bid or Change Order for TOC. Prepare documentation of training. Provide copies of regular reporting.

Proposed Action Item Schedule	Task Description
5/15/2013	Prepare change order for installation of TOC and appurtenances. Smithbridge
08/12/2013	Completed installation of on-site TOC analyzer.
08/15/2013	Completed training of operators on site TOC analyzer.
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA – Complete

12. Treatment-- Inadequate turbidity monitoring and reporting at Ugum

Action Plan:
Address re-programming SCADA. Provide copies of daily submittals sent to GEPA and monthly submittals, and send example reports to USEPA as documentation.

Proposed Action Item Schedule	Task Description
06/06/2013	Send documentation of conformance to USEPA
05/30/2013	Sent documentation of conformance to USEPA - Complete

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Corrective Action Plan (CAP) (Approved 10/21/2014) Quarterly/Annual Update Report

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

13. Treatment-- At least one well (D-5) did not have a chlorination system in place	
Action Plan: Explain that D-5 well is not a point of entry into the potable distribution system issue.	
Proposed Action Item Schedule	**Task Description**
6/6/2013	Report to USEPA
05/31/2013	Report sent to USEPA - Complete

14. Treatment Well-- At least one well, the well log indicated chlorine gas had run out in the past (April 29, 2012) Inadequate chlorination/disinfection could result in exposure to bacteriological contamination.	
Action Plan: GWA to provide the log sheets. This finding is a result of an incorrect assessment	
Proposed Action Item Schedule	**Task Description**
6/6/2013	GWA to send USEPA the log sheet – interpretation was incorrect.
05/31/2013	Sent to USEPA - Complete

15. Water Storage-- Severe internal/external rust and corrosion including roofs, roof vents, walls, base and other welds, anchors allows contaminants to enter tanks. Recommendation: GWA should properly maintain facilities and grounds (remove overgrown vegetation, take away garbage, repair security breaches, etc.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

16. Water Storage-- Bolts, many completely rusted through, compromise structural stability of tanks. Recommendation: Potential for tank failure	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

17. Water Storage-- Inadequate Site Security (holes in fences, missing gates) and unlocked hatches allow easy access to tanks (as demonstrated by vandalism at many tanks). Potential for access by public and consequent contamination.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

18. Water Storage-- Leaking tanks. Recommendation: Could allow contamination to enter.	
Action Plan: This is a Court Ordered project. Work performed will be in accordance with the 2011 court order Paragraph 29.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

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Corrective Action Plan (CAP) (Approved 10/21/2014) Quarterly/Annual Update Report

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

19. Water Storage-- Flooded, uncovered and unsecured valve vaults Could allow contamination to enter.	
Action Plan: This is a Court Ordered project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports- Complete

20. Water Storage-- No screen or flapper on the storage tanks' overflows. Potential for access by public and consequent contamination.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	See CO Section II C Paragraph 29, Quarterly and Annual Reports - Complete

21. Water Storage-- Ladders not locked, allow easy potential access by vandals.	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29. GWA will correct on tanks undergoing major repairs.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	Repairs Complete

22. Water Storage-- Ladders severely corroded or no cage will prevent adequate maintenance	
Action Plan: This is a Court Order project. Work performed will be in accordance with the 2011 court order Paragraph 29.	
Proposed Action Item Schedule	**Task Description**
In Progress – Court Order.	Repairs Complete

23. Distribution System-- Inadequate cross connection control program exists within GWA. Potential for backflow/backpressure and contamination.	
Action Plan: Engage consultant to develop how GWA can plan for backflow prevention program. Create report documenting procedures for implementing a program.	
Proposed Action Item Schedule	**Task Description**
02/01/2013	Engage consultant Brown and Caldwell
05/05/2013	Submit draft plan for GWA review
06/05/2013	Submitted draft plan to USEPA
NTP issued.	Draft Detailed Cross-Connection Control Plan by PMO Work Order.
Pending CCU approval	GWA recruiting positions to man and execute this project..
Included in Plan	Detailed Cross-Connection Control Plan Technical Memo Completed
Program Completed	**Final plan Completed 02/16/2018. Implementation in Progress**

GUAM WATERWORKS AUTHORITY

Suite 200, Gloria B. Nelson Public Service Building, 688 Rt. 15. Mangilao, GU 96913-6203

Corrective Action Plan (CAP) (Approved 10/21/2014) Quarterly/Annual Update Report

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

24. Distribution System-- Undersized water lines impact water pressure and water quality and contribute to potential cross-connections.
Potential for backflow/backpressure and contamination.

Action Plan:
Engage consultant to develop how GWA can plan for small diameter pipeline replacement program. Create report documenting procedures for implementing a program.

Proposed Action Item Schedule	Task Description
02/01/2013	Engage consultant Brown and Caldwell
05/05/2013	Submit draft plan for GWA review
06/05/2013	Submitted draft plan to USEPA
10/01/2013	Approved Plan/CIP for line replacement.
12/31/2013	Submit Approved Plan/CIP for line replacement to PUC.
04/30/2014	Approved of Plan/CIP for line replacement by PUC.
07/01/2014	Begin line replacement program for small diameter pipelines.
01/01/2024	Complete small diameter pipeline replacement.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

25. Pumps-- No pump controls at many of the booster pump stations; lack of maintenance. Leaking seals in pumps and valves results in intermittent service and supply, lower reliability and decreased pressure.
Recommendation:
Implement routine and corrective maintenance at all spring appurtenances—meters, valves, pumps, piping, pressure gauges, etc.

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
03/30/2014	Final plan for booster station repairs.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

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Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

26. Pumps-- Lack of adequate backup pumps. Flooding of booster pump stations.
Results in intermittent service and supply, lower reliability and decreased pressure

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
03/30/2014	Final plan for booster station repairs.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

27. Pumps-- No controls on well pumps or booster pumps.
Results in intermittent service and supply, lower reliability and decreased pressure.

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
03/30/2014	Final plan for booster station repairs.
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

28. Pumps-- Leaking pump seals, valves, lines, and highly rusted piping.
Results in intermittent service and supply, lower reliability and decreased pressure.

Action Plan:
Initiate repair. Engage consultant for independent analysis and condition assessment of booster pumping stations. Consultant to develop schedule and cost estimates for implementing upgrades of booster pumping stations. Consultant to prepare a report for rehabilitation program.

Proposed Action Item Schedule	Task Description
12/01/2012	Initiate immediate repairs
02/01/2013	Engage consultant Brown and Caldwell
02/26/2013	5-year CIP approved by CCU
04/30/2013	Complete immediate repairs
05/05/2013	Submit draft report to GWA for review
09/06/2013	Submitted draft report to USEPA for approval
Maintenance work in progress	Begin program for booster station repairs, copy to USEPA
Updates (Reporting per Preface)	See GWA CIP at < http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf >.

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

29. Water Quality-- Inadequate monitoring and reporting – Ugum WTP and Santa Rita Spring (turbidity and chlorine residual) exceedances (violations) may be going undetected and unreported. Recommendation: Continue to improve utility-wide communications to address previous lack of complete communication between departments.	
Action Plan: GWA has made this KPI and it is managed via weekly reports	
Proposed Action Item Schedule	**Task Description**
06/06/2013	GWA to submit weekly report documentation to USEPA.
05/30/2013	GWA submitted documentation to USEPA. Complete

30. SDWA Compliance-- Lead and Copper Rule monitoring overdue.	
Action Plan: GWA has implemented the required LCR monitoring and will proceed to complete and continue as required by the rule without waiting for GEPA to approve the schedule and process. If GEPA ever decides to participate, GWA will make additions that are requested.	
Proposed Action Item Schedule	**Task Description**
12/04/2012	Routine Procedure started.
06/14/2013	Round 1 completed with all sample results below both Pb and Cu action levels.
12/31/2013	Completed second Round of Monitoring
01/31/2014.	Lab results verify GWA is in compliance. - Complete

31. SDWA Compliance-- Unaddressed Stage 2 Disinfection/Disinfectant Byproducts rule (DBP) Rule MCL Violations, required public notification.	
Action Plan: Continue to report in CCR and add quarterly mailings to Central (GU0000003) and or Southern (GU0000001) System customers. GWA to await schedule for Navy water compliance schedule from Fena Reservoir for Central (GU0000003).	
Proposed Action Item Schedule	**Task Description**
05/20/2013	Southern (GU0000001) System is now compliant with Stage 2 DBP Rule
05/20/2013	Central (GU0000003) System is compliant with Stage 2 DBP Rule in all areas except one small part of Agat. Mailings to all Central Customers will continue until clear.
06/06/2013	Initiated quarterly mailings to affected customers. [Central (GU0000003)]
Consecutive System Management	GWA continues to reduce purchases of water from the Fena SWTP which has made the difference in the Central (GU0000003) System.
Navy Water is now in compliance	DBP exceedance Central (GU0000003) System has ended with changes in the Navy Fena Surface Water Treatment Plant's operations, achieving compliance with the Stage 2 DBP Rule.
Quarterly mailings are discontinued.	Complete

32. Administration-- No formal, comprehensive training program for operators and other personnel. Can result in inappropriate or inadequate operation and negative impacts on water quality.	
Action Plan: GWA to complete an annual Workforce Development Report	
Proposed Action Item Schedule	**Task Description**
01/16/2014	First Annual Workforce Development (Training) Report.
Regular Training Scheduled	**Adapted dependent on subject matter. Assisted by PMO.**
Updates (Reporting per Preface)	**See Comprehensive management Plan 08/27/2013**

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NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

33. Administration-- Hydraulic model is neither complete nor accurate enough to make operational or design decisions. Results in poor design and operational decisions impacting water quality.	
Action Plan: This is a Court Ordered project. Work performed will be in accordance with the 2011 court order Paragraph 29(a)(2).	
Proposed Action Item Schedule	**Task Description**
05/03/2013	Submitted Hydraulic Model report to USEPA under CO 29(a)(2). Complete

34. Administration-- No preventative maintenance programs for most operational areas. Many system components in varying levels of disrepair or failure put system at risk for contamination.	
Action Plan: GWA is working with USEPA and CDM to improve Asset Management	
Proposed Action Item Schedule	**Task Description**
In Progress	GWA/CDM-Smith Asset Management program
Continuously updated	**GWA Asset Management program – Lucity CMMS being implemented**

35. Administration-- Data are collected, but do not have the capacity to analyze the information to assist with operational decisions. Lack of understanding and use of operational data can result in poor system operations and consequent risk for contamination or failure.	
Action Plan: GWA will improve data collection and assessment function – SOP's and Training are in planning stages.	
Proposed Action Item Schedule	**Task Description**
2013	New SOP's and Training
2013 through 2018	Five year development plan for staff capacity for data retrieval and analysis.
Evolved, data collection upgraded.	**Required staff positions created**
Updates (Reporting per Preface)	**Creation of Management analyst positions is completed.**

36. Administration-- Lack of Standard Operating Procedures ("SOPs").	
Action Plan: GWA will conduct SOP training	
Proposed Action Item Schedule	**Task Description**
As of 06/25/2013.	55 new SOP's Implemented (assisted by CDM, EPA Grant)
Drafts and planed	CDM continues work, particularly on Asset Management
Average one a month my 06/30/2014	Complete new SOP's and implement
09/06/2013	Reported status to USEPA
Semi-annual - Continuous	**Training on SOP's**
Updates (Reporting per Preface)	**Generated by GWA Staff - Supplemented by CDM Smith - EPA SRF.**

37. Operator Compliance-- No proper operator certification for system type. Inadequately trained operators do not perform process control adequately, which impacts finished water quality.	
Action Plan: GWA disputes the described deficiency. **GWA has always been in compliance.**	
Proposed Action Item Schedule	**Task Description**
06/06/2013	Submit Certification information USEPA.
05/24/2013	Certification information sent to USEPA - Complete

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Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and John Riegel **Update**: July 31, 2018

NEIC Work Product No. VP0989E01 GWA Sanitary Survey Significant Deficiency Items:

38. Operator Compliance-- Plant operators do not regularly conduct jar tests.
Inadequately trained operators do not perform process control adequately, which impacts finished water quality.

Proposed Action Item Schedule	Task Description
5/15/2013	Prepare change order for installation of TOC and appurtenances. Smithbridge
08/12/2013	Completed installation of on site TOC analyzer.
08/15/2013	Completed training of operators on site TOC analyzer.
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA - Complete

39. Operator Compliance-- Plant operators and engineering staff did not understand the correlation between ineffective coagulant dosing.
Inadequately trained operators do not perform process control adequately, which impacts finished water quality.

Proposed Action Item Schedule	Task Description
5/15/2013	Prepare change order for installation of TOC and appurtenances. Smithbridge
08/12/2013	Completed installation of on site TOC analyzer.
08/15/2013	Completed training of operators on site TOC analyzer.
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA - Complete

40. Operator Compliance-- No level 4 Operator is actually located on site at the Ugum WTP, as required.
Violation of Guam Operator Certification requirement.

