



## **CONSOLIDATED COMMISSION ON UTILITIES**

Guam Power Authority • Guam Waterworks Authority  
P.O.BOX 2977 • Agana, Guam 96932

### **GUAM WATERWORKS AUTHORITY WORK SESSION**

*CCU Conference Room*

4:30 p.m., January 16, 2018

### **AGENDA**

#### **1. ISSUES FOR DECISION**

- 1.1 [Creation of the Leak Detection Technician Series of Positions / Resolution No. 11-FY2018](#)
- 1.2 [Change Order No. 4 for the Northern and Southern Guam Reservoir Design Services / Resolution No. 12-FY2018](#)
- 1.3 [Construction Management Contract for Santa Rosa, Sinifa, and Santa Rita Tank and System Upgrades / Resolution No. 13-FY2018](#)
- 1.4 [Change Order for the Design Services for the Agat-Santa Rita Wastewater Treatment Plant / Resolution No. 14-FY2018](#)
- 1.5 [Change Order for the Line Replacement Phase IV Project / Resolution No. 15-FY2018](#)

#### **2. GM REPORT**

#### **3. ISSUES FOR DISCUSSION**

#### **4. DIVISION REPORTS**

- 4.1 [Communications](#)
- 4.2 [Compliance & Safety](#)
- 4.3 [Customer Service](#)
- 4.4 [Engineering](#)
- 4.5 [Finance](#)
- 4.6 [Operations](#)

#### **5. ANNOUNCEMENTS**

- 5.1 [Next CCU Meetings: GPA Work Session: 01/18/18; CCU Meeting: 01/23/18](#)

#### **6. ADJOURNMENT**



## **Issues for Decision**

### **Resolution No. 11-FY2018:**

Relative to the Approval of the Creation of the Leak Detection Technician I, Leak Detection Technician II, Leak Detection Technician Leader and Leak Detection Technician Supervisor positions at the Guam Waterworks Authority.

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

The Guam Waterworks Authority (GWA) has determined a need to create the Leak Detection Technician I, Leak Detection Technician II, Leak Detection Technician Leader and Leak Detection Technician Supervisor to identify and reduce non-revenue water through minimizing water leaks affecting services to the community thus increasing revenues. These positions will allow the Water Operations Divisions to efficiently locate and repair all water leaks within the distribution system island-wide.

Currently, employees from the Pressure Line (leak repair) Unit are assigned to leak detection duties in addition to their normal repair responsibilities. There are no dedicated employees assigned to perform water leak detection on a full-time basis. This results in more focus given to reported/observable leaks, and less focus on pro-active background leak detection. Further, the smaller number of leak detections with accompanying repairs as may be required, are addressed only by requests made through other sections via customer reports/complaints of low pressure, and not systematically using a full-time leak detection crew based on system-generated data from the Systems Control Center or Engineering. This work is currently an ancillary responsibility- performed by Water Sewer Maintenance Workers, Pumping Stations Operators, or Trades Helpers within the Water Operations Divisions.

Guam's drinking water supply and delivery is dependent on the agency's distribution system and our ability to properly maintain it to provide safe drinking water throughout the community. Undetected leaks within the distribution system pose a threat to the continued supply and delivery of Guam's safe drinking water to the community and contribute significantly to GWA's water loss: It is the agency's goal to identify, and repair these leaks through the creation of these positions as a key component of GWA's water loss control program.

### **Where is the location?**

The Leak Detection Technician series will be organizationally located within the Water Operations (Distribution) Division under the direct supervision and management of the Operations & Maintenance Manager for Water Distribution.

### **How much will it cost?**

There is no cost to create the position.

### **When will it be completed?**

Public Law 28-159, Section 7.0.3 (c) requires GWA to post a petition on their websites for ten (10) days (not including Saturdays, Sundays and government of Guam holidays). After the 10 days posting, the petition can then be forwarded to the CCU for their disposition at any regularly scheduled meeting. GWA has met the posting requirements.

Additionally, Guam law requires notice of such posting to each newspaper of general circulation and broadcasting station which airs regular news programs within Guam.

### **What is the funding source?**

GWA will certify funding for the position available for the filling and retention of its certified, technical and professional newly created position. The funding of this position does not have an impact on the General Fund.

**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

**RESOLUTION NO. 11-FY2018**

**RELATIVE TO THE APPROVAL OF THE CREATION OF THE LEAK DETECTION  
TECHNICIAN SERIES OF POSITIONS**

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

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

**WHEREAS**, the GWA General Manager requests the CCU to approve the creation of the Leak Detection Technician series of positions (Exhibit A); and

**WHEREAS**, the GWA General Manager requests the CCU to approve the classification standards of the Leak Detection series of positions in the classified status; and

**WHEREAS**, Public Law 28-112 and 4 GCA §6303 (d) authorizes the creation of positions in Autonomous Agencies and Public Corporations; and

**WHEREAS**, GWA Personnel Rules and Regulations as amended by Public Law 28-159 Section 3 (C) authorizes the CCU to amend, modify or add a position to the list of certified, technical and professional positions;

**NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities, as the Governing Body of the Guam Waterworks Authority, does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.

2. The creation and the job classification standards for the Leak Detection Technician series of positions in the classified status is hereby approved and attached herein as Exhibit A.
3. The Leak Detection Technician series of positions is hereby added to the certified, technical and professional list of positions at GWA.

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

**DULY AND REGULARLY ADOPTED**, this 23<sup>rd</sup> day of January, 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: \_\_\_\_\_



# Exhibit A

## **LEAK DETECTION TECHNICIAN I**

### **NATURE OF WORK IN THIS CLASS:**

Performs routine leak detection monitoring duties independently after initial training and works under close supervision on a variety of more semi-skilled developmental assignments.

**ILLUSTRATIVE EXAMPLES OF WORK:** (These examples do not list all the duties which may be assigned; any one position may not include all the duties listed)

Performs water leak survey and pinpointing using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Provide report of all locations where water use, meter sounds or possible leak sounds exist.

Review detailed distribution system maps and locate Pressure Reducing Valves (PRVs), forgotten valves, or other system apparatus that might make the suspect sound.

If possible cause of the sound is found, the sound should be isolated and identified.

Create and record found leaks on Computerized Maintenance Management System (CMMS).

Provide GWA Systems Control Center (SCC) and Geographic Information System (GIS) a record of found leaks, utilizing leak detection form and Global Positioning System (GPS) technology.

Assist water maintenance operators, leak repair crews and contractors in locating water leaks daily or during emergency situations.

Responsible for job safety, traffic control, cleanliness and security.

Responsible for maintenance and calibration of all leak detection equipment.

Perform sequential actions to locate leaks by applying knowledge of leak detection practices.

Prepare field reports and documentation of completed tasks.

### **MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:**

Knowledge of water meters, distribution system, valves, hydrants, PRVs, air release valves, distribution system maps and curb stops on customer service connection piping.

Ability to estimate leak flows.

Ability to apply safe work practices on the job.

Ability to work effectively with the public and employees.

Ability to understand and follow oral and written instructions.

Leak Detection Technician I – page 2 of 2

Ability to perform arduous physical tasks and work in strained and awkward positions.