Action Plan:
Level 4 operators are not required at Ugum, Current status requires only Level 3 operators. **GWA has always been in compliance.**

Proposed Action Item Schedule	Task Description
06/06/2013	Submit Certification information USEPA.
05/24/2013	Certification information sent to USEPA - Complete

Status Summary: as of Julyy 30, 2018

Corrective Action Plan Legend	Fill Color	No. of Items
Information and/or future steps	**No Fill**	
Completed – no further action-or pending EPA approval	Green	**37**
Court Order Managed items (some are completed- the others are on schedule)	Blue	**9**
On Schedule or Continuous (Long Term Commitment/Reporting)	Orange	**10**

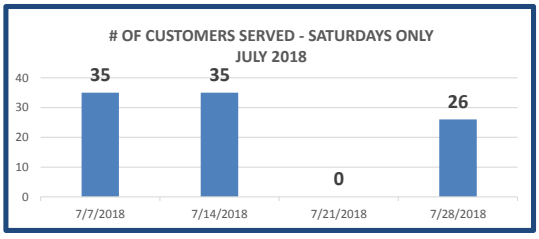
GWA Utility Services Division
Monthly Status Report
Month ending July 28, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE JUNE 2018	JUNE 2018 MONTHLY TOTAL	WEEK ENDING: 7/7/2018	WEEK ENDING: 7/14/2018	WEEK ENDING: 7/21/2018	WEEK ENDING: 7/28/2018	WEEKLY AVERAGE JULY 2018	JULY 2018 MONTHLY TOTAL
Collections Unit								
I. Number of accounts cut for nonpayment:	62	249	28	93	60	39	55	220
II. Number of accounts restored for nonpayment:	62	247	33	67	49	47	49	196
III. Number of No water reports responded to:	2	6	0	0	7	2	2	9
IV. Number of Secure/Unsecure valve reports responded to:	3	11	0	2	1	1	1	4
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 :	185	741	147	233	196	142	180	718
VII. Number of active pay plans negotiated and ongoing :	2032		1775	1957	2083	2171	1997	
VIII. Number of **inactive** accounts with a payment arrangement:	15		1	0	0	0	0	
IX. Number of broken payment plans:	79	316	114	51	70	54	72	289
Customer Service Unit								
I. Service Delivery Points:								
a. GBN Public Service Building – Fadian								
i. Total Customers Assisted :	251	1003	254	192	201	210	214	857
ii. Total Abandoned Requests :	16	65	8	11	14	15	12	48
iii. Average Wait Time:	6 minutes		7 minutes	4 minutes	5 minutes	8 minutes	6 minutes	
iv. Average Service Time:	12 minutes		11 minutes	11 minutes	9 minutes	11 minutes	12 minutes	
v. Breakdown by request type:								
1. Apply for water	59	235	48	38	44	44	44	174
2. Restore water cut for non payment	11	45	9	20	13	14	14	56
3. Terminate Water	19	76	21	11	10	14	14	56
4. Copy of Bill	36	144	22	43	40	34	35	139
5. Billing Dispute	61	243	35	51	42	46	44	174
6. Billing Dispute follow up	5	19	2	3	2	3	3	10
7. General Questions & Other	35	138	28	37	23	34	31	122
8. Report a water leak	1	5	1	1	1	0	1	3
9. Report water theft	0	0	1	0	0	0	0	1
10. Payment Arrangement	31	122	22	30	30	25	27	107
b. Julale Satellite Office – Hagatna								
i. Total Customers Assisted :	271	1085	274	223	190	236	231	923
ii. Total Abandoned Requests :	7	27	13	6	5	11	9	35
iii. Average Wait Time:	7 minutes		8 minutes	3 minutes	3 minutes	7 mintes	7 minutes	
iv. Average Service Time:	10 minutes		9 minutes	8 minutes	8 minutes	12 minutes	10 minutes	
v. Breakdown by request type:								
1. Apply for water	55	220	49	58	29	44	45	180
2. Restore water cut for non payment	15	58	1	2	9	20	8	32
3. Terminate Water	27	108	12	31	16	20	20	79
4. Copy of Bill	62	248	45	82	52	68	62	247
5. Billing Dispute	66	265	35	41	38	46	40	160
6. Billing Dispute follow up	3	13	1	1	0	0	1	2
7. General Questions & Other	31	125	32	35	19	15	25	101
8. Report a water leak	1	2	0	3	1	1	1	5
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	31	124	24	34	31	26	29	115
c. Upper Tumon Satellite Office – Upper Tumon								
i. Total Customers Assisted :	342	1367	382	385	262	236	316	1265
ii. Total Abandoned Requests :	22	86	13	3	7	12	9	35
iii. Average Wait Time:	6 minutes		5 minutes	7 minutes	7 minutes	8 minutes	6 minutes	
iv. Average Service Time:	9 minutes		9 minutes	11 minutes	11 minutes	12 minutes	9 minutes	
v. Breakdown by request type:								
1. Apply for water	79	316	55	98	49	70	68	272
2. Restore water cut for non payment	17	69	10	22	10	3	11	45
3. Terminate Water	24	97	41	34	22	20	29	117
4. Copy of Bill	75	301	82	105	56	44	72	287
5. Billing Dispute	74	296	71	98	53	58	70	280
6. Billing Dispute follow up	2	8	2	4	2	2	3	10
7. General Questions & Other	33	132	27	63	37	23	38	150
8. Report a water leak	3	12	2	3	6	2	3	13
9. Report water theft	0	1	0	0	0	0	0	0
10. Payment Arrangement	37	146	30	59	42	21	38	152

GWA Utility Services Division
Monthly Status Report
Month ending July 28, 2018

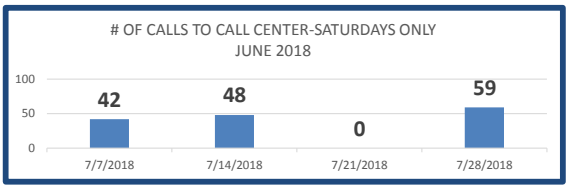
UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE JUNE 2018	JUNE 2018 MONTHLY TOTAL	WEEK ENDING: 7/7/2018	WEEK ENDING: 7/14/2018	WEEK ENDING: 7/21/2018	WEEK ENDING: 7/28/2018	WEEKLY AVERAGE JULY 2018	JULY 2018 MONTHLY TOTAL
d. Customer Call Center								
i. Calls Recieved :	1060	4238	690	1451	1250	1010	1100	4401
ii. Calls Immediately Answered :	756	3023	450	978	767	555	688	2750
iii. Calls Abandoned	40	159	24	53	55	35	42	167
iv. Calls Handled by Voice mail:	264	1054	215	420	427	420	371	1482
v. Average duration of calls answered	4 minutes		20 minutes	17 minutes	19 minutes	20 minutes	19 minutes	
vi. Breakdown by request type:								
1. Apply/Terminate info.	38	153	129	124	90	127	118	470
2. Automated Telphone Call	22	87	101	107	90	127	106	425
3. Balance Inquiry	123	491	60	93	48	94	74	295
4. Call Back	64	257	119	164	89	119	123	491
5. Dispatch	39	157	86	139	68	109	101	402
6. Dispute	9	36	6	6	2	1	4	15
7. Follow up	44	174	26	49	27	44	37	146
8. General Questions & Other	113	453	19	52	7	15	23	93
9. GWA Staff	123	490	19	33	18	27	24	97
10. No Water	23	91	27	45	3	14	22	89
11. Online/Phone App Help	28	110	19	127	27	15	47	188
12. Pay by Phone	123	493	6	8	5	10	7	29
13. Pay Plan	84	336	8	10	7	14	10	39
14. Restore Non-payment	27	108	15	14	16	22	17	67
15. Secure/Unsecure Valve	12	46	30	34	24	34	31	122
16. Voice Mail	24	96	69	88	34	24	54	215
17. Water leak	10	41	19	40	32	45	34	136
e. Customer Emails:								
i. Emails Recieved :								
1. customers@guamwaterworks.org	30	121	28	42	39	31	35	140
Breakdown by request type (email):								
a. Apply for water	2	7	1	2	5	2	3	10
b. Terminate Water	2	6	2	4	1	1	2	8
c. Copy of Bill	0	1	0	1	3	1	1	5
d. Billing Dispute & follow up	9	36	7	7	8	11	8	33
e. General Questions & Other	2	9	15	17	12	9	13	53
f. Report a water leak	12	49	0	4	3	1	2	8
g. Report water theft	2	7	0	0	0	0	0	0
h. Online services inquiry	2	6	3	7	7	6	6	23
2. gwaservesme@guamwaterworks.org (realtors and prop m	5	21	0	0	0	0	0	0
ii. Emails Replied (both):	34	136	21	28	32	33	29	114

f. Saturday Services: 9AM TO 1PM ONLY	AVERAGE	7/7/2018	7/14/2018	7/21/2018	7/28/2018	AVERAGE
	33	35	35	HOLIDAY	26	32
i. VISITS: Breakdown by request type:						
1. Apply for water	4	4	5	HOLIDAY	8	6
2. Restore water cut for non payment	1	0	2	HOLIDAY	0	1
3. Terminate Water	3	2	1	HOLIDAY	2	2
4. Copy of Bill	7	12	9	HOLIDAY	9	10
5. Billing Dispute	10	5	10	HOLIDAY	1	5
6. Billing Dispute follow up	0	0	0	HOLIDAY	0	0
7. General Questions & Other	2	2	2	HOLIDAY	1	2
8. Report a water leak	0	1	0	HOLIDAY	0	0
9. Report water theft	0	0	0	HOLIDAY	0	0
10. Payment Arrangement	5	9	6	HOLIDAY	5	7



GWA Utility Services Division
Monthly Status Report
Month ending July 28, 2018

UTILITY SERVICES DIVISION ACTIVITIES:	WEEKLY AVERAGE JUNE 2018	JUNE 2018 MONTHLY TOTAL	WEEK ENDING: 7/7/2018	WEEK ENDING: 7/14/2018	WEEK ENDING: 7/21/2018	WEEK ENDING: 7/28/2018	WEEKLY AVERAGE JULY 2018	JULY 2018 MONTHLY TOTAL
ii. CALLS TO CALL CENTER (Saturday services only):			7/7/2018	7/14/2018	7/21/2018	7/28/2018		
			42	48	0	59		



Dispute Resolution & Document Control

I. Dispute Resolution:			7/7/2018	7/14/2018	7/21/2018	7/28/2018		
a. Number of disputed accounts resolved:	9	35	14	10	8	8	10	40
b. Number of disputed accounts under review:	178	712	178	178	178	178	178	712
II. Document Control:								
a. Number of field activities posted :	470	1879	400	223	482	269	344	1374
b. Number of field activities pending:	639	2554	394	466	398	376	409	1634

Disconnect/Reconnect Unit

I. Number of field activities received:	269	1076	298	240	158	253	237	949
II. Number of field activities completed:	303	1210	340	252	263	180	259	1035
III.Number of field activities pending field action:	3	13	10	5	4	3	6	22

Meter Reading Unit

I. Number of meters read:			7/7/2018	7/14/2018	7/21/2018	7/28/2018		
a. Electronically Read Meters:	9810	39239	7917	1072	10397	10162	7387	29548
b. Manually Read Meters:	39	156	19	39	36	47	35	141
i. Unread meters (Meters scheduled to be read but not read):	40	160	38	46	42	50	44	176
ii. Number of data logs received:	30	118	29	29	20	29	27	107
iii. Number of data logs retrieved:	31	122	11	17	33	39	25	100
iv. Number of data logs pending field action:	9	35	23	33	29	18	26	103
v. Communication Errors/Reprogramming requests:	3	11	3	4	1	1	2	9
vi. Number of estimated readings (for the week):	27	108	37	33	23	30	31	123
vii. Reasons for Estimations:								
1. Cant locate meter:	3	11	0	9	3	4	4	16
2. Temporary Obstruction	1	5	4	2	5	5	4	16
3. Vicious Dog	0	0	0	0	0	1	0	1
4. Flooded meter	1	5	1	2	2	0	1	5
5. Corrective action requested (database corrections needed)	2	7	1	2	4	3	3	10
6. Possible changed out meter:	5	19	1	3	8	9	5	21
7. Communication/Programming error (code 92's):	4	15	2	5	1	5	3	13
8. Other:	8	30	6	8	8	14	9	36
1. Leaks detected on customer's private line:	1141	4564	987	1418	1325	1167	1224	4897
2. Reverse Flow Detected	70	278	37	91	41	159	82	328
3. No Usage Detected	390	1559	308	460	506	439	428	1713
4. Tamper Code	20	78	19	24	17	19	20	79
c. Electronic Read Percentage:	100%		98%	100%	100%	100%	99%	