Skill in operating leak detection equipment (acoustic listeners and correlators)

**MINIMUM EXPERIENCE AND TRAINING:**

- A) One (1) year of experience in the water construction, maintenance and repair of water lines and related systems; or
- B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

**NECESSARY SPECIAL QUALIFICATIONS:**

Must possess a valid Guam Driver's License

ESTABLISHED: January 2018

JOB EVALUATION POINTS:	363
PAYGRADE:	MINIMUM: G2-D \$32,336
	MAXIMUM: G3-D \$33,649

---

JOSEPH T. DUENAS, Chairman  
Consolidated Commission on Utilities

## **LEAK DETECTION TECHNICIAN II**

### **NATURE OF WORK IN THIS CLASS:**

Performs skilled work in the leak detection monitoring.

Employees in this class perform full range of skilled tasks under general supervision a

**ILLUSTRATIVE EXAMPLES OF WORK:** (These examples do not list all the duties which may be assigned; any one position may not include all the duties listed)

Perform water leak survey and pinpointing using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Provide report of all locations where water use, meter sounds or possible leak sounds exist.

Review detailed distribution system maps and locate Pressure Reducing Valves (PRVs), forgotten valves, or other system apparatus that might make the suspect sound.

If possible cause of the sound is found, the sound should be isolated and identified.

Create and record found leaks on Computerized Maintenance Management System (CMMS).

Provide GWA Systems Control Center (SCC) and Geographic Information System (GIS) a record of found leaks, utilizing leak detection form and Global Positioning System (GPS) technology.

Assist water maintenance operators, leak repair crews and contractors in locating water leaks daily or during emergency situations.

Responsible for job safety, traffic control, cleanliness and security.

Responsible for maintenance and calibration of all leak detection equipment.

Perform sequential actions to locate leaks by applying knowledge of leak detection practices.

Prepare field reports and documentation of tasks completed.

Coordinate with GIS for updates of the plotted leak detection areas and develop programs for infrastructure rehabilitation.

May provide guidance with less skilled workers on assigned tasks.

### **MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:**

Knowledge of water meters, distribution system, valves, hydrants, PRVs, air release valves, distribution system maps and curb stops on customer service connection piping.

Leak Detection Technician II – page 2 of 2

Knowledge of maintenance and calibration of leak detection equipment.

Ability to estimate leak flows.

Ability to pinpoint water losses and points of water loss using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Ability to apply safe work practices on the job.

Ability to work effectively with the public and employees.

Ability to understand and follow oral and written instructions.

Ability to perform arduous physical tasks and work in strained and awkward positions.

Skill in operating leak detection equipment (acoustic listeners and correlators)

Skill in the use and maintenance of mechanical equipment, including pumps, power generators, drills, motors, valves and hydrants.

**MINIMUM EXPERIENCE AND TRAINING:**

- A) Two (2) years of experience in the water construction, maintenance and repair of water lines and related systems; or
- B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

**NECESSARY SPECIAL QUALIFICATIONS:**

Must possess a valid Guam Driver's License

ESTABLISHED: January 2018

JOB EVALUATION POINTS:	421
PAYGRADE:	MINIMUM: I3-A \$39,871
	MAXIMUM: I4-A \$41,490

---

JOSEPH T. DUENAS, Chairman  
Consolidated Commission on Utilities

## **LEAK DETECTION TECHNICIAN LEADER**

### **NATURE OF WORK IN THIS CLASS:**

Leads crew and performs complex skilled work in the leak detection monitoring.

Employees perform full range of complex skilled tasks under general supervision and leads less skilled workers on assigned tasks.

**ILLUSTRATIVE EXAMPLES OF WORK:** (These examples do not list all the duties which may be assigned; any one position may not include all the duties listed)

Leads in water leak survey and pinpointing using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Provide report of all locations where water use, meter sounds or possible leak sounds exist.

Lead the review detailed distribution system maps and locate Pressure Reducing Valves (PRV's), forgotten valves, or other system apparatus that might make the suspect sound.

If possible cause of the sound is found, the sound should be isolated and identified.

Lead the creation and recording of found leaks on Computerized Maintenance Management System (CMMS).

Provide GWA Systems Control Center (SCC) and Geographic Information System (GIS) a record of found leaks, utilizing leak detection form and Global Positioning System (GPS) technology.

Coordinate the assistance required by water maintenance operators, leak repair crews and contractors in locating water leaks daily or during emergency situations.

Lead job site safety, traffic control, cleanliness and security.

Lead maintenance and calibration of all leak detection equipment.

Perform sequential actions to locate leaks by applying knowledge of leak detection practices.

Lead the preparation of field reports and documentation of completed tasks.

Prepares and provides reports of assigned and completed reports of lower level technicians as requested.

Lead the coordination with GIS for updates of the plotted leak detection areas and develop programs for infrastructure rehabilitation.

### **MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:**

Knowledge of water meters, distribution system, valves, hydrants, PRVs (Pressure Reducing Valve), air release valves, distribution system maps and curb stops on customer service connection piping.

Leak Detection Technician Leader – page 2 of 2

Ability to estimate leak flows.

Knowledge in operating leak detection equipment (acoustic listeners and correlators)

Knowledge in the use and basic maintenance of mechanical equipment, including pumps, power generators, drills, motors, valves and hydrants.

Knowledge to pinpoint water losses and points of water loss using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Ability to maintain leak detection database for water losses and reporting.

Knowledge of maintenance and calibration of leak detection equipment.

Ability to apply safe work practices on the job.

Ability to work effectively with the public and employees.

Ability to understand and follow oral and written instructions.

Ability to perform arduous physical tasks and work in strained and awkward positions.

**MINIMUM EXPERIENCE AND TRAINING:**

- A) Three (3) years of experience in the water construction, maintenance and repair of water lines and related systems; or
- B) Any equivalent combination of experience and training which provides the minimum knowledge, abilities and skills.

**NECESSARY SPECIAL QUALIFICATIONS:**

Possession of a valid Water Distribution or Water Treatment Operator's Certificate Level I; **and**

Possession of a valid Guam Driver's License;

ESTABLISHED:

JOB EVALUATION POINTS:

PAYGRADE:

553

MINIMUM: J5-D \$49,821

MAXIMUM: J6-D \$51,843

---

JOSEPH T. DUENAS, Chairman  
Consolidated Commission on Utilities

## **LEAK DETECTION TECHNICIAN SUPERVISOR**

### **NATURE OF WORK IN THIS CLASS:**

Supervises lower level leak detection technicians, performs and participates in the leak detection monitoring of the water distribution systems.

**ILLUSTRATIVE EXAMPLES OF WORK:** (These examples do not list all the duties which may be assigned; any one position may not include all the duties listed)

Provide leadership, supervision and guidance for the line and leak detection section of the Guam Waterworks Authority.

Supervise and implement leak detection projects.

Coach and train assigned staff on leak detection tools, techniques, procedures and best practices.

Communicate scope of work, project milestones and project findings with staff.

Supervise the creation and recording of found leaks on Computerized Maintenance Management System (CMMS).

Provide GWA Systems Control Center (SCC) and Geographic Information System (GIS) a record of found leaks, utilizing leak detection form and Global Positioning System (GPS) technology.

Coordinate the assistance required by water maintenance operators, leak repair crews and contractors in locating water leaks daily or during emergency situations.

Supervise job site safety, traffic control, cleanliness and security.

Supervise maintenance and calibration of all leak detection equipment.

Supervise the preparation of field reports and documentation.

Perform sequential actions to locate leaks by applying knowledge of leak detection practices.

Supervise the coordination with GIS for updates of the plotted leak detection areas and develop programs for infrastructure rehabilitation.

### **MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:**

Knowledge of water meters, distribution system, valves, hydrants, PRVs (Pressure Reducing Valve), air release valves, distribution system maps and curb stops on customer service connection piping.

Ability to estimate leak flows.

Knowledge in operating leak detection equipment (acoustic listeners and correlators)



Leak Detection Technician Supervisor – page 2 of 2

Knowledge in the use and basic maintenance of mechanical equipment, including pumps, power generators, drills, motors, valves and hydrants.

Knowledge to pinpoint water losses and points of water loss using leak detection equipment to find hidden, unreported leaks in the water distribution system.

Knowledge to maintain leak detection database for water losses and reporting.

Knowledge of maintenance and calibration of leak detection equipment.

Ability to apply safe work practices on the job.

Ability to work effectively with the public and employees.

Ability to understand and follow oral and written instructions.

Ability to perform arduous physical tasks and work in strained and awkward positions.

Ability to evaluate operational effectiveness and recommend/implement changes to enhance improvements.

Ability to make work decisions in accordance with appropriate program guidelines.

**MINIMUM EXPERIENCE AND TRAINING:**

- A) Five (5) years of experience in the water construction, maintenance and repair of water lines and related systems, including two (2) years as a leak detection technician leader.

**NECESSARY SPECIAL QUALIFICATIONS:**

Possession of a valid Water Distribution or Water Treatment Operator's Certificate Level II; **and**

Possession of a valid Guam Driver's License;

ESTABLISHED: January 2018

JOB EVALUATION POINTS: 734  
PAYGRADE: MINIMUM: L3-A \$63,219  
MAXIMUM: L4-A \$65,785

---

JOSEPH T. DUENAS, Chairman  
Consolidated Commission on Utilities



**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. 12-FY2018**

Relative to Approval of Change Order No. 4 for the Northern and Southern Guam Reservoir Design Services

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

The project is part of the 2011 Court Order Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program. As a Court Order project, it is necessary and urgent to work towards meeting the Court Order deadlines. The project's objective is to provide design services for the Northern and Southern reservoirs, which include the Santa Rosa, Santa Rita, Sinifa, Ugum, and Inarajan.

The Change Order proposal is for the following work:

- (1) Santa Rosa: design of new 4,120 LF of 12-inch pipe along Route No. 1 in Yigo.
- (2) Santa Rosa: Identification and survey of easements for agreements with DoD.
- (3) Agfayan Booster Pump Station: design of pressure reducing valve near original bps site.
- (4) Agfayan Booster Pump Station: Investigate 4 lots as new alternatives for the new booster pump station location.
- (5) Ugum Reservoir: Investigate a new alternative for the reservoir location. The new alternative involves consolidating 2 lots adjacent and south of the existing plant to provide the site needed for the new reservoir and facilities.
- (6) Ugum Reservoir: Existing water treatment plant drainage will be corrected in the new design and plans.
- (7) Santa Rita: Incorporate roadway repair in the design. New design to replace existing culvert.
- (8) Sinifa: Prepare construction easements and construction support documents for 2 lots.

#### **Where is the location?**

Santa Rosa reservoir: located off Route 15 in Yigo

Santa Rita reservoir: located off Obispo Olaiz Street in Santa Rita

Sinifa reservoir: located off Cross Island Road in Santa Rita

Ugum: located off Paulino Street in Inarajan

Inarajan: located off Belen Avenue in Inarajan

#### **How much will it cost?**

The fee proposal is for \$537,880.25.

#### **When will it be completed?**

Santa Rosa work: 90 days

Agfayan BPS: dependent on outcome of investigations

Ugum: dependent on outcome of land owner responses

Santa Rita: 30 days

Sinifa: 60 days

#### **What is the funding source?**

The funding shall be from PW 09-11: Water System Reservoirs 2005 Improvements.

#### **The RFP/BID responses (if applicable):**

Not Applicable)



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

**GWA RESOLUTION NO. 12-FY2018**

**RELATIVE TO APPROVAL OF CHANGE ORDER NO. 4 FOR THE NORTHERN AND SOUTHERN GUAM RESERVOIR DESIGN SERVICES**

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

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

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

**WHEREAS**, The CCU approved via Resolution No. 20-FY2015 (Exhibit A) for GWA management to enter into contract with TG Engineers, P.C. to provide design services for the Northern and Southern Guam Reservoirs, as well as Resolution No. 56-FY2016 (Exhibit B) that approved a Change Order to TG Engineers, P.C. for additional design services that totaled Three Million Eighty-Seven Thousand Thirty-Two Dollars (\$3,087,032.00); and

**WHEREAS**, GWA issued Change Order No. 1 to No. 3 to TG Engineers, P.C. for additional services that were not identified in the original scope of work but subsequently required due to the following:

- (1) land acquisition for various project sites;
- (2) design for several additions and revisions to the pipe system to complete the pressure zone realignment which includes surveying and environmental service for Santa Rita and Santa Rosa Reservoirs;

- (3) design for the new Unified Facilities Criteria (“UFC”) structural code requirements for Ugum, Santa Rosa, Santa Rita, and Sinifa Reservoirs, and Inarajan Booster Pump Station that was not in effect at the time of contract execution;
- (4) additional land acquisition support for the Government of Guam Chamorro Land Trust (CLTC) property, additional Archaeological and Unexploded Ordinances (UXO) monitoring, and design to include the new GWA-AAFB tank interconnection system for the Santa Rosa Reservoir;
- (5) design for new Booster Pump Station and a new Pressure Reducing Valve (PRV) to be added into the system in the vicinity of Agfayan Subdivision in Inarajan as part of the Pressure Zone Realignment plan;
- (6) percolation tests to be included at each project site location for drainage basins,
- (7) design to incorporate the Siemens controls from the existing Ugum plant to be extended to the new Ugum Reservoir and facilities; and

**WHEREAS**, in the ongoing design and analysis of the reservoirs and the water system served by the noted reservoirs, further design services listed below were identified as being above and beyond original scope requirements but necessary to move forward with improving the functionality of the water system:

- (1) Santa Rosa: design of new 4,120 LF of 12-inch pipe along Route No. 1 in Yigo;
- (2) Santa Rosa: Identification and survey of easements for agreements with DoD;
- (3) Agfayan Booster Pump Station: design of pressure reducing valve near original bps site;
- (4) Agfayan Booster Pump Station: Investigate 4 lots as new alternatives for the new booster pump station location;
- (5) Ugum Reservoir: Investigate a new alternative for the reservoir location. The new alternative involves consolidating 2 lots adjacent and south of the existing plant to provide the site needed for the new reservoir and facilities;
- (6) Ugum Reservoir: Existing water treatment plant drainage will be corrected in the new design and plans;
- (7) Santa Rita: Incorporate roadway repair in the design. New design to replace existing culvert;

- 1 (8) Sinifa: Prepare construction easements and construction support documents for 2 lots;  
2 and  
3

4 **WHEREAS**, GWA engineering and TG Engineers, P.C. negotiated the price for the  
5 above services to be provided in the amount of Five Hundred Thirty-Seven Thousand Eight  
6 Hundred Eighty Dollars and Twenty-Five Cents (\$537,880.25) (See Exhibit C); and  
7

8 **WHEREAS**, GWA management is seeking CCU approval of additional funding in the  
9 amount of Five Hundred Thirty-Seven Thousand Eight Hundred Eighty Dollars and Twenty-Five  
10 Cents (\$537,880.25); and  
11