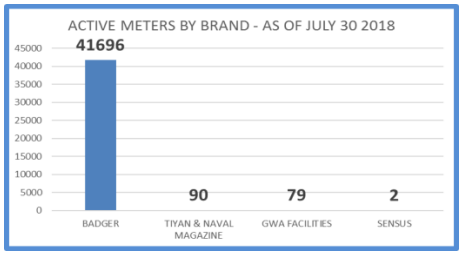
Revenue Protection Unit

I. Number of Inactive Still Consuming Reports rec'd & investigated:	0	0	0	0	2	0	1	2
II.Number of Illegal Connection reports rec'd & investigated:	1	3	1	2	0	1	1	4

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
August 2018

Prepared By:
Thomas Cruz, P.E. Chief Engineer

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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	54.90%	45.10%	$ 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	95.15%	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	64.94%	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	75.47%	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	100.00%	0.00%
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	55.51%	44.49%
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	38.96%	61.04%
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 Maloloj 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	88.43%	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	47.84%	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	51.50%	48.50%
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	Wastewater 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%	100.00%
		$ 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	54.11%	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	91	**	$83.339	95.35%	10.99
2013	$139.325	54	**	$131.780	94.58%	29.28
2015	$140.019	24		$85.991	61.41%	43.00
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of July 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**	
100% Complete	**Activities/Notes:** Contract executed July 31, 2018. NTP issued August 2, 2018.	
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**	
100% Complete	**Activities/Notes:** Contract executed June 19, 2018. NTP issued July 13, 2018.	
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**	
99% Complete	**Activities/Notes:** Contract routed for signatures within GWA.	
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**	
99% Complete	**Activities/Notes:** Contract routed for signatures within GWA.	
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) 80% (Design)	**Activities/Notes:** Design firm working to 90% design submittal.	**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, Sinifa and Santa Rita design to be packaged in one IFB. Inarajan – Land procurement second site related to new BPS's still on-going. 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 – CCU resolution to be presented authorizing Change Order to AIC to construct tank. 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
90% Complete	**Activities/Notes:** Contractor continuing work along Chalan Koda and Matguac.	**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
80% Complete	**Activities/Notes:** Design firm working to 90% design submittal.	**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
90% Complete	**Activities/Notes:** Yigo #1: tank on-line, final punch list on-going. Yigo #2: tank on-line, punch list on-going. Existing steel tank off-line for inspection and GWA working to Change Order repair work. Astumbo #1: disinfection work started	**Completion Date:** 07/31/18, (GWA working through delay claims from contractor)
	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
90% 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
10% Complete	**Activities/Notes:** Nissan Tank demolition on-going. GWA working on GFD issued related to BPS at Hyundai tank site. No permit received yet.	**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
90% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going. Change Order related to installation of last segment of sewer being process.	**Completion Date:** Phase I: 03/01/18 (this completion date will have to be extended. Under negotiations)
	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
80% Complete	**Activities/Notes:** Negotiations for Change Order proposal related to time extension on-going.	**Completion Date:** April 2018 (this completion date will have to be extended. Under negotiations)
	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
95% Complete	**Activities/Notes:** New SPS, force main and gravity line installation along Route 17 on-going. Change Order related to installation of last segment of sewer being process.	**Completion Date:** April 2018 (this completion date will have to be extended. Under negotiations)
	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
45% 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. Under negotiations)
	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 25% construction	**Activities/Notes:** • For-Construction Design: • BC acceptance of recirculation pump withheld since pump overloads at low head conditions. Engineer reviewing multiple possible solutions. • BC's Comments on I&C and Process Control requires a formal response. • Change Proposals: • WW Characterization / Design of Phosphorus Removal System: Scope & fee proposal for WW Characterization through sample collection and jar testing being prepared by CT/HD. After data is supplied to GWA, a Conceptual Design will be generated and a construction cost estimate provided. Phosphorus is the nutrient of concern	**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
25%	**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.	

F. GIS Section

MAPPING MC 05-02	**Island Wide Survey- (Duenas, Camacho & Ass.)**	**Start Date:** December 2007
99% complete	**Activities/Notes:** GWA engineering working to close project with surveyor and ensure all maps received.	**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
50% complete	**Activities/Notes:** First 25 property maps that GM signed are with Land Management. Second set of maps for 20 properties received from surveyor for GM signature. Surveyor conducting field work for third set of 20 properties.	**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 2018

NO DATA FOR AUGUST

	2018						
Description	Jan	Feb	Mar	April	May	Jun/July	
Building Permit	11	9	1	13	11	28	
Occupancy Permit	3	10	18	16	18	32	
New Installation	14	8	7	9	3	18	
Sewer Application	15	14	7	6	3	0	
Sewer Inspection	0	1	3	0	0	1	
Private Utility Acceptance	0	0	0	0	0	0	
Relocation of Water Meter	0	0	0	0	0	0	
Tapping-Water	1	1	0	0	3	1	
Tapping-Sewer	0	1	0	0	0	0	
Clearance-Water	3	2	7	10	20	41	
Clearance-Sewer	3	2	7	10	20	41	
Highway Encroachment	0	4	41	22	25	31	
Verification of Utilities	4	4	5	4	1	7	
Fire Flow Test	0	0	1	0	0	0	
Schedule Water Outage	0	1	0	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 08/15/18
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	Warranty work complete .
				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		10/16/2018	12/30/2019	$6,275,782.88		Procurement 95%. Resolution seeking approval of contract before the CCU's August board meeting.
				Const. Mgmt	2	8/3/2017	8/3/2019	$ 870,610.41	DCA	Procurement 100%. Contract executed July 31, 2018. NTP issued August 2, 2018.
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	2	8/31/2017	10/1/2018	$ 4,554,451.00	ProPacific	• PPBC working on SMH #7 and start #8; following up with TGE/PPBC about elevations. • Laying pipe between SMH #4 & 5 ongoing, and finishing up between #5 & 6; additional emphasis on poll support and trench safety. • PPBC continues discharging/dewatering water to sewer; GWA metering discharge. • PPBC continuing exploratory excavations as needed due to existing utilities. CM/BC working with PPBC to determine the final alignment. • Existing concrete-encased utilities continuing to be an issue with installing manholes per the original design; also runs parallel/above new sewerline in some locations. CM coordinating PPBC and BC on new manhole locations as needed. • Still waiting on SSFM to supply justification for hours spent on engineering services; to provide proposal on T&M basis for additional services. • CO #1: Contractor agreed to 30 days additional time; routed to Finance (7/24). • Awaiting Contractor Invoice #7.
				Const. Mgmt	3	9/19/2017	10/1/2018	$ 584,725.00	TG Engineers	• CM inspection and cooridnation on-going.

5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	$ 2,640,220.00	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	• Public meetings are now complete. • Plan is to update Master Plan on comments received and be ready for approval at the August CCU meeting. • Plan has been updated to reflect comments received so far. Waiting for meeting notes from the public meetings for a final check. • Budget is expended - additional work for the public meetings and SFO Presentation currently at ~$65,000.
				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	• Project in holding pattern until construction IFB is issued (funding source TBD).
				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		12/1/2018	12/31/2019			Procurement 70%; GWA rejected all bid due to bids being above funding availability. GWA will work to repackage bids and re-bid within two month period.
				Const. Mgmt		12/1/2018	12/31/2019			Procurement 90%: Proposal evaluation completed with AMOrient selected as most qualified. Scope and fee negotiations on-going..
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	$ 1,542,979.01	ProPacific	All work at each sewer pump station are substantially complete. Final close out on-going.
				Const. Mgmt	4	9/9/2016	3/30/2018	$ 329,353.52	Stanley	CM working. Close out of projec.

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	3	4/5/2017	9/30/2017	$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	5	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		11/15/2018	12/31/2019			Procurement 95%, CCU approved resolution. Contract for Insituform routed for signatures given all required documents received by GWA. GWA still waiting for insurance policy from Propacfic before preparing contract .
				Const. Mgmt	6	11/15/2018	12/31/2019	$ 702,678.13	EMPSCO	No CM activities until contractors on board.
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	4	8/19/2016	3/30/2018 (completion date under analysis)	$ 6,158,240.67	Pacific Rim	• Main issues remain • VFD size. Responded to RFI 96 (VFD's and D-03) on Monday. No response from PRC to date. • PRC was given direction in the meeting on 7/16 to lower the sounding tube issues. Currently scheduled to complete next Tuesday • GHD provided updated electrical drawings for the drive changes on 8/3. • Level Sensor trouble shooting indicated that the problem is not in the well which eliminates the design issue contention. PRC needs to look at the out of well installation to find the issue. • CM met with PRC on the O&M manuals this week and BC had several discussion with him as well. This should be complete next week. • Memo drafted to transfer power bill to GWA. • Well rig test failure still an issue; trying to coordinate between GWA/Morrico/Honke.
				Const. Mgmt	7	3/22/2016	3/30/2018 (completion date under analysis)	$ 1,041,722.56	EA	• CM continuing to coordinate punch list items with contractor.

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	5	8/2/2016	Due to issue related to Santa Rita sewer project completion under analysis.	$ 1,189,815.00	ProPacific	• GWA to prepare and transmit letter to PPBC regarding remaining work for the new SPS and force main. • GWA letter to establish new time line and deliverables. •
				Const. Mgmt	8	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		12/1/2018	12/31/2019			Procurement 70%; GWA rejected all bid due to bids being above funding availability. GWA will work to repackage bids and re-bid within two month period.
				Const. Mgmt		12/1/2018	12/31/2019			Procurement 90%: Proposal evaluation completed with AMOrient selected as most qualified. Scope and fee negotiations on-going..
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	$ 493,818.86	EMPSCO	Talafofo Pump Station design /bid package received. Final Design of Chalan Pago Pump Station project under review by GWA. Change Order related to snails to be executed.
				Construction		12/1/2018	12/31/2019			Procurement 70%; bid package advertised 6/19/18, Bid opening rescheduled for 8/22/18.
				Const. Mgmt		12/1/2018	12/31/2019			Procurement 50%; RFP package being prepared.
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		3/15/2019	3/30/2020			
				Const. Mgmt		3/15/2019	3/30/2020			
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		3/15/2019	3/30/2020			Funding for construction project to be from FY18 grant that is still pending.
				Const. Mgmt		3/15/2019	3/30/2020			Funding for construction manager to be from FY18 grant that is still pending.

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.	Construction project complete.
				Const. Mgmt	9	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 Project 3 above.		
				Construction	6	3/8/2017	12/30/2017	$ 2,470,658.00	Pacific Rim	GWA waiting on as-builts.
				Const. Mgmt	10	1/24/2017	12/30/2017	covered under Project 3	HDR	CM work complete.
21	Valve Maintenance Equipment Trailer (2 each)	Acquire two sets of valve exercise equipment mounted on trailers to be used to exercise existing valves in the distribution system as a means of maintaining the valves functionality so the valves to not "freeze up" and required replacement	Grants/Operations	Equipment	1			$ 167,814.94		Complete
22	Heavy Duty Trucks to Haul Valve Maintenance Equipment Trailer (2 each)	Acquire two heavy duty trucks with extended to pull the valve exercise equipment trailer	Grants/Operations	Equipment	2			$ 139,790.00	Triple J	Complete
23	Project Advertisement	Each IFB or RFP requires advertising	Engineering/ Procurement	MISC	1			$ 25,172.50	PDN/Post	On-going

GUAM WATERWORKS AUTHORITY
JULY 31, 2018
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
July 31, 2018

SCHEDULE A

ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	Unaudited July 31, 2018	Audited September 30, 2017	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	1,844,859	4,873,275	(3,028,416)
Restricted Funds (Schedule G)	69,200,580	65,124,400	4,076,179
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $13,716,031 at Jul 31, 2018 and $12,619,034 at Sep 30, 2017	15,729,788	15,450,733	279,055
Other Receivable	2,176,641	8,433,446	(6,256,804)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Jul 31, 2018 and Sep 30, 2017	3,490,355	2,166,557	1,323,798
Total Current Assets	92,442,223	96,048,411	(3,606,188)
Property, Plant and Equipment			
Utility plant in service:			
Water system	334,789,099	327,484,191	7,304,908
Wastewater system	290,040,866	286,394,940	3,645,926
Non-utility property	19,115,656	18,938,255	177,401
Total property	643,945,621	632,817,387	11,128,235
Less Accumulated Depreciation	(301,315,079)	(286,043,580)	(15,271,499)
Land	1,163,298	1,110,998	52,300
Construction Work in Progress	173,679,989	111,695,887	61,984,103
Property, Plant and Equipment, net	517,473,829	459,580,691	57,893,138
Other noncurrent assets			
Restricted cash (Schedule G)	185,716,541	236,550,002	(50,833,461)
Investments (Schedule G)	37,779,974	41,042,038	(3,262,064)
Other Prepaid Expenses	1,000,616	551,128	449,487
Total other noncurrent assets	224,497,131	278,143,169	(53,646,038)
Total Assets	834,413,183	833,772,271	640,912
Deferred outflows of resources:			
Debt defeasance due to bond refunding	13,430,873	1,695,981	11,734,892
Deferred outflows from pension	4,940,338	4,943,777	(3,439)
Total Assets and Deferred Outflows of Resources	**852,784,394**	**840,412,029**	**12,372,365**
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Bond	1,800,000	1,725,000	75,000
-Series 2014 Refunding	3,620,000	3,475,000	145,000
-Series 2017 Refunding	295,000	-	295,000
-Notes Payable	3,145,406	3,037,569	107,837
Accounts Payable -Trade	4,540,612	5,390,256	(849,644)
Interest Payable	2,137,785	6,656,499	(4,518,715)
Accrued Payroll and Employee Benefits	2,093,203	2,604,471	(511,269)
Accrued Annual Leave	1,082,311	1,729,291	(646,980)
Current portion of employee annual leave	411,887	567,057	(155,170)
Contractors' Payable	9,760,619	13,950,287	(4,189,668)
Customer and Other Deposits	1,988,983	2,014,435	(25,452)
Other Liabilities	72,817	72,772	45
Total Current Liabilities	30,948,623	41,222,638	(10,274,015)
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	1,895,000	112,800,000	(110,905,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding	68,900,000	72,520,000	(3,620,000)
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	(1,296,168)	(1,338,751)	42,583
Unamortized Premium - Bond 2014	4,582,516	4,804,694	(222,178)
Unamortized Premium - Bond 2016	16,756,730	17,262,975	(506,246)
Unamortized Premium - Bond 2017	13,102,457	-	13,102,457
Notes Payable	2,899,281	5,533,918	(2,634,637)
Unfunded Ret Liability (GASB 67/68)	49,243,798	49,243,798	-
Employee Annual Leave, Less Current Portion	1,021,974	783,992	237,982
Total Liabilities	611,359,211	616,905,739	(5,546,528)
Deferred inflows of resources:			
Deferred inflows from pension	235,155	564,514	(329,359)
Total Liabilities and Deferred Inflows of Resources	611,594,366	617,470,253	(5,875,887)
Net Assets	**241,190,028**	**222,941,776**	**18,248,252**
Total Liabilities, Deferred Inflows of Resources and Net Assets	**852,784,394**	**840,412,029**	**12,372,365**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE B**
Comparative Budget vs. Actual for the period ending July 31, 2018

	Month to Date		Variance
	Budget July-18	Actual (Unaudited) July-18	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,743,160	5,160,754	(582,406)
Wastewater Revenues	3,228,257	3,205,892	(22,365)
Legislative Surcharge	291,896	296,790	4,894
Other Revenues	57,638	24,273	(33,365)
System Development Charge	46,136	131,810	85,674
Total Operating Revenues	9,367,087	8,819,520	(547,567)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	668,113	648,721	19,392
Power Purchases	1,317,997	1,308,740	9,257
Total Utility Costs	1,986,110	1,957,462	28,649
Salaries and Wages	1,625,056	1,636,313	(11,257)
Pension and Benefits	584,558	686,271	(101,713)
Total Salaries and Benefits	2,209,614	2,322,584	(112,970)
Capitalized Labor and Benefits	(208,333)	(208,333)	(0)
Net Salaries and Benefits	2,001,281	2,114,251	(112,970)
Administrative and General Expenses			
Sludge removal	104,514	102,974	1,540
Chemicals	104,997	90,727	14,270
Materials & Supplies	277,900	275,218	2,682
Transportation	72,370	64,393	7,978
Communications	16,182	16,131	51
Claims	37,100	37,009	91
Insurance	78,757	75,172	3,585
Training & Travel	11,814	6,060	5,754
Advertising	13,910	10,935	2,975
Miscellaneous	108,515	78,761	29,754
Regulatory Expense	29,086	28,287	799
Bad Debts Provision	110,103	109,693	409
Total Administrative and General Expense	965,248	895,360	69,889
Depreciation Expense	1,528,175	1,528,175	(0)
Contractual Expense			
Audit & Computer Maint.	38,630	35,368	3,262
Building rental	37,955	36,262	1,693
Equipment rental	47,375	46,089	1,286
Legal	4,167	600	3,567
Laboratory	4,752	4,005	747
Other	140,363	138,714	1,649
Total Contractual Expense	273,241	261,038	12,203
Retiree Supp. Annuities and health care costs	240,008	234,003	6,006
Contribution to Government of Guam	49,500	49,833	(333)
Total Retiree Benefits	289,508	283,836	5,672
Total Operating Expenses	7,043,563	7,040,121	3,442
Earnings (Loss) from Operations	2,323,524	1,779,399	(544,125)
Interest Income-2010/13/14/16/17 Series Bond	15,727	293,949	278,223
Interest Income-Other Funds	2,935	54,950	52,015
Interest Income-SDC	2,414	12,382	9,968
Interest Expense- 2010/13/14/16/17 Series Bond	(2,625,587)	(2,137,785)	487,803
Interest Expense- ST BOG	(33,288)	(26,293)	6,995
Federal Expenditures	(51,332)	(81,913)	(30,581)
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)	32,592	137,873
Prior Year Adjustment	-	-	-
Total non-operating revenues (expenses)	(2,246,492)	(1,317,103)	929,389
Net Income (Loss) before capital contributions	77,032	462,296	385,264
Capital Contributions			
Grants from US Government	873,108	1,408,716	535,608
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	873,108	1,408,716	535,608
Change in Net Assets	950,140	1,871,012	920,872
Debt Service Calculation			
Earnings From Operations	2,323,524	1,779,399	
System Development Charge	(46,136)	(131,810)	
Retiree COLA	49,500	49,833	
Interest/Investment Income	2,935	54,950	
Depreciation	1,528,175	1,528,175	
Balance Available for Debt Service per Section 6.12	3,857,998	3,280,547	
Working Capital Reserve Available for Debt Service	932,265	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	4,373,596	4,215,868	
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	1.47	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	1.89	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending July 31, 2018 and 2017

SCHEDULE C

	Month to Date		Variance
	Actual (Unaudited) July-18	Actual (Audited) July-17	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,160,754	5,331,404	(170,649)
Wastewater Revenues	3,205,892	3,099,528	106,364
Legislative Surcharge	296,790	267,269	29,521
Other Revenues	24,273	36,293	(12,019)
System Development Charge	131,810	72,662	59,148
Total Operating Revenues	8,819,520	8,807,155	12,365
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	648,721	609,094	(39,627)
Power Purchases	1,308,740	1,006,355	(302,385)
Total Utility Costs	1,957,462	1,615,449	(342,013)
Salaries and Wages	1,636,313	1,413,608	(222,704)
Pension and Benefits	686,271	490,400	(195,871)
Total Salaries and Benefits	2,322,584	1,904,009	(418,575)
Capitalized Labor and Benefits	(208,333)	(262,516)	(54,183)
Net Salaries and Benefits	2,114,251	1,641,493	(472,758)
Administrative and General Expenses			
Sludge removal	102,974	140,487	37,513
Chemicals	90,727	174,001	83,274
Materials & Supplies	275,218	128,788	(146,430)
Transportation	64,393	53,744	(10,648)
Communications	16,131	10,884	(5,247)
Claims	37,009	22,151	(14,858)
Insurance	75,172	90,603	15,431
Training & Travel	6,060	23,055	16,994
Advertising	10,935	8,988	(1,947)
Miscellaneous	78,761	71,997	(6,765)
Regulatory Expense	28,287	24,134	(4,153)
Bad Debts Provision	109,693	109,700	6
Total Administrative and General Expense	895,360	858,530	(36,829)
Depreciation Expense	1,528,175	1,402,038	(126,137)
Contractual Expense			
Audit & Computer Maint.	35,368	76,901	41,533
Building rental	36,262	36,557	295
Equipment rental	46,089	59,374	13,285
Legal	600	414	(186)
Laboratory	4,005	10,627	6,622
Other	138,714	156,747	18,033
Total Contractual Expense	261,038	340,619	79,581
Retiree Supp. Annuities and health care costs	234,003	231,895	(2,107)
Contribution to Government of Guam	49,833	49,500	(333)
Total Retiree Benefits	283,836	281,395	(2,441)
Total Operating Expenses	7,040,121	6,139,525	(900,596)
Earnings (Loss) from Operations	1,779,399	2,667,630	(888,231)
Interest Income-2010/13/14/16/17 Series Bond	293,949	65,354	228,595
Interest Income-Other Funds	54,950	10,032	44,918
Interest Income-SDC	12,382	1,060	11,322
Interest Expense- 2010/13/14/16/17 Series Bond	(2,137,785)	(2,220,744)	82,959
Interest Expense- ST BOG	(26,293)	(43,736)	17,443
Federal Expenditures	(81,913)	(42,501)	(39,412)
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	32,592	-	32,592
Prior Year Adjustment	-	(26,756)	26,756
Total non-operating revenues (expenses)	(1,317,103)	(1,119,512)	(197,590)
Net Income (Loss) before capital contributions	462,296	1,548,118	(1,085,822)
Capital Contributions			
Grants from US Government	1,408,716	1,815,921	(407,205)
Grants from GovGuam & Others	-	1,664	(1,664)
Other Contributions	-	-	-
Total Capital Contributions	1,408,716	1,817,586	(408,870)
Change in Net Assets	1,871,012	3,365,704	(1,494,691)
Debt Service Calculation			
Earnings From Operations	1,779,399	2,667,630	
System Development Charge	(131,810)	(72,662)	
Retiree COLA	49,833	49,500	
Interest/Investment Income	54,950	10,032	
Depreciation	1,528,175	1,402,038	
Balance Available for Debt Service per Section 6.12	3,280,547	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	4,215,868	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)	1.47	1.98	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.89	2.44	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE D**
Comparative Budget vs. Actual for the period ending July 31, 2018

	Budget July-18	Year to Date Actual (Unaudited) July-18	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	57,431,601	54,347,086	(3,084,515)
Wastewater Revenues	32,282,573	31,978,862	(303,711)
Legislative Surcharge	2,918,960	2,816,274	(102,687)
Other Revenues	576,380	362,380	(214,000)
System Development Charge	461,358	956,455	495,097
Total Operating Revenues	93,670,872	90,461,056	(3,209,816)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	7,351,132	7,351,566	(434)
Power Purchases	12,128,369	12,241,869	(113,500)
Total Utility Costs	19,479,500	19,593,435	(113,935)
Salaries and Wages	16,250,559	14,779,464	1,471,095
Pension and Benefits	5,845,583	5,035,636	809,947
Total Salaries and Benefits	22,096,142	19,815,100	2,281,042
Capitalized Labor and Benefits	(2,083,333)	(2,197,613)	114,279
Net Salaries and Benefits	20,012,809	17,617,487	2,395,322
Administrative and General Expenses			
Sludge removal	1,295,140	1,292,445	2,695
Chemicals	1,754,968	1,753,154	1,814
Materials & Supplies	1,931,998	1,930,244	1,754
Transportation	538,705	538,629	76
Communications	151,819	151,528	291
Claims	108,500	108,301	199
Insurance	758,566	758,031	535
Training & Travel	124,142	124,141	1
Advertising	116,601	116,165	435
Miscellaneous	860,154	859,656	498
Regulatory Expense	174,863	174,562	302
Bad Debts Provision	1,097,026	1,096,953	73
Total Administrative and General Expense	8,912,481	8,903,809	8,672
Depreciation Expense	15,281,747	15,281,750	(3)
Contractual Expense			
Audit & Computer Maint.	600,803	600,527	276
Building rental	387,650	387,590	60
Equipment rental	755,746	755,735	11
Legal	31,667	31,525	141
Laboratory	361,516	360,733	783
Other	1,716,631	1,716,221	410
Total Contractual Expense	3,854,012	3,852,331	1,681
Retiree Supp. Annuities and health care costs	2,400,083	2,374,388	25,695
Contribution to Government of Guam	495,000	498,333	(3,333)
Total Retiree Benefits	2,895,083	2,872,722	22,362
Total Operating Expenses	70,435,633	68,121,534	2,314,099
Earnings (Loss) from Operations	23,235,240	22,339,522	(895,718)
Interest Income-2010/13/14/16/17 Series Bond	157,266	2,162,528	2,005,262
Interest Income-Other Funds	29,347	368,643	339,296
Interest Income-SDC	24,143	79,857	55,714
Interest Expense- 2010/13/14/16/17 Series Bond	(26,255,872)	(21,854,044)	4,401,828
Interest Expense- ST BOG	(332,882)	(299,775)	33,106
Federal Expenditures	(513,322)	(550,432)	(37,110)
Loss on Asset Disposal	-	-	-
AFUDC	6,250,000	6,250,000	-
Amortization of Discount, Premium and Issuance Costs	(618,608)	(357,211)	261,397
Defeasance due to bond refunding	(152,184)	(124,436)	27,748
Deferred outflows from pension	(1,052,806)	325,920	1,378,726
Prior Year Adjustment	-	44,314	44,314
Total non-operating revenues (expenses)	(22,464,918)	(13,954,636)	8,510,283
Net Income (Loss) before capital contributions	770,321	8,384,886	7,614,565
Capital Contributions			
Grants from US Government	8,731,082	9,863,365	1,132,283
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	8,731,082	9,863,365	1,132,283
Change in Net Assets	9,501,403	18,248,251	8,746,848
Debt Service Calculation			
Earnings From Operations	23,235,240	22,339,522	
System Development Charge	(461,358)	(956,455)	
Retiree COLA	495,000	498,333	
Interest/Investment Income	29,347	368,643	
Depreciation	15,281,747	15,281,750	
Balance Available for Debt Service per Section 6.12	38,579,976	37,531,794	
Working Capital Reserve Available for Debt Service	9,322,650	9,321,342	
Transfer to Working Capital- Debt Service Reserve	(1,500,000)	-	
Transfer to Working Capital- O&M Reserve	(2,666,667)	-	
Balance Available for Debt Service inclusive of reserves	43,735,959	46,853,135	
Debt Service			
Principal	4,333,333	4,333,333	
Interest	20,634,022	17,949,100	
Total	24,967,355	22,282,433	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.55	1.68	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	2.10	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending July 31, 2018 and 2017