12 **WHEREAS**, the approval of the Five Hundred Thirty-Seven Thousand Eight Hundred  
13 Eighty Dollars and Twenty-Five Cents (\$537,880.25), along with the prior authorized contract  
14 value of Three Million Eighty-Seven Thousand Thirty-Two Dollars (\$3,087,032.00) will bring  
15 the total authorized funding for the design contract with TG Engineers, P.C. to Three Million Six  
16 Hundred Twenty-Four Thousand Nine Hundred Twelve Dollars and Twenty-Five Cents  
17 (\$3,624,912.25); and  
18

19 **WHEREAS**, funding for this change order will be from the Bond Funds under the line  
20 item "PW 09-11 Water System Reservoirs 2005 Improvements"; and  
21

22 **NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities  
23 does hereby approve the following:  
24

- 25 1. The recitals set forth above hereby constitute the findings of the CCU.  
26 2. The CCU finds that the terms of the fee proposal submitted by TG Engineers,  
27 P.C. are fair and reasonable (Exhibit C).  
28 3. The CCU authorizes GWA management to execute Change Order No. 4 in the  
29 amount of Five Hundred Thirty-Seven Thousand Eight Hundred Eighty  
30 Dollars and Twenty-Five Cents (\$537,880.25).  
31 4. The CCU hereby further approves increasing the total authorized funding for  
32 the design contract with TG Engineers, P.C. to Three Million Six Hundred

Twenty-Four Thousand Nine Hundred Twelve Dollars and Twenty-Five Cents (\$3,624,912.25).

5. The CCU hereby further authorizes the funding source to be from bond funds under the CIP line Item PW 09-11 "Water System Reservoirs 2005 Improvements".

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

**DULY AND REGULARLY ADOPTED** this 23<sup>rd</sup> day of January 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: \_\_\_\_\_

## Exhibit A (1 of 4)

### **GUAM CONSOLIDATED COMMISSION ON UTILITIES RESOLUTION NO. 20 – FY2015**

#### **RELATIVE TO CONTRACT APPROVAL FOR THE NORTHERN AND SOUTHERN GUAM RESERVOIRS DESIGN SERVICES**

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

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

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

**WHEREAS**, GWA has advertised the Request For Proposals (RFP-09-ENG-2014) soliciting statement of qualifications from experienced and qualified engineering firms for the preparation of design plans and specifications for the Northern and Southern Guam Reservoirs; and

**WHEREAS**, the Northern and Southern Guam Reservoir design project includes site investigations and system evaluations at the Santa Rita, Santa Rosa, Inarajan, Sinifa, and Ugum reservoir sites, development of design plans and specifications for various sized concrete reservoirs ranging from 0.2 MG to 2.0 MG nominal capacities, booster station upgrades, instrumentation and control upgrades, control valves upgrades, pipe upgrades, and other general site upgrades; and

**WHEREAS**, RFP packages were downloaded by forty five (45) interested parties, from which GWA received proposal submittals from ten (10) firms before the RFP submittal deadline; and

## Exhibit A (2 of 4)

**WHEREAS**, the GWA A-E Selection committee reviewed and evaluated the ten (10) proposals (see EXHIBIT A – Evaluation Score) and generated a short list of the top four (4) firms with a recommendation to award a contract to the firm TG Engineers, P.C. and any successor at interest thereto (see EXHIBIT B – Evaluation Summary and GM Determination); and

**WHEREAS**, TG Engineers, P.C. and GWA negotiated the price for the services to be provided in the amount of Two Million Five Hundred Thirty Two Thousand Five Hundred Eighty Dollars (\$2,532,580.00) (see EXHIBIT C – Fee Proposal); and

**WHEREAS**, GWA management seeks approval of the fee proposal amount of Two Million Five Hundred Thirty Two Thousand Five Hundred Eighty Dollars (\$2,532,580.00), plus a ten percent (10%) contingency of Two Hundred Fifty Three Thousand Two Hundred Fifty Eight Dollars (\$253,258.00) to bring the total authorized funding amount to a maximum of Two Million Seven Hundred Eighty Five Thousand Eight Hundred Thirty Eight Dollars (\$2,785,838.00); and

**WHEREAS**, funding for this project will be from the 2010 and 2013 Bond Funds under the line items CIP PW 09-11 Water System Reservoirs 2005 Improvements and CIP PW 11-02 Ugum Water Treatment Plant Reservoir Replacement; and

**WHEREAS**, GWA management recommends that a contract be entered into with TG Engineers, P.C. in the aforementioned base contract amount.

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

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by TG Engineers, P.C. is fair and reasonable.



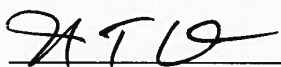
## Exhibit A (3 of 4)

3. The CCU finds that the terms of the conditions set by GWA relative to commencement of subsequent work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
4. The CCU hereby authorizes the management of GWA to enter into a contract with TG Engineers, P.C., in the amount of Two Million Five Hundred Thirty Two Thousand Five Hundred Eighty Dollars (\$2,532,580.00).
5. The CCU hereby further approves the total funding amount for this project of Two Million Five Hundred Thirty Two Thousand Five Hundred Eighty Dollars (\$2,532,580.00), plus a ten percent (10%) contingency of Two Hundred Fifty Three Thousand Two Hundred Fifty Eight Dollars (\$253,258.00) to bring the total authorized funding amount to a maximum of Two Million Seven Hundred Eighty Five Thousand Eight Hundred Thirty Eight Dollars (\$2,785,838.00).

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

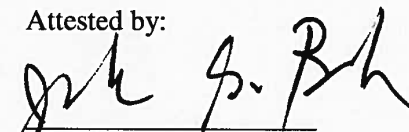
**DULY AND REGULARLY ADOPTED**, this 24<sup>th</sup> day of March 2015.

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:

/

/

/

/

## Exhibit A (4 of 4)

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 B (1 of 4)

### GUAM CONSOLIDATED COMMISSION ON UTILITIES

#### RESOLUTION NO. 56-FY2016

#### RELATIVE TO APPROVAL OF CHANGE ORDER NO. 2 FOR THE NORTHERN AND SOUTHERN GUAM RESERVOIR DESIGN SERVICES

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

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

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

**WHEREAS**, Resolution No. 20-FY2015 (See Exhibit A) authorized GWA management to enter into a contract with TG Engineers, P.C. in the amount of Two Million Five Hundred Thirty Two Thousand Five Hundred Eighty Dollars (\$2,532,580.00) to provide design services for the Northern and Southern Guam Reservoirs, which includes:

- (1) site investigations and system evaluations at Santa Rosa, Santa Rita, Sinifa, Inarajan, and Ugum reservoir sites, and
- (2) development of design plans and specifications for various sized concrete reservoirs ranging from 1.0 MG to 2.0 MG nominal capacities, instrumentation and control upgrades, control valves upgrades, pipe upgrades, new booster station, and other general site and system upgrades; and

**WHEREAS**, Resolution No. 20-FY2015 further authorized on top of the contract amount a ten percent (10%) contingency of Two Hundred Fifty Three Thousand Two Hundred Fifty Eight Dollars (\$253,258.00) bringing the total authorized funding to a maximum of Two

**Exhibit B (2 of 4)**

1 Million Seven Hundred Eighty Five Thousand Eight Hundred Thirty Eight Dollars  
2 (\$2,785,838.00); and  
3

4 **WHEREAS**, GWA issued Change Order No. 1 to TG Engineers, P.C. for additional  
5 services that were required due to needs for land acquisition for various project sites using the  
6 approved contingency funding in the amount of Fifty One Thousand Three Hundred Forty One  
7 Dollars and Fifty Cents (\$51,341.50) in which the total value of the Contract was increased to  
8 Two Million Five Hundred Eighty Three Thousand Nine Hundred Twenty One Dollars and  
9 Fifty Cents (\$2,583,921.50); and  
10