SCHEDULE E

	Year to Date ACTUAL (Unaudited) July-18	ACTUAL (Audited) July-17	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	54,347,086	53,314,035	1,033,050
Wastewater Revenues	31,978,862	30,995,277	983,585
Legislative Surcharge	2,816,274	2,672,689	143,585
Other Revenues	362,380	362,929	(548)
System Development Charge	956,455	726,622	229,833
Total Operating Revenues	90,461,056	88,071,551	2,389,505
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	7,351,566	6,090,937	(1,260,629)
Power Purchases	12,241,869	10,063,552	(2,178,317)
Total Utility Costs	19,593,435	16,154,489	(3,438,946)
Salaries and Wages	14,779,464	14,136,085	(643,379)
Pension and Benefits	5,035,636	4,904,003	(131,633)
Total Salaries and Benefits	19,815,100	19,040,088	(775,012)
Capitalized Labor and Benefits	(2,197,613)	(2,625,158)	(427,545)
Net Salaries and Benefits	17,617,487	16,414,931	(1,202,557)
Administrative and General Expenses			
Sludge removal	1,292,445	1,404,868	112,423
Chemicals	1,753,154	1,740,011	(13,143)
Materials & Supplies	1,930,244	1,287,877	(642,367)
Transportation	538,629	537,444	(1,185)
Communications	151,528	108,838	(42,690)
Claims	108,301	221,510	113,209
Insurance	758,031	906,027	147,997
Training & Travel	124,141	230,545	106,404
Advertising	116,165	89,878	(26,288)
Miscellaneous	859,656	719,966	(139,690)
Regulatory Expense	174,562	241,344	66,782
Bad Debts Provision	1,096,953	1,096,997	44
Total Administrative and General Expense	8,903,809	8,585,304	(318,505)
Depreciation Expense	15,281,750	14,020,379	(1,261,371)
Contractual Expense			
Audit & Computer Maint.	600,527	769,010	168,483
Building rental	387,590	365,565	(22,025)
Equipment rental	755,735	593,739	(161,996)
Legal	31,525	4,140	(27,385)
Laboratory	360,733	106,265	(254,468)
Other	1,716,221	1,567,471	(148,749)
Total Contractual Expense	3,852,331	3,406,191	(446,140)
Retiree Supp. Annuities and health care costs	2,374,388	2,318,954	(55,434)
Contribution to Government of Guam	498,333	495,000	(3,333)
Total Retiree Benefits	2,872,722	2,813,954	(58,768)
Total Operating Expenses	68,121,534	61,395,248	(6,726,286)
Earnings (Loss) from Operations	22,339,522	26,676,303	(4,336,781)
Interest Income-2010/13/14/16/17 Series Bond	2,162,528	653,544	1,508,985
Interest Income-Other Funds	368,643	100,318	268,325
Interest Income-SDC	79,857	10,598	69,259
Interest Expense- 2010/13/14/16/17 Series Bond	(21,854,044)	(22,207,438)	353,394
Interest Expense- ST BOG	(299,775)	(437,363)	137,587
Federal Expenditures	(550,432)	(425,014)	(125,418)
Loss on Asset Disposal	-	(811,046)	811,046
AFUDC	6,250,000	11,722,410	(5,472,410)
Amortization of Discount, Premium and Issuance Costs	(357,211)	618,607	(975,818)
Defeasance due to bond refunding	(124,436)	(152,184)	27,748
Deferred outflows from pension	325,920	-	325,920
Prior Year Adjustment	44,314	(267,557)	311,871
Total non-operating revenues (expenses)	(13,954,636)	(11,195,125)	(2,759,511)
Net Income (Loss) before capital contributions	8,384,886	15,481,178	(7,096,292)
Capital Contributions			
Grants from US Government	9,863,365	18,159,215	(8,295,850)
Grants from GovGuam & Others	-	16,644	(16,644)
Other Contributions	-	-	-
Total Capital Contributions	9,863,365	18,175,859	(8,312,494)
Change in Net Assets	18,248,251	33,657,037	(15,408,785)
Debt Service Calculation			
Earnings From Operations	22,339,522	26,676,303	
System Development Charge	(956,455)	(726,622)	
Retiree COLA	498,333	495,000	
Interest/Investment Income	368,643	100,318	
Depreciation	15,281,750	14,020,379	
Balance Available for Debt Service per Section 6.12	37,531,794	40,565,378	
Working Capital Reserve Available for Debt Service	9,321,342	9,321,342	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	46,853,135	49,886,720	
Debt Service			
Principal	4,333,333	4,200,000	
Interest	17,949,100	16,268,584	
Total	22,282,433	20,468,584	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.68	1.98	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.10	2.44	

SCHEDULE F

Bond Compliance

		($$$) Per Indenture	As of 7/31/18 ($$$) 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 July 31, 2018	Audited September 30, 2017	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	-
Petty Cash	5,000	5,000	-
BOG - Deposit Accounts	1,837,859	4,866,275	(3,028,416)
Sub-total Unrestricted	1,844,859	4,873,275	(3,028,416)
RESTRICTED			
Collection Accounts	58,842	163,466	(104,624)
BOG Deposit Accounts	7,478,641	6,051,064	1,427,577
BP Deposit Accounts	791,208	944,282	(153,074)
BOG Revenue Trust Fund	6,772,080	7,782,227	(1,010,147)
BOG O & M Reserve	13,629,968	13,516,540	113,428
BOG Debt Service Reserve	11,311,972	11,217,733	94,239
BOG CAPEX Fund	18,116,285	15,462,869	2,653,416
	58,158,997	55,138,182	3,020,815
BOG - SDC Deposit	3,291,583	1,486,219	1,805,365
BOG - SDC CDs	7,750,000	8,500,000	(750,000)
Total Restricted	69,200,580	65,124,400	4,076,179
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	-
BOG Series 13 Construction Fund	41,199,847	74,461,765	(33,261,918)
BOG Series 14 Refunding Construction Fund	739,933	771,281	(31,348)
BOG Series 16 Construction Fund	118,656,846	132,811,449	(14,154,603)
BOG Series 16 Cap Int Fund	-	1,782,982	(1,782,982)
BOG Series 17 Refunding Construction Fund	7,696,702	9,299,311	(1,602,610)
Total Restricted - Held by Trustee	185,716,541	236,550,002	(50,833,461)
USB Series 2013 Debt Service Fund	802,420	2,336,754	(1,534,334)
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	-
USB Series 2014 Refunding Debt Service Fund	629,634	1,796,559	(1,166,925)
USB Series 2014 Refunding Debt Service Reserve Fund	7,891,693	7,707,602	184,091
USB Series 2016 Debt Service Fund	609,209	130	609,079
USB Series 2016 Debt Service Reserve Fund	7,594,597	7,582,725	11,872
USB Series 2010 Debt Service Fund	172,323	2,020,121	(1,847,798)
USB Series 2017 Refunding Debt Service Reserve Fund	7,566,460	7,566,460	-
USB Series 2017 Debt Service Fund	481,951	-	481,951
Total Investments	37,779,974	41,042,038	(3,262,064)
Total Restricted and Unrestricted Cash	294,541,954	347,589,716	(53,047,762)

SCHEDULE H

Guam Waterworks Authority
Statement of Cash Flows (Unaudited)
FY 2018

	YTD Jul-18
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	89,242,750
Cash payments to suppliers/contractors for goods and services	(33,861,450)
Cash payments to employees for services	(21,891,565)
Net cash provided by operating activities	33,489,735
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	15,386,628
Acquisition of utility plant	(71,128,657)
Repayment of Long Term Debt	7,639,142
Interest expense	(29,310,747)
Net cash provided by (used in) capital and related financing activities	(77,413,634)
Cash flows from investing activities:	
Transfers from (to) restricted fund	38,284,455
Interest income received	2,611,028
Net cash provided by investing activities	40,895,483
Net increase (decrease) in cash	(3,028,416)
Unrestricted cash at beginning of the period	4,873,275
Unrestricted cash at end of period	1,844,859
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	21,775,355
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	15,281,750
Other Expense/income	771,034
(Increase) decrease in assets:	
Accounts receivable	(1,192,899)
Materials and supplies inventory	(1,323,798)
Other Assets	(449,488)
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	(835,543)
Accrued payroll	(511,269)
Customer deposits	(25,407)
Net cash provided by operating activities	33,489,735

Guam Waterworks Authority
Accounts Receivable - Government
As of July 31, 2018

SCHEDULE I

		AGING				
Customer Name	**No of Accounts**	**Current Balance**	**31-60 days**	**61-90 days**	**91-120 days**	**Over 120 days**	**Outstanding Bal.**
Guam Int'l Airport Authority	4	32,430	42,397	18,700	42,341	160,509	296,377
Guam Memorial Hospital Authority	3	37,564	32,512	38,480	36,415	-	144,970
Port Authority of Guam	2	39,233	40,716	20,845	-	-	100,794
Guam Power Authority	22	60,088	-	-	-	-	60,088
Guam Community College	3	4,390	5,724	4,920	4,590	39,563	59,188
University of Guam	3	16,350	-	-	-	-	16,350
Guam Housing & Urban Renewal Authority	8	5,248	-	-	-	-	5,248
Guam Housing Corporation	1	31	-	-	-	-	31
AUTONOMOUS AGENCIES	**46**	**195,334**	**121,349**	**82,945**	**83,346**	**200,072**	**683,046**
Department of Parks & Recreation	17	96,733	67,809	51,188	38,449	489,352	743,532
Department of Education	48	148,442	162,993	61,070	11,829	121,409	505,743
Department of Corrections	8	90,756	35,536	40,129	23,937	-	190,359
Department of Public Health & Social Services	6	2,757	2,086	1,032	398	102,295	108,567
Mayors' Council of Guam	47	14,799	121	61	107	-	15,088
Guam Fire Department	8	6,792	1,930	-	-	-	8,722
Office of the Governor	2	5,508	-	-	-	-	5,508
Department of Youth Affairs	3	1,012	23	23	23	3,873	4,956
Department of Agriculture	1	1,534	1,400	-	-	-	2,934
Department of Public Works	9	1,488	-	-	-	-	1,488
Sanctuary Inc.	1	1,164	-	-	-	-	1,164
Guam Police Department	2	1,114	-	-	-	-	1,114
Division of Senior Citizens, DPH&SS	2	434	161	164	26	-	785
Guam Veterans' Affairs Office	2	483	-	-	-	-	483
Department of Mental Health & Substance Abuse	1	320	-	-	-	-	320
Department of Administration	1	305	-	-	-	-	305
Guam Public Library	4	228	-	-	-	-	228
The Office of the Dededo Mayor	1	177	-	-	-	-	177
Merizo Mayor	1	34	-	-	-	-	34
Guam Solid Waste Authority	1	23	-	-	-	-	23
LINE AGENCIES	**165**	**374,104**	**272,060**	**153,669**	**74,769**	**716,929**	**1,591,531**
TOTAL July 31, 2018	**211**	**569,438**	**393,409**	**236,614**	**158,115**	**917,002**	**2,274,577**
TOTAL September 30, 2017	**253**	**715,578**	**442,522**	**169,120**	**72,476**	**396,347**	**1,796,043**
% INCREASE/ (DECREASE)	**-17%**	**-20%**	**-11%**	**40%**	**118%**	**131%**	**27%**

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of July 31, 2018

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 07/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 07/31/18
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	90,163	9,837	$ 100,000	$ -	$ 9,837
"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	7,159,766	3,752,687	$ 10,912,453	$ 238,547	$ 3,991,234
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	10,897,321	2,980,680	$ 13,878,000	$ (0)	$ 2,980,679
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	9,024,195	2,580,805	$ 11,605,000	$ 0	$ 2,580,805
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	566,364	84,536	$ 650,900	$ 100	$ 84,636
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	578,438	81,875	$ 660,314	$ 119,687	$ 201,562
Baza Gardens STP Replacement		$ 3,114,883	2,688,166	426,703	$ 3,114,869	$ 14	$ 426,717
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	47,621,200	19,262,992	$ 66,884,192	$ 315,808	$ 19,578,800
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	445,447	276,912	$ 722,359	$ 200,641	$ 477,553
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							$ 769,729
Total Construction Fund (2013 Series Revenue Bond)	**$ 139,325,000**	**$ 139,325,000**	**$ 99,169,887**	**$ 33,297,300**	**$ 132,467,187**	**$ 6,857,813**	**$ 41,199,847**

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

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of July 31, 2018

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	ADJUSTED PROJECT COST	EXPENDITURES AS OF 07/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 07/31/18	CONSTRUCTION FUND BALANCE AS OF 07/31/18
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	$ 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 Reductic	$ 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	$ 17,468,359.32	$ 0	$ 2,514,413	$ 597,837
Total Construction Fund (2014 Series Refu	$ 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	$ (0)				$ (0)		$ 8,871
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**$ 88,981,263**	**$ 669,600**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 739,934**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of July 31, 2018

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 07/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 07/31/18
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	64,531	85,469.44	$ 150,000	$ 4,351,000	$ 4,436,469
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	260,131	616,163.05	$ 876,294	$ 1,399,706	$ 2,015,869
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		741,000.20	$ 741,000	$ 400,000	$ 1,141,000
Mechanical/Electrical Equipment	$ 100,000	$ 100,000			$ -	$ 100,000	$ 100,000
Water Reservoir Internal/External	$ 800,000	$ 800,000		800,000.00	$ 800,000	$ -	$ 800,000
Water System Reservoirs 2005 Improvements	$ 42,350,000	$ 28,350,000	2,008,486	14,118,396.31	$ 16,126,882	$ 12,223,118	$ 26,341,514
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000		389,561.70	$ 389,562	$ 610,438	$ 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	193,899	119,084.26	$ 312,983	$ 36,017	$ 155,101
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	222,568	42,186.67	$ 264,755	$ 2,139,245	$ 2,181,432
Wastewater Collection System Repl/Rehab	$ 2,920,000	$ 2,920,000	911.46	554,566.54	$ 555,478	$ 2,364,522	$ 2,919,089
Baza Gardens STP Replacement	$ 16,700,000	$ 29,400,170	12,108,603	17,097,178.90	$ 29,205,782	$ 194,388	$ 17,291,567
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	239,045	13,060.42	$ 252,105	$ 274,895	$ 287,955
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	1,273,611	271,477.03	$ 1,545,088	$ 1,454,912	$ 1,726,389
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	4,028,214	16,574,040.38	$ 20,602,254	$ 197,746	$ 16,771,786
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		2,883,117.85	$ 2,883,118	$ 3,616,882	$ 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	716,554	827,205.38	$ 1,543,760	$ 1,225,703	$ 2,052,909
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-	$ 244,068	$ 255,932	$ 255,932
Interest Earned		$ -					$ 1,424,912
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 22,787,530**	**$ 66,594,304**	**$ 89,381,834**	**$ 50,637,629**	**$ 118,656,845**

GUAM WATERWORKS AUTHORITY
2010 Series Bond Project Status
As of July 31, 2018

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 07/31/18	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 07/31/18
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	$ 251,134	$ 86,760	$ 337,895	$ 1,362,105	$ 1,448,866
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	$ 1,083,817	$ 425,567	$ 1,509,384	$ 490,616	$ 916,183
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	$ 1,151,947	$ 314	$ 1,152,261	$ 149,686	$ 150,000
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							$ 131,430
Total Construction Fund (2010 Series Revenue Bond)	**$ 87,402,000**	**$ 87,402,000**	**$ 79,836,728**	**$ 4,096,454**	**$ 83,933,182**	**$ 3,468,818**	**$ 7,696,702**

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

Guam Waterworks Authority

VEHICLE FLEET STATUS

8/9/2018

EQUIPMENT STATUS					SUMMARY						
Description	Number of Equipment	Number of Equipment Available	Number of Equipment Not Available	Percentage	Operational	Operational w/Rprs Pending	In Shop-Accident Repairs	In Shop-Assessment Pending	In Shop-Repairs Pending	In Shop-Vendor Repairs	Recommend Survey
Backhoe	5	2	3	40%	2	0	0	0	1	0	2
Bobcat	1	1	0	100%	1	0	0	0	0	0	0
Boom Truck	2	1	1	50%	1	0	0	0	1	0	0
Crane	2	0	1	0%	0	0	0	0	1	0	1
Dump Truck	3	1	2	33%	1	0	0	0	2	0	0
Flat Bed	1	0	1	0%	0	0	0	0	0	0	1
Forklift	7	6	1	86%	6	0	0	0	0	0	1
Fuel Tanker	1	1	0	100%	1	0	0	0	0	0	0
Heavy Duty	7	4	3	57%	4	0	0	0	0	1	2
Hoist Rig	1	1	0	100%	1	0	0	0	0	0	0
Light	176	127	58	72%	126	1	2	4	9	3	40
Mini Backhoe	4	0	4	0%	0	0	0	0	2	2	0
Pumper Truck	1	1	0	100%	1	0	0	0	0	0	0
Skidster	1	1	0	100%	1	0	0	0	0	0	0
Sludge Truck	5	4	1	80%	2	2	0	0	1	0	0
Tow	1	0	1	0%	0	0	0	0	0	0	1
Tractor	2	2	0	100%	2	0	0	0	0	0	0
Tractor Mower	1	1	0	100%	1	0	0	0	0	0	0
Trailer	15	12	3	80%	12	0	0	0	1	0	2
Trencher	1	1	0	100%	1	0	0	0	0	0	0
Vaccon	1	1	0	100%	1	0	0	0	0	0	0
Vacuum Truck	3	2	1	67%	2	0	0	0	0	1	0
Water Buffalo	2	2	0	100%	2	0	0	0	0	0	0
Water Tanker	5	2	1	40%	2	0	0	0	0	2	1

Compressor	1	1	0	100%	1	0	0	0	0	0	0
Total	249	176	84		176	3	2	4	18	9	51

Guam Waterworks Authority	Date: 8/9/2018
	Time:

REVIEWS			
TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	92%
TOTAL PUMPS OPERATIONAL	47	% OF OPERATING PUMPS	92%
TOTAL BOOSTER PUMP STATIONS	25		

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

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	1	50%	OP	A	Pending megger testing for pump # 2.					
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**	**19**	**90%**								
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	Pump # 1 grounded.				At vendor for repairs	
2	Brigade	60	3	3	100%	OP	A			Generator inadequate for 2 pump operation			
3	Windward Hills	200 / 75	3	3	100%	OP	A						
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%													

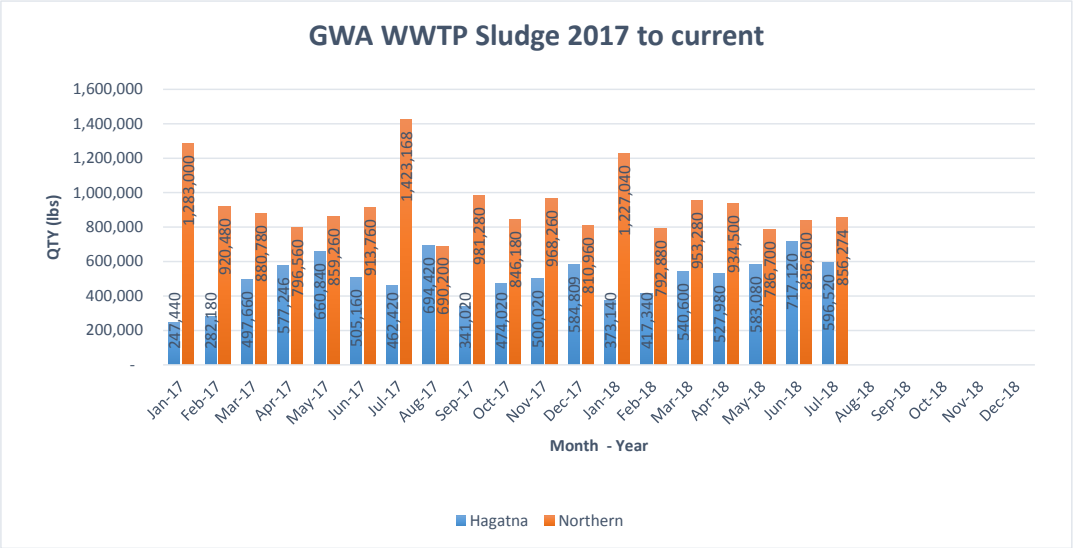
Southern District

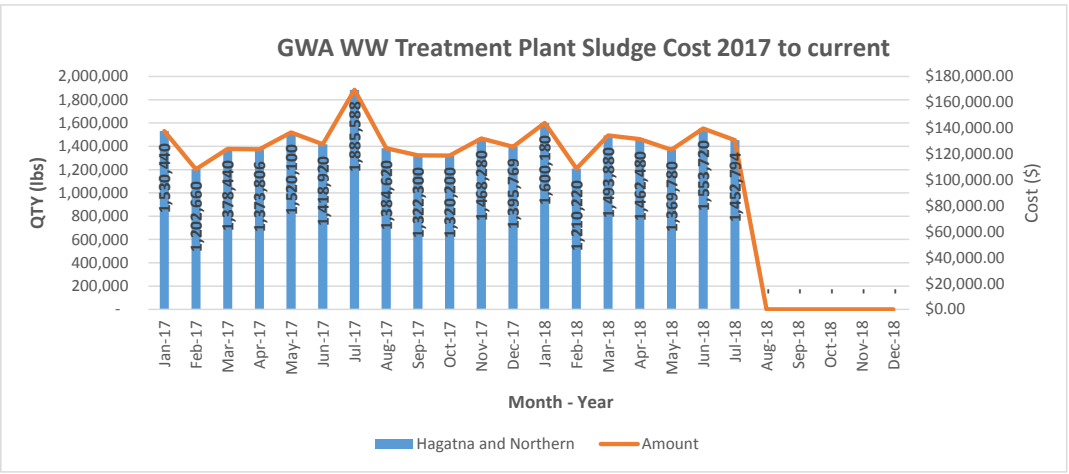
NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Malojloj Line	125 / 50	3	3	100%	OP	A	Pump 3 installed by JMI 6-28-18					
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**	**15**	**100%**								
pump availability =no of operational pumps/no of pumps*100%													

Sludge Disposal To Landfill Weight and Cost

	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	**583,080**	**$52,477.20**	**786,700**	**$70,803.00**	**1,369,780**	**$123,280.20**
Jun-18	**717,120**	**$64,540.80**	**836,600**	**$75,294.00**	**1,553,720**	**$139,834.80**
Jul-18	**596,520**	**$53,686.80**	**856,274**	**$77,064.66**	**1,452,794**	**$130,751.46**
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	**3755780**	**$338,020.20**	**6387274**	**$574,854.66**	**10143054**	**$912,874.86**


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
-
240,440
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
583,080
786,700
717,120
836,600
596,520
856,274
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
Northern

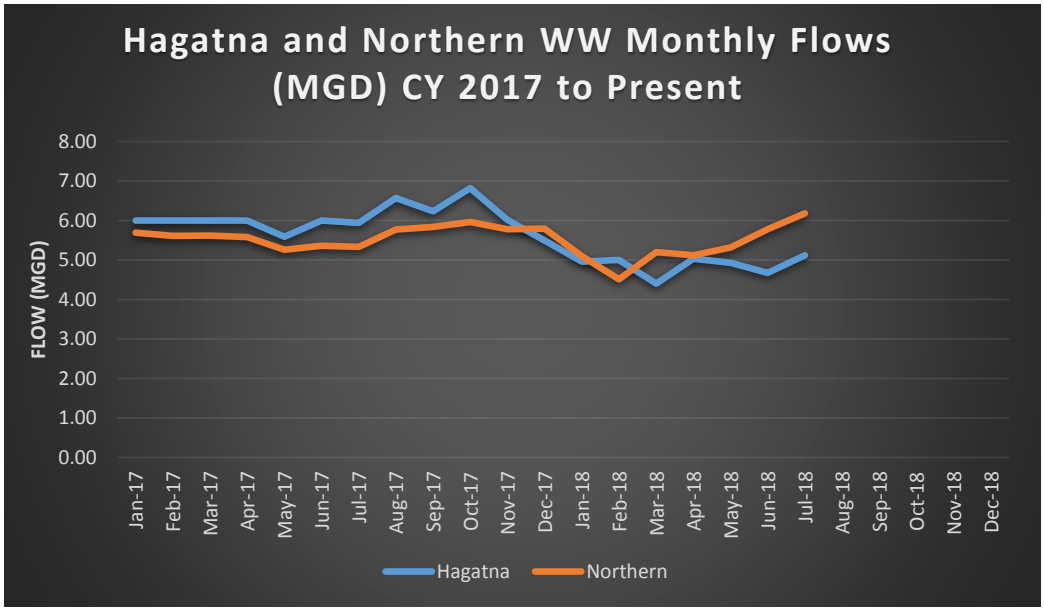

GWA WW Treatment Plant Sludge Cost 2017 to current
QTY (lbs)
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
Cost ($)
$180,000.00
$160,000.00
$140,000.00
$120,000.00
$100,000.00
$80,000.00
$60,000.00
$40,000.00
$20,000.00
$0.00
1,530,440
1,202,660
1,378,140
1,373,806
1,520,100
1,418,920
1,885,588
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
1,369,780
1,553,720
1,452,794
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