11 **WHEREAS**, in the course of the design and analysis of the reservoirs and the water  
12 system served by the noted reservoirs additional design services listed below was identified as  
13 being necessary to meet new building code requirement and to improve the functionality of the  
14 water systems (See Exhibit B – Scope of Work and Fees):

- 15 (1) design for several additions and revisions to the pipe system to complete the pressure  
16 zone realignment which includes surveying and environmental services for Santa Rita  
17 and Santa Rosa Reservoirs,
- 18 (2) design for the new UFC structural code requirements for Ugum, Santa Rosa, Santa Rita  
19 and Sinifa Reservoirs; and Inarajan Booster Pump Station,
- 20 (3) additional land acquisition support for the Government of Guam Chamorro Land Trust  
21 Commission (CLTC) property, additional Archaeological and Unexploded Ordinance  
22 (UXO) monitoring, and design to include the new GWA-AAFB tank interconnection  
23 system for the Santa Rosa Reservoir,
- 24 (4) design for new Booster Pump Station and a new Pressure Reducing Valve (PRV) to be  
25 added into the system in the vicinity of Agfayan Subdivision in Inarajan as part of the  
26 pressure zone realignment plan,
- 27 (5) percolation tests to be included at each project site location for drainage basins,
- 28 (6) design to incorporate the Siemens controls from the existing Ugum plant to be extended  
29 to the new Ugum Reservoir and facilities; and  
30  
31  
32

**Exhibit B (3 of 4)**

**WHEREAS**, GWA engineering and TG Engineers, P.C. negotiated the price for the services to be provided in the amount of Five Hundred Three Thousand One Hundred Ten Dollars and Fifty Cents (\$503,110.50); and

**WHEREAS**, GWA Management is seeking CCU approval of additional funding in the amount of Three Hundred One Thousand One Hundred Ninety Four Dollars (\$301,194.00) which is the balance needed above the remaining contingency that will fund Change Order No. 2; and

**WHEREAS**, GWA Management further seeks CCU approval of the total authorized funding for the design contract with TG Engineers, P.C. to Three Million Eighty Seven Thousand Thirty Two Dollars (\$3,087,032.00); and

**WHEREAS**, funding for this project will be from 2013 and/or 2015 Bond Funds under CIP line item PW 09-11 Water System Reservoirs 2005 Improvements; 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 fee proposal submitted by TG Engineers, P.C. are fair and reasonable.
3. The CCU finds that the terms of the conditions set by GWA relative to commencement of subsequent work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
4. The CCU hereby authorizes GWA management to execute Change Order No. 2 in the amount of Five Hundred Three Thousand One Hundred Ten Dollars and Fifty Cents (\$503,110.50) (Exhibit B).
5. The CCU further approves increasing the total authorized funding for the design contract with TG Engineers, P.C to Three Million Eighty Seven Thousand Thirty Two Dollars (\$3,087,032.00);

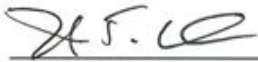
## Exhibit B (4 of 4)

6. Funding source will be CIP PW 09-11 Water System Reservoir 2005 Improvements.

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


**DULY AND REGULARLY ADOPTED**, this 23<sup>rd</sup> day of August, 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



///

///

///



**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. 12-FY2018**

Relative to Approval of Change Order No. 4 for the Northern and Southern Guam Reservoir Design Services

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

The project is part of the 2011 Court Order Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program. As a Court Order project, it is necessary and urgent to work towards meeting the Court Order deadlines. The project's objective is to provide design services for the Northern and Southern reservoirs, which include the Santa Rosa, Santa Rita, Sinifa, Ugum, and Inarajan.

The Change Order proposal is for the following work:

- (1) Santa Rosa: design of new 4,120 LF of 12-inch pipe along Route No. 1 in Yigo.
- (2) Santa Rosa: Identification and survey of easements for agreements with DoD.
- (3) Agfayan Booster Pump Station: design of pressure reducing valve near original bps site.
- (4) Agfayan Booster Pump Station: Investigate 4 lots as new alternatives for the new booster pump station location.
- (5) Ugum Reservoir: Investigate a new alternative for the reservoir location. The new alternative involves consolidating 2 lots adjacent and south of the existing plant to provide the site needed for the new reservoir and facilities.
- (6) Ugum Reservoir: Existing water treatment plant drainage will be corrected in the new design and plans.
- (7) Santa Rita: Incorporate roadway repair in the design. New design to replace existing culvert.
- (8) Sinifa: Prepare construction easements and construction support documents for 2 lots.

#### **Where is the location?**

Santa Rosa reservoir: located off Route 15 in Yigo

Santa Rita reservoir: located off Obispo Olaiz Street in Santa Rita

Sinifa reservoir: located off Cross Island Road in Santa Rita

Ugum: located off Paulino Street in Inarajan

Inarajan: located off Belen Avenue in Inarajan

#### **How much will it cost?**

The fee proposal is for \$537,880.25.

#### **When will it be completed?**

Santa Rosa work: 90 days

Agfayan BPS: dependent on outcome of investigations

Ugum: dependent on outcome of land owner responses

Santa Rita: 30 days

Sinifa: 60 days

#### **What is the funding source?**

The funding shall be from PW 09-11: Water System Reservoirs 2005 Improvements.

#### **The RFP/BID responses (if applicable):**

Not Applicable)



**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. 13-FY2018**

Relative to Santa Rosa, Sinifa, and Santa Rita Tank and System Upgrades Construction Management Contract

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

The project is part of the 2011 Court Order Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program. As a Court Order project, it is necessary and urgent to work towards meeting the Court Order deadlines. The project's objective is to provide construction management services for the construction of the Santa Rosa, Sinifa, and Santa Rita Tank and System Upgrade project, which includes new PRV's.

#### **Where is the location?**

Santa Rosa, Sinifa, and Santa Rita reservoir sites. The Santa Rosa reservoir is located in Yigo. Sinifa and Santa Rita reservoirs are located in Santa Rita village.

#### **How much will it cost?**

The fee proposal is for Two Million Nine Hundred Seventy-Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents (\$2,977,234.69). GWA management further seeks CCU approval of a 10% contingency or Two Hundred Ninety-Seven Thousand Seven Hundred Twenty-Three Dollars and Forty-Seven Cents (\$297,723.47) which would bring the total authorized funding requested to Three Million Two Hundred Seventy-Four Thousand Nine Hundred Fifty-Eight Dollars and Sixteen Cents (\$3,274,958.16).

#### **When will it be completed?**

Santa Rosa site: 365 calendar days

Sinifa site: 365 calendar days

Santa Rita site: 410 calendar days

CM start is dependent on the construction NTP.

#### **What is the funding source?**

The funding shall be from PW 09-11: Water System Reservoirs 2005 Improvements.

#### **The RFP/BID responses (if applicable):**

- RFP-06-ENG-2017
- 19 firms picked up RFP
- 8 firms submitted
- GHD recommended for award





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. 13–FY2018**

**RELATIVE TO APPROVAL OF THE CONSTRUCTION MANAGEMENT CONTRACT  
FOR SANTA ROSA, SINIFA, AND SANTA RITA TANK AND SYSTEM UPGRADES**

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

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

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

**WHEREAS**, the design of Santa Rosa, Sinifa, and Santa Rita Tank designs (RFP-09-ENG-2014) have been completed; and

**WHEREAS**, GWA has advertised the Request for Proposals (RFP-06-ENG-2017) soliciting statement of qualifications from experienced and qualified engineering firms to provide construction management services for the Santa Rosa, Sinifa, and Santa Rita Tank and System Upgrades project; and

**WHEREAS**, RFP packages were picked up by 19 interested parties, from which GWA received proposal submittals from 8 firms before the RFP submittal deadline; and

**WHEREAS**, the GWA A-E Selection committee reviewed and evaluated the 8 proposals (See Exhibit A – Score Summary) and generated a short list of the top 3 firms with a

1 recommendation to award a contract to the firm GHD (See Exhibit B – GM’s Determination);  
2 and  
3

4 **WHEREAS**, GHD and GWA negotiated the price for the construction management  
5 services (Santa Rosa, Sinifa, and Santa Rita tank and off-site system upgrades related to all three  
6 tank sites) to be provided in the total amount of Two Million Nine Hundred Seventy-Seven  
7 Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents (\$2,977,234.69) (See Exhibit  
8 C – Scope of Work and Fees); and  
9

10 **WHEREAS**, GWA management seeks approval of the fee proposal amount of Two  
11 Million Nine Hundred Seventy-Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-  
12 Nine Cents (\$2,977,234.69), along with a 10% contingency of Two Hundred Ninety-Seven  
13 Thousand Seven Hundred Twenty Three Dollars and Forty Seven Cents (\$297,723.47), to bring  
14 the total authorized funding amount to a maximum of Three Million Two Hundred Seventy-Four  
15 Thousand Nine Hundred Fifty-Eight Dollars and Sixteen Cents (\$3,274,958.16); and  
16

17 **WHEREAS**, funding for this project will be from the Bond Funds under the line item  
18 “PW 09-11 Water System Reservoirs 2005 Improvements”; and  
19

20 **NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities  
21 does hereby approve the following:  
22

- 23 1. The recitals set forth above hereby constitute the findings of the CCU.
- 24 2. The CCU finds that the terms of the fee proposal submitted by GHD are fair  
25 and reasonable (Exhibit C).
- 26 3. The CCU hereby authorizes the management to accept the fee proposal from  
27 GHD, which is also incorporated into this Resolution in its entirety.
- 28 4. The CCU hereby further authorizes the management of GWA to enter into a  
29 contract with GHD, in the amount of Two Million Nine Hundred Seventy-  
30 Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents  
31 (\$2,977,234.69).  
32

5. The CCU hereby further approves the total funding amount for this project of Two Million Nine Hundred Seventy-Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents (\$2,977,234.69), along with a 10% contingency of Two Hundred Ninety-Seven Thousand Seven Hundred Twenty-Three Dollars and Forty-Seven Cents (\$297,723.47), to bring the total authorized funding amount to Three Million Two Hundred Seventy-Four Thousand Nine Hundred Fifty-Eight Dollars and Sixteen Cents (\$3,274,958.16).
6. The CCU hereby further authorizes the funding source to be from bond funds under the CIP line Item PW 09-11 "Water System Reservoirs 2005 Improvements".

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

**DULY AND REGULARLY ADOPTED**, this 23<sup>rd</sup> day of January 2018.

Certified by:

Attested by:

\_\_\_\_\_  
**JOSEPH T. DUENAS**  
 Chairperson

\_\_\_\_\_  
**J. GEORGE BAMBA**  
 Secretary

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32

# **SECRETARY’S CERTIFICATE**

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

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

AYES: \_\_\_\_\_

NAYS: \_\_\_\_\_

ABSTENTIONS: \_\_\_\_\_

ABSENT: \_\_\_\_\_

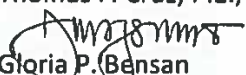
## Exhibit A (1 of 1)

**GUAM WATERWORKS AUTHORITY**

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

June 19, 2017

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

From:  Gloria P. Bensen  
Chairperson, Consultant Selection Board9

Subject: RFP-06-ENG-2017  
Construction Management Services for the Northern and Southern Guam  
Reservoirs (Santa Rosa, Sinifa, and Santa Rita) Tank and System Upgrades  
GWA Project No. W14-007-BND

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

EVALUATION COMMITTEE MEMBERS	
Name	Title
Brett Railey, P.E.	CIP Water Engineer Supervisor
Garrett Yeoh	Senior Engineer
Delfyn Quitlong	Engineer II
Vincent Pangelinan	Operations Manager

Consultant	Evaluation Score				Total	Rank
1. EMPSCO Engineering Consultants	75	65	90	74	304	7
2. HDR	90	80	95	86	351	2
3. LYON	65	72	89	80	306	6
4. SSFM International	86	82	94	85	347	3
5. Duenas, Camacho & Associates	79	74	92	80	325	4
6. E.M. Chen & Associates	71	67	88	70	296	8
7. AECOM	74	74	93	81	322	5
8. GHD	90	94	91	91	366	1

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

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


## Exhibit B (1 of 1)

### GUAM WATERWORKS AUTHORITY

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

#### MEMORANDUM

To: Miguel C. Bordallo, General Manager

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

Subject: RFP-06-ENG-2017  
Construction Management Services for the Northern and Southern Guam  
Reservoirs (Santa Rosa, Sinifa, and Santa Rita) Tank and System Upgrades  
GWA Project No. W14-007-BND

Date: June 19, 2017

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

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

1. GHD
2. HDR
3. SSFM International

Concurred:

  
VINCENT E. GUERRERO  
Supply Management Administrator

6/20/2017  
Date

#### GENERAL MANAGER'S DETERMINATION

Consultant Firm Selected:

GHD

Remarks:

  
MIGUEL C. BORDALLO, P.E.  
General Manager

6.24.17  
Date



## Exhibit C

September 22, 2017

Mr. Miguel Bordallo  
General Manager  
688 Route 15  
Mangilao, GU 96913

**SUBJECT: FORMAL SUBMITTAL OF FINAL SCOPE OF WORK AND FEE PROPOSAL  
FOR NORTHERN AND SOUTHERN GUAM RESERVOIRS (SANTA ROSA,  
SINIFA, AND SANTA RITA) TANK AND SYSTEM UPGRADES  
CONSTRUCTION MANAGEMENT SERVICES  
RFP-06-ENG-2017, PROJECT NO. W14-007-BND**

Dear Mr. Bordallo:

GHD is pleased to formally submit our final Scope of Work and Fee Proposal for the above referenced project. The scope of work and fee proposal is based upon detailed meetings we held with GWA staff and we believe it meets GWA's needs in an economically feasible manner by pooling project management and resident engineer resources between the three (3) projects. We look forward to working with GWA on this critical project for Guam. If you have any questions or need additional information, please do not hesitate to contact me directly by email or telephone.

Sincerely,

A handwritten signature in black ink that reads "Paul K. Baron".

Paul K. Baron, PE  
Principal

Attachments: Scope of Work (15 pages)  
Fee Proposal (29 pages)



## **Guam Northern & Southern GWA Reservoirs Construction Management Services Scope of Work & Fees**

### **I. GENERAL**

GHD, as the Construction Manager (CM) shall provide services relating to the daily field observation, inspection, testing, supervision, management, coordination, and compliance monitoring for the Guam Northern & Southern GWA Reservoirs (Projects) at the following project locations.