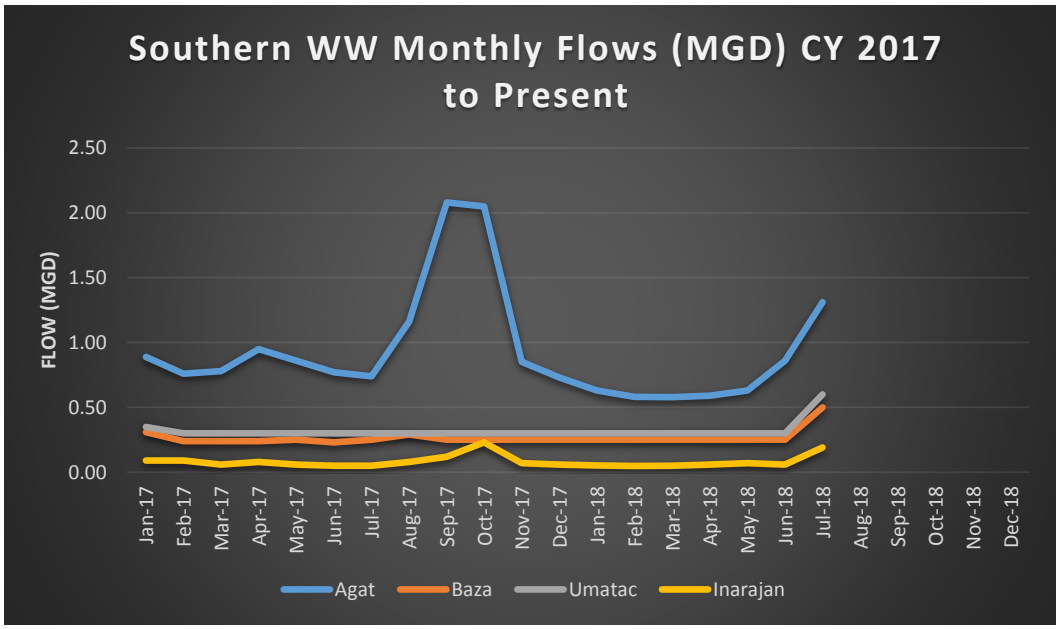
Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

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	4.93	5.32	0.63	0.25	0.30	0.07
Jun-18	4.67	5.78	0.86	0.25	0.30	0.06
Jul-18	5.12	6.18	1.31	0.50	0.60	0.19
Aug-18						
Sep-18						
Oct-18						
Nov-18						
Dec-18						
2018 Average MGD	**4.87**	**5.32**	**0.74**	**0.29**	**0.34**	**0.08**
2018 Total MGY	1,779	1,940	270	104	125	28

GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 8/6/2018





GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 8/6/2018

GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
A01	Grounded motor	216	N/S	0	0	0	0	0	0	Grounded Motor	Grounded Motor	**0**	DG: Defective pressure gages 5/18: A01 secured, grounded motor.
A02	Out of commission	241	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	11/8/2012: A02 secured, pump-motor stuck in well casing, out of commission.
A03	Active	180	22	8035	31	238	10624	106	100	277731825.0	288316518.0	**10585**	
A04	Active	244	88	10892	31	310	13838	34	23	Defective Water Meter	Defective Water Meter	**13838**	4/21/2018: A04 WM defective, esttimated water production @ **310-GPM,** based on actuals from 4/1 thru 4/19 on Apr18PZ
A05	Active	269	47	12008	31	238	10624	75	104	142255374.0	152881210.0	**10626**	DG: Defective pressure gages.
A06	Active	241	70	10758	31	337	15044	58	43	272357820.0	287284306.0	**14926**	Inadequate Chloride Contact Time, sampling taken @ 1st customer
A07	Out of commission	113	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Jan-2004: HB: A07 DW stuck in well head, redrilling/rehab required.
A08	Active	206	35	9196	31	80	3571	77	50	25028000.0	27782000.0	**2754**	
A09	Active	230	209	10267	31	283	12633	25	21	Illegible Water Meter	Illegible Water Meter	**12633**	Illegible Water Meter. Estimated water production based on actual average of **283-GPM** from the month of May2018 (worksheet "May18PZ")
A10	Active	233	397	10066	30	187	8078	60	46	Defective Water Meter	Defective Water Meter	**8078**	DM: Defective water meter. Estimated GPM based on actuals recorded during the month of July-2016 @ **187-GPM.**
A12	Active	176	N/S	7857	31	176	7857	114	115	Defective Water Meter	Defective Water Meter	**7857**	DM (estimated water production per GEPA permitted value of **176-gpm**), DG: Defective pressure gage.
A13	Active	237	426	10580	31	149	6651	40	38	193697000.0	200427000.0	**6730**	
A14	Active	147	265	6562	31	174	7767	42	45	789837541.8	797721052.8	**7884**	DG: Defective pressure gages.
A15	Active	231	161	10312	31	303	13526	45	46	697619000.0	710940000.0	**13321**	DG: Defective pressure gage.
A17	Active	180	229	8035	31	122	5446	70	DG	249518000.0	254357000.0	**4839**	DG: Defective pressure gage.
A18	Active	229	339	10223	31	234	10446	53	51	926411390.0	936121468.0	**9710**	
A19	Active	138	477	6160	31	264	11785	50	44	85846033.0	97841983.0	**11996**	
A21	Active	213	322	9508	31	270	12053	79	DG	936799000.0	948906000.0	**12107**	DG: Defective pressure gages.
A23	Temporarily secured, pending corrective active on PFOs	317	N/S	0	0	0	0	0	0	Temporarily secured, pending corrective active on PFOs	Temporarily secured, pending corrective active on PFOs	**0**	8/3 thru 8/11: A23 & A25 secured; OPS performing periodic lab sampling and line pressure testings. 8/12/2016: Temporarily secured, pending correction action on PFOs. DG: Defective pressure gages
A25	Temporarily secured, pending corrective active on PFOs	245	N/S	0	0	0	0	0	0	Temporarily secured, pending corrective active on PFOs	Temporarily secured, pending corrective active on PFOs	**0**	8/3 thru 8/11: A23 & A25 secured; OPS performing periodic lab sampling and line pressure testings. 8/12/2016: Temporarily secured; pending correction action on PFOs. DG: Defective pressure gages.
A26	Grounded motor	50	N/S	0	0	0	0	0	0	Grounded Motor	Grounded Motor	**0**	5/5/2012: A26 secured (energy conservation, power source deactivated). 10/27/2017: A26 reactivated back on line @ 1539 hrs. Water production based on 50-GPM. 11/6: A26 secured, grounded motor.

Formulated and compiled by:
J.B.Garrido, GWA Planner III

GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
A28	Out of commission	223	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Jan-2008: A28 secured, exceeded maximum contaminated levels (MCL) for Perchloroethylene (PCE).
A29	Standby	403	N/S	0	0	0	0	0	0	Standby	Standby	**0**	DG: Defective pressure gage. 7/6: A29 activated on line; A30 secured for grounded motor. 7/8: A29 secured & on SB as A30 was activated BOL upon completion of pull out procedures.
A30	Active	755	107	33703	31	795	35489	89	96	670915000.0	705715000.0	**34800**	DG: Defective pressure gages.
A31	Active	293	58	13080	31	369	16472	30	24	351729534.0	368287676.0	**16558**	Inadequate Chloride Contact Time, sampling taken @ 1st customer.
A32	Active	173	34	7723	31	302	13481	40	39	288538869.0	302113913.0	**13575**	Inadequate Chloride Contact Time, sampling taken @ 1st customer.
AG01	Active	250	47	11160	31	179	7991	100	77	293286000.0	300988000.0	**7702**	
AG02	Active	400	35	17856	31	632	28212	69	62	75476529.7	102644139.3	**27168**	
D01	Active	257	88	11472	31	302	13481	10	9	291267000	304501000	**13234**	DG: Defective pressure gages.
D02	Active	187	96	8348	31	223	9955	12	4	191148000	200781000	**9633**	DG: Defective pressure gages.
D03	Out of commission	189	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Jan-2004: D03, hard-broke, DW stuck in well head, redrilling/rehab required.
D04	Active	172	61	7678	31	270	12053	14	8	427000	11225000	**11874**	**D04 estimated water production: 1076-kgals** (269-kgals per day X 3-days based on average of 7/4 thru 7/31) + **10798-kgals** (WM reading from 6/26 thru 6/30 = **11874-kgals.**
D05	Out of commission	166	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	7/8/2013: D05 secured, grounded motor. Pump & motor unit"stuck" in pump's casing.
D06	Active	189	84	8437	31	214	9553	7	6	822926000	832391000	**9465**	DG: Defective pressure gages.
D07	Active	198	77	8839	31	200	8928	73	72	891304000.0	900214000.0	**8910**	
D08	Active	185	254	8258	31	180	8035	84	59	Defective Water Meter	Defective Water Meter	**8035**	3/8: D08 WM rdgs periodically getting stuck; estimated wtr prod as per actual averages from 3/1 thru 3/8 @ **172-GPM.**
D09	Active	196	191	3105	11	224	3548	71	42	362430000.0	365789000	**3359**	
D10	Standby	351	N/S	0	0	0	0	0	0	Standby	Standby	**0**	12/30/2014: D10 secured, grounded motor; DG: Defective pressure gage. 7/25: D10 pull outs completed; lab samples submitted & on SB.
D11	Active	226	94	5532	17	233	5704	55	54	53903000	58672000.0	**4769**	Inadequate Chloride Contact Time, sampling taken @ 1st customer. 6/12: D11 secured, defective well pump.
D12	Active	188	45	8392	31	209	9330	63	59	19837000.0	29242300.0	**9405**	DG: Defective pressure gages.
D13	Out of commission	172	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	May-2009: D13 secured, high chlorides.
D14	Active	200	76	8928	31	204	9107	68	66	40597300.0	49462400.0	**8865**	
D15	Active	202	230	9017	31	138	6160	58	43	Defective Water Meter	Defective Water Meter	**6160**	9/7: D15 water meter defective, registers periodically and readings stuck; water prod based on actuals from 9/1 thru 9/7 @ **138-GPMs.**
D16	Active	161	85	3478	15	220	4752	50	48	18316000.0	22620000.0	**4304**	DG: Defective pressure gages. 3/28: D16 secured and on standby status.
D17	Active - Contractor test	199	N/S	8883	31	139	6205	63	60	17991510.0	23904365.0	**5913**	Apr-2004: D17 secured, collapsed screen, complete rehab required. 3/30/2018: D17 back on line. DG: Defective pressure gages.
D18	Active - Contractor test	180	N/S	8035	31	220	9821	55	50	32307744.0	41207678.0	**8900**	Dec-1995: D18 secured, collapsed screen, complete rehab required. 3/10/2018: D18 back on line (under contract for rehab).
D19	Active	227	87	10133	31	196	8749	98	69	350021000.0	358530000.0	**8509**	
D20	Active	207	91	9240	31	212	9464	86	79	515911000.0	525277000.0	**9366**	DG: Defective pressure gages.
D21	Active	157	83	7008	31	120	5357	86	74	112095000.0	117255000.0	**5160**	