- **Santa Rita GWA Reservoir Replacement**
- **Santa Rosa GWA Reservoir Replacement**
- **Sinifa GWA Reservoir Replacement**

The projects generally consists of geo-technical ground improvements, demolition of existing tank structures, construction of pre-stressed concrete tanks conforming to AWWA/ANSI D110 for Type I Wire-and-Strand Wound, Circular Prestressed Concrete Water Tanks (site adapted for each location), installation of new water lines, construction and refurbishment of booster pump stations, chlorination systems, electrical, instrumentation and control, SCADA controls, plus associated utilities for each site. Additionally, the work includes preconstruction services including constructability review and value engineering of the project design.

Reports submitted to GWA by the CM shall be in a form approved by GWA's Chief Engineer.

### **II. PROJECT OVERVIEW**

The construction management, testing, and field observation services for the projects will require general construction management and observation, as well as specialized inspection and testing. In addition to general construction management duties, the specialized inspection and testing will include, but not be limited to:

- Concrete placement
- Concrete anchors/Adhesive anchoring systems/Expansion bolts
- Grading
- Excavation
- Compaction grouting
- Compaction testing
- Pre-stressing operations
- Concrete cylinder testing
- Shotcrete application
- High strength bolting
- Earthwork/Soil analysis
- Instrumentation and SCADA
- Hydrostatic testing
- Disinfection



In general, the CM shall function as Owner's representative whose primary function shall be to:

- Keep GWA advised and informed as to project progress and cost
- Manage the change process
- Disclose any information relevant to GWA's interest
- Make proactive recommendations to GWA for action to maintain progress and achieve the project schedule and budget
- Observing System Commissioning
- Act in the best interest of GWA

The CM shall administer the Contract, except that the CM is not authorized to make any decisions on the behalf of GWA that materially affect the intent of the design or financially obligate GWA in any manner.

### III. TASK AND REQUIREMENTS

The following tasks are applicable to and will be provided to each of the Guam Northern & Southern GWA Reservoirs project locations.

#### A. PRE-CONSTRUCTION PHASE SERVICES:

In accordance with GWA's RFP, the purpose of this task is to obtain "a clear set of construction documents that will allow the perspective bidder to bid competitively, to build or install the designed facility in an efficient and timely manner, and reduce the number of change orders and delays." Under this task the CM will review the design documents; review the Contractor's Construction Management Quality Control Plan; prepare a Construction Quality Assurance Plan and a Construction Management Plan; provide contract bidding support; participate in meetings to discuss design documents; submit comments on design documents; and participate in meetings to discuss responses to comments as detailed in the following paragraphs.

**Task A1: Design Document Review.** The CM shall perform review of the design documents. The CM will provide redline mark-up of the plans and specifications and annotated comments. The review shall also verify that the design is clearly presented and potential construction related conflicts or deficiencies which may lead to substantive changes to the design, schedule, or cost of the project have been mitigated as practicable. Based upon our understanding of the current status of the design documents, we will undertake this at the 100% design stages.

**Deliverables** (electronic pdf files and hard copies):

- Final Design Review Report

#### **Task A2: CM Quality Assurance:**

**Task A2.1: Review Contractor Construction Management Quality Control Plan.** The CM shall review, record, and comment on the Construction Management Quality Control Plan submitted by the Construction Contractor.

**Task A2.2: Construction Quality Assurance Plan.** The CM will develop, implement, and maintain a Quality Assurance Plan for civil, structural, electrical, mechanical, and instrumentation elements including specialized work related to the construction of concrete

water reservoirs conforming to AWWA/ANSI D110 Type I Wire- and Strand- Wound, Circular Pre-stressed Concrete Water Tanks.

Content of the Quality Assurance Plan shall include, but not be limited to the following:

- Documentation of site conditions prior to beginning construction
- Review of approved submittals from the Contractor prior to fabrication or installation of materials and equipment
- Inspection, observation, and documentation of daily field work
- Monitoring of the Contractor's Quality Control Plan
- In-plant fabrication and/or witness testing at place of manufacture (where applicable)
- Reports and record keeping
- Non-conforming and deficient work resolution process
- Monitoring the Construction Contractor's implementation of their Quality Control Plan
- Complete list of specialized inspections for the tank structure and under tank

It is important to note that the CM is responsible for monitoring the Contractor's compliance with the Contract Documents, but is not responsible for the Contractor's means and methods the Contractor elects to use in performance of their work.

**Deliverables** (electronic pdf files and hardcopies):

- Quality Assurance Plan

**Task A3: Construction Management Plan.** The CM will develop and implement the Construction Management Plan (CM Plan) including guidelines for project organization and coordination in the field, standard daily operations, change order procedures, quality, schedule, and cost control. The CM Plan sets forth the procedures and approach for the construction of the project. The CM Plan will serve the CM, the Owner's Representative, and Contractors by defining the project, project team members and their roles, coordination among team members, procedure, key milestones, and schedule constraints. By establishing these parameters early in the project, the CM Plan will help control resources and costs, establish communication and coordination between the CM, Contractor, and GWA.

**Deliverables** (electronic pdf files and hardcopies):

- Construction Management Plan

**Task A4: Contract Bidding:**

The CM will review and perform an assessment of the 100% contract bid package (Parts A, B, & C) to assess their readiness, completeness, and suitability to solicit competitive bids. We will assist in the management of the bid documents, prepare for and conduct the pre-bid conference and site visit(s), manage and assist with RFI responses and addendums during the bid period.

After receipt of construction bid packages, the CM will perform an overall review of the bids received with a detailed emphasis on the apparent low bidder(s). The CM will work with GWA to perform the necessary follow-up with the bidders until the lowest responsible and responsive bidder is determined. Upon completion of this process, the CM will provide a technical memorandum summarizing the review and recommendation for award, and/or concurrence of

the proposed selected contractor. Recommendation shall include document review to ensure compliance with all bid requirements and procurement regulations, bid analysis, and contractor selection.

**Deliverables** (electronic pdf files and hardcopies):

- Pre-Bid Meeting Agenda and Minutes
- Technical Memorandum(s) – Document Review, Bid Analysis, and Contractor Selection

## **B. CONSTRUCTION PHASE SERVICES:**

**Task B1.0: Project Records & Document Control.** The CM shall provide services and tools to ensure that the project is efficiently managed and constructed according to the terms of the Contract. The primary function shall be the proper collection and organization of construction documents, gathering data regarding project progresses, producing progress reports, and monitoring time, cost, and quality.

The CM shall use Bentley EADOC for the Project Management Information System (PMIS) to track communication, design documents, construction documents, finances, and reporting. Our fee proposal shall include up to 15 users.

- Communication Documents: Memos, daily inspector logs for both contractor and CM, meeting minutes, and all other relevant documentation.
- Construction Documents: Submittals, RFIs, testing results, photo logs, special inspection, change orders, corrective actions, punch list, various construction logs, payment applications, wage rate reporting, and all other relevant documentation.
- Contract Documents: Specifications, drawings, permits, bid documents, contract documents, and all other relevant documentation.

**Task B2.0: Daily Construction Reports.** The onsite inspectors shall maintain daily reports of the general work performed, visitors to the site, daily production, weather and site condition, field orders, progress photos, material testing, special inspections, documentation of delays, non-conformance, punch lists, and other material and work facts and issues regarding the production of the work. The daily reports and logs shall be available to GWA project team for review at any time via the project management software.

### **Task B3.0: Progress Photo Log and Live Video Feed:**

**Task B3.1: Progress Photo Log.** The CM shall prepare and retain a construction progress photo log in an album organized by year, month, and day. The photo log shall capture the different phases of the project – pre-construction, construction, and post-construction. The photo log shall be digital and provided to GWA at the end of the project.