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GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
D22	Active - Contractor test	200	N/S	8928	31	60	2678	49	48	411979.0	3549256.0	**3137**	Feb-2009: D22, secured pending OPS assessment (pumping air issue). 3/27/2018: D22 back on line; under contract to rehab. DG: Defective pressure gages.
D24	Active	180	66	8035	31	194	8660	64	53	169118000.0	177629000.0	**8511**	
D25	Active	400	63	17856	31	398	17767	75	68	947736000.0	965652000.0	**17916**	
D26	Active	250	184	11160	31	256	11428	87	78	260836000.0	272133000.0	**11297**	
D27	Active	400	37	17856	31	472	21070	67	63	1913631862.0	1934925242.0	**21293**	DG: Defective pressure gage.
D28	Standby	200	65	0	0	0	0	0	0	Standby	Standby	**0**	DG: Defective pressure gages. 4/1/2018: D28 found tripped @ 0913 hrs; 4/2, D28 secured grounded motor. 6/1: Pull outs completed pending lab analysis results/report.
EX05	Active	254	59	11339	31	311	13883	16	10	792063000	805666000	**13603**	
EX11	Active	210	63	9374	31	257	11472	50	40	458871000.0	469978000.0	**11107**	
F01	Grounded motor	140	N/S	0	0	0	0	0	0	Grounded Motor	Grounded Motor	**0**	6/7: F01 secured, grounded motor.
F02	Active	121	120	5401	31	121	5401	92	108	Defective Water Meter	Defective Water Meter	**5401**	DG: Defective pressure gage. F02 estimated water production: based on **121-GPM,** GEPA permitted values. DM: Defective water meter
F03	Active	142	N/S	6339	31	207	9240	DG	DG	198919000.0	207865000.0	**8946**	DG: Defective pressure gage.
F04	Active	137	10	6116	31	123	5491	102	108	35372000.0	40591000.0	**5219**	DG: Defective pressure gage.
F05	Grounded motor	145	86	4176	20	190	5472	DG	DG	214835000.0	220522000.0	**5687**	DG: Defective gage
F06	Active	151	N/S	6741	31	209	9330	81	74	43808800.0	50801900.0	**9100**	F06 estimated water production based on **209-GPM**, actuals from 4/1 thru 4/30. Apr18.PZ. **F06 estimated water production: 2107-kgals** (based on average of 209-GPM @ 7-days from 7/ thru 7/7) + **6993-kgals** (WM reading from 7/7 thru 7/31) = **9100-kgals.**
F07	Active	170	88	7589	31	185	8258	94	90	971462000.0	979328000.0	**7866**	
F08	Active	149	29	6651	31	181	8080	71	61	66953300.0	74639500.0	**7686**	
F09	Active	140	67	6250	31	152	6785	65	64	704076202.0	710900934.2	**6825**	
F10	Standby	142	202	0	0	0	0	0	0	Standby	Standby	**0**	3/12/2018: F10 secured and on standby status. 5/31: F10 reactivated BOL. 6/7: F10 secured, grounded motor. 7/25: F10 pull outs completed; lab samples submiited; placed on SB.
F11	Active	148	116	6607	31	168	7500	122	111	89587000.0	96196000.0	**6609**	
F12	Active	148	29	6607	31	198	8839	60	60	420081000.0	428586000.0	**8505**	DG: Defective pressure gage.
F13	Active	380	211	16963	31	285	12722	69	50	213747000.0	218033000.0	**11730**	**F13 estimated water production**: **7742-kgals** (based on average of 272-GPM from 7/1 thru 7/12, x 19 days) + **4286-kgals** (WM reading from 7/13 thru 7/31) = **11730-kgals.**
F15	Active	440	50	19642	31	199	8883	62	39	634305000.0	642889000.0	**8584**	
F16	Active	230	18	10267	31	213	9508	48	42	6918000.0	16129000.0	**9211**	
F17	Active	240	25	10714	31	277	12365	37	36	572202000.0	583953000.0	**11751**	
F18	Active	240	39	10714	31	256	11428	49	41	919661000.0	930464000.0	**10803**	5/29: F18 secured and placed on SB. 6/14: F18 reactivated BOL.
F19	Active	200	172	8928	31	244	10892	58	53	57071000.0	68062000.0	**10991**	
F20	Active	200	201	8928	31	245	10937	62	50	418305000.0	428735000.0	**10430**	
G501	Active	183	124	8169	31	219	9776	41	39	244363000.0	254152000.0	**9789**	
H01	Active	288	159	12856	31	278	12410	47	21	40482700.0	52824400.0	**12342**	
HGC2	Active	444	35	19820	31	592	26427	70	84	233662000.0	258479000.0	**24817**	DG: Defective pressure gages. . 6/17: HGC02 secured, grounded motor. 6/19: HCG02 back on line.
M01	Active	109	170	4866	31	89	3973	40	39	713325000.0	717210000.0	**3885**	

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GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
M02	Active	184	85	8214	31	184	8214	39	48	Defective Water Meter	Defective Water Meter	**8214**	DG: Defective pressure gage; DM: Defective water meter. Estimated M02 water production utilizing GEPA permitted GPM @ **184-GPM**.
M03	Active	177	43	7901	31	190	8482	22	18	415036000.0	423548000.0	**8512**	
M04	Active	138	37	5962	30	199	8597	24	23	544678000.0	552923000.0	**8245**	7/25: M04 secured, grounded motor. 7/26: M04 BOL @ 1931 hrs.
M05	Active	176	68	7857	31	214	9553	86	83	Defective Water Meter	Defective Water Meter	**9553**	M05 WM reading stuck @ 388520000; estimated water production @ **214-GPM** based on actuals from 12/1/2017 thru 12/28/2017.
M06	Grounded motor	168	N/S	1935	8	181	2085	67	64	56014000.0	58242000.0	**2228**	DG: Defective pressure gage.
M07	Active	175	59	7812	31	175	7812	98	82	Defective Water Meter	Defective Water Meter	**7812**	Nov-2016: M07 defective water meter, slowly registering. Estimate based on GEPA permitted value of **175-GPM.**
M08	Active	158	39	7053	31	170	7589	17	17	571813000.0	579168000.0	**7355**	DG: Defective pressure gage
M09	Active	162	161	7232	31	151	6741	52	50	22151586.0	29442125.0	**7291**	
M12	Out of commission	104	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Nov-2010: M12 secured, grounded motor requiring also drill rig to blow-out well.
M14	Out of commission	239	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Jan-2006: M14 secured, high chlordane.
M15	Active	172	34	7678	31	164	7321	63	74	41160157.0	48438128.4	**7278**	DG: Defective pressure gages.
M17A	Out of commission	202	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	Jan-2004: M17A secured, recorded as hard broke
M17B	Active	354	68	15803	31	276	12321	100	98	Defective Water Meter	Defective Water Meter	**12321**	DG: Defective pressure gage. M17B estimated water production based on **276-GPM,** actuals from 5/1 thru 5/15 on May18PZ. M17B was secured and placed on SB on 6/4 thru 6/5 - 2-days.
M18	Active	300	78	13392	31	201	8973	53	57	Defective Water Meter	Defective Water Meter	**8973**	DG: Defective pressure gage; NOTATE: M18 underpumping permitted GPM value). M18 estimated water production based on actuals from 10/1 thru 10/15 Oct17PZ @ **201-GPM.**
M20A	Active	400	71	17856	31	271	12097	98	46	662897000.0	675104000.0	**12207**	
M21	Active	200	95	8928	31	225	10044	80	72	751262910.0	761407199.6	**10144**	
M23	Active	225	46	10044	31	225	10044	40	34	Defective Water Meter	Defective Water Meter	**10044**	M23 defective water meter. Estimated @ **225-GPM,** GEPA permitted value.
MJ01	Out of commission	56	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	MJ01 last tested to insure proper operations was Feb-2010. Secured due to high chlorine residual reported by Customers being serviced by DW.
MJ05	Out of commission	58	N/S	0	0	0	0	0	0	Out of commission	Out of commission	**0**	MJ05 last tested to insure proper operations was Feb-2010. Secured due to high chlorine residual reported by Customers being serviced by DW.
NAS01	Active	200	N/S	8640	30	239	10325	54	36	82704000.0	92828000.0	**10124**	7/30: NAS01 temporarily secured @ 1315 hrs for repairs.
Y01	Standby	141	N/S	0	0	0	0	0	0	Standby	Standby	**0**	DG: Defective pressure gage. Y01 secured on 6/20/2016, grounded motor. 7/25: Y01 pull outs completed; lab samples submiited; placed on SB.
Y02	Standby	161	47	2550	11	200	3168	79	73	Defective Water Meter	Defective Water Meter	**3168**	Y02 estimated water production based on **200-GPM,** actuals from 4/1 thru 4/22 on Apr18.PZ. 7/11: Y02 secured and on SB status.
Y03	Active	138	44	6160	31	165	7366	101	96	115837000.0	123134000.0	**7297**	

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GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
Y04	Active	180	68	8035	31	224	9999	110	DG	160962000.0	170642000.0	**9680**	3/10: Y04 secured @ 800 hrs; grounded motor. 6/17: Y04 back on line.
Y05	Standby	148	91	0	0	0	0	0	0	Standby	Standby	**0**	5/27: Y05 secured, grounded motor. Jun-2018: Y05 pullouts procedures completed and placed on SB status.
Y06	Active	136	37	6071	31	222	9910	41	66	904679000.0	914272000.0	**9593**	DG: Defective pressure gage.
Y07	Active	514	44	22945	31	491	21918	99	88	Defective Water Meter	Defective Water Meter	**21918**	2/2: Y07 WM defective; estimated GPMs based on actual average of **491-GPM** on Jan18PZ
Y09	Active	472	43	21070	31	532	23748	99	99	969028439.0	992727088.7	**23699**	
Y10	Active	250	66	11160	31	228	10178	71	65	496975000.0	506343000.0	**9368**	
Y12	Active	235	77	10490	31	303	13526	61	DG	754771000.0	767904000.0	**13133**	DG: Defective pressure gage.
Y14	Active	400	83	13248	23	475	15732	86	70	Defective Water Meter	Defective Water Meter	**15732**	4/6: Y14 secured, grounded motor. 5/23: Y14 BOL. 6/118: Y14 tripped; secured on 6/19, defective well pump. 7/7: Y14 back on line @ 1823 hrs. Estimated water production from 7/8 thru 7/31 based on water meter readings actuals @ 475-GPM daily.
Y15	Active	600	38	26784	31	792	35355	90	83	537089169.0	568948292.5	**31859**	
Y16	Active	200	50	8928	31	404	18035	87	34	149992000.0	167489000.0	**17497**	
Y17	Active	300	46	13392	31	310	13838	36	33	142791000.0	156437000.0	**13646**	
Y18	Active	250	52	11160	31	307	13704	72	85	328446000.0	341733000.0	**13287**	DG: Defective pressure gage.
Y19	Active	500	43	20880	29	647	27019	117	103	Defective Water Meter	Defective Water Meter	**27019**	**3/23:** Y19 WM reported as defective by Rover; estimated GPM based on actuals from 3/1 thru 3/22, averaging @ **647-GPM.** 7/30: Y15 secured, grounded motor. 7/31: Y15 back on line @ 2258 hrs.
Y20	Active	500	55	22320	31	702	31337	109	101	645544000.0	676226000.0	**30682**	
Y21	Active	350	48	15624	31	490	21874	101	91	341203000.0	362548000.0	**21345**	
Y22	Active	300	27	13392	31	346	15445	60	55	438321000.0	453344000.0	**15023**	
Y23	Active	300	34	13392	31	286	12767	69	62	436649000.0	449028000.0	**12379**	
				1,021,565			**1,117,584**					**1,093,214**	

Other (Sprs or WTP)	OPS Status	EPA Permit GPM	Jul-Sep 2016 Chlorides Max Allowable @ 250-PPM.	EPA Permit kgals	OPS Days Standby or Active	Daily GPM Rdg (avg)	Mnthly Water Prod Daily Rdg (avg)	Daily PSI Rdg (avg)	N/A	Total Water Prod Kgals	Remarks
Santa Rita Springs	Active	N/A	43	N/A	0	**N/A**	N/A	N/A	N/A	**0**	Santa Rita Water Reservoir being by-passed; Navy water supply directly fed into Agat Santa Rita water supply system. In addition, Spring Water compartment flow meter out of service. Refer to **"Jul18.SRS"** worksheet for more information.
Ugum Wtr Trmt Plant	Active	N/A	46	N/A	31	**N/A**	N/A	N/A	N/A	**58142**	Ugum Water Treatment Plant: Water Prod based from production of raw water pump to finished water production. Totals formulated by Mr. Kyle Taimanglo, Ugum Water Treatment Plant Operations Leader (refer to **"Jul18.UgumWTP"** worksheet).
Maui Well	Active	N/A	116	N/A	31	**N/A**	N/A	N/A	N/A	**32258**	NOTE: Includes Ron Topasna's Report on the Maui Well water production data as of 8/13/2018 (refer to Tumon Maui Well July 2018 System Operation.XLS)
										1,183,615	

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GWA Monthly Water Production Report, July-2018

DW	OPS Status as of 7/31/2018	EPA Permit GPM	Jul-Sep 2017 Chlorides Max Allowable @ 250-PPM. NS = DW not in service	EPA Permitted GPM Calculated kgals	Days in OPS	Daily GPM Rdg (avg)	Mnthly Water Prod Daily GPM Rdg (avg)	Daily Pump PSI Rdg (avg)	Daily Xmission Line PSI Rdg (avg)	Wtr Mtr Rdg 6/30/2018	Wtr Mtr Rdg 7/31/2018	Total Water Prod Kgals Jul-2018	Remarks as of 7/31/2018
	ICCT=Inadequate Chloride Contact Time, sampling taken @ 1st customer; DM=Defective Water Meter (Requirements: refer to 10GCA, Chapter 46); IM=Illegible Water Meter; DG=Defective Pressure Gage; DW=Deep Well; WM=Water Meter; BOL="back on line". NOTE: ns = Deep Well unit was secured during scheduled lab sampling (column D). PFO=Perfluorooctane Sulfonate (ref: A23, A25 & NAS01 Deep Wells)												

DW Status as of 7/31/2018		
Active	95	
Grounded motor	5	A01-A26-F01-F05-M06
Out of commission	11	A02-A07-A28-D03-D05-D13-M12-M14-M17A-MJ01-MJ05
Secured, PFOs	2	A23-A25
Standby	7	A29-D10-D28-F10-Y01-Y02-Y05
TOTAL	120	

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