**Task B3.2: Live Video Feed.** The CM shall provide 24 hour monitoring camera(s) to be installed at each project site to allow for regular monitoring of the project work. The camera system will allow for remote view and playback functions. A time-lapse video of the entire project shall be provided to GWA at the end of the project.

**Task B4.0: Submittal and Shop Drawings.** The CM shall review and act on (accept or reject) submittals required by the Contract documents. The CM shall review and provide comments

regarding shop drawings, work drawings, material submittals, traffic control plan, safety plan, demolition plan, and other submittals for conformance with the Contract Documents. The CM reviewer shall be a competent person. In the event of a Contractor request for a time extension or material or equipment substitution, the CM shall make a recommendation to GWA regarding the substitution. The GWA Chief Engineer or his authorized representative will approve the substitution.

**Task B5.0: Contractor Project Schedules.** The CM shall review the Contractor's work schedule for accuracy and for efficient sequencing of the work. The CM shall provide recommendations to the Contractor to make changes deemed necessary and coordinate approval of the revised (recovery) schedule with GWA. Any delays shall be documented and notified to GWA and the Contractor when actual progress is behind schedule. The CM shall adhere to the requirements set forth in the Contract document for Contractor project schedule tracking and review.

**Task B6.0: Payment Request.** The CM shall receive and process payment requests from the Contractor. Payment requests shall be reviewed to be in compliance with the Contract documents and with the actual work completed. Upon completion of the review, the CM shall make any necessary adjustments, certify, and forward the request to GWA for processing of the payment. The CM shall submit their review, recommendation, acceptance, or rejection within five (5) working days of receipt from the Contractor. We assume the payment application will be a standard AIA or EJCDC.

**Task B7.0: Payroll Report.** The CM shall review any payroll submittals required by the Contract Documents including prevailing wage submissions. At the minimum, the Contractor and its subcontractors shall provide bi-weekly pay records for each of its employees on the project. The CM shall conduct two (2) random employee interviews every two (2) weeks to verify the pay request information. Upon completion of the review, the CM shall require the Contractor to make any necessary adjustments, certify, and forward the Payroll report along with the pay request to GWA for processing. Our review will be based on the wage rates provided in the bid package.

**Task B8.0: Project Meetings.** The CM shall schedule, arrange, and conduct conferences and meetings as required for clear communication of the Contract requirements and adherence to project schedules.

**Task B8.1: Pre-construction Conference.** The CM shall prepare for, chair, and provide meeting minutes for the pre-construction conference. The preconstruction conference shall be arranged to discuss mobilization, prosecution of work, safety, environmental protection, historic preservation, processing payments, material submittals, testing procedure, project schedules, inspections, and all other contract issues as necessary.

**Task B8.2: Weekly Progress Meetings.** The CM shall arrange for a weekly progress meeting with the Contractor and GWA to discuss progress of work, Contract requirements, and other issues related to the administration and prosecution of work. The CM shall prepare meeting minutes for all progress meetings with contractors, sub-contractors, GWA, and all other parties. The meeting minutes shall include action items from week to week until it has been completed.

**Task B8.3: Special/Stakeholder Coordination Meetings.** The CM shall arrange meetings between the Contractor and GWA, and other parties such as GEPA, DPW, GPA, etc. and other

Stakeholders as necessary to address project issues that require decisions that cannot be made by the CM or to resolve regulatory concerns.

**Task B9.0: As-Built Drawings:**

**Task B9.1: As-Built Drawing Review.** After each weekly meeting, the CM shall review the Contractor's review drawings to ensure that they are current and capture any deviations from the original plan set.

**Task B9.2: Maintain As-Built Drawing.** The CM shall maintain a separate set of red-line as-built drawings on site. Drawings shall be available for GWA at any time. Monthly as-built documents shall be uploaded to the project management software system.

**Task B10.0: Request for Information.** The CM shall track Requests for Information (RFI) and maintain an RFI log; coordinate receipt of answers from other sources; and provide RFI responses with GWA's input regarding any aspect of the Contract documents, which includes the plans and technical specifications.

**Task B11.0: General Compliance Monitoring.** The CM shall evaluate and ensure Contractor compliance with all local and federal labor laws applicable to the Project. Any violations shall be immediately reported to GWA. Compliance monitoring shall include but not limited to the following:

**Task B11.1: Regulations and Laws.** The CM shall monitor compliance with Territorial and/or Federal laws, regulations, and rules.

**Task B11.2: Labor Laws.** The CM shall monitor Contractor and subcontractor procedures to verify legal status of employees on site. Verify bi-weekly compliance with labor requirements for federally funded projects including posting of wage rate schedules at the job site and safety requirements.

**Task B11.3: Licensure.** To the best of our ability, the CM shall confirm that the Contractor and its subcontractors and their workers have all required licenses and ensure that said licenses are valid throughout the terms of the Contract.

**Task B11.4: Permit Compliance.** To the best of our ability, the CM shall monitor and track Contractor's compliance in obtaining required permits and approvals.

**Task B11.5: Insurance.** To the best of our ability, the CM shall review the Contractor's insurance documents that are submitted to GWA for compliance with Contractor requirements. The CM shall track insurance documents, ensure insurance is valid throughout the term of Contract and maintain an insurance certificate log.

**Task B12.0: Claims and Disputes.** The CM shall promptly notify GWA regarding any issues that arise during construction of the project that could result in claims and/or disputes. The CM shall provide the following services to assist GWA with the resolution of claims and disputes:

**Task B12.1: Claim Records.** Maintain copies of all verbal and written communications, submittals, testimony, photos, and meetings regarding a potential dispute and promptly submit all originals to the Chief Engineer and Attorney for GWA.

**Task B12.2: Claims Reviews & Interpretation.** Review claims submitted by the Contractor. Provide GWA with interpretation of Contract drawings and specifications and provide written recommendations to GWA regarding the solution of the dispute. At the outset of the Contract, the CM shall work with the Contractor to provide pricing for equipment, material, personnel, and other relevant considerations as specified in the bid. Prices agreed upon shall be used in any subsequent Change Order. No amounts shall be paid except for actual losses incurred by the Contractor through no fault of their own or for risks not allocated to the Contractor under the bid.

**Task B13.0: Change Order Negotiations and Review:**

**Task B13.1: Change Order Review.** Track all change orders and maintain a change order log. Provide change order evaluations, negotiations, and recommendations for approval by GWA. Change orders shall not be made when the Contractor has assumed such risk in the bid. Change orders may include requests for additional payments for differing site conditions and the CM shall utilize the bid documents to determine if a change order is warranted. The CM shall submit change order requests and supporting documentation to GWA for approval within ten (10) working days of receipt from the Contractor wherever practical.

**Task B13.2: Change Order Negotiations with Contractor.** Prepare independent cost estimates and negotiate change orders with the Contractor subject to GWA approval (final approval of negotiated change orders can only be made by the GWA General Manager).

**Task B13.3: Change Order Documentation and Administration.**

The CM shall maintain copies for all approved change orders (originals to be provided to GWA) and ensure that subsequent pay requests accurately represent these change orders. Approved change orders shall be administered by the CM along with other work elements according to the provisions of this scope of work.

**Task B14.0: Design Changes and Verification Request:**

As directed by GWA, prepare changes to the Contract technical documents (design and specifications) required to address a change order. GWA will direct the CM to make design changes only when changes are deemed by the GWA Chief Engineer and the Engineer of Record to have no material effect on the original intent of the design. All other design changes shall be forwarded to the Engineer of Record for processing.

If the request for change will materially change the original design, the CM shall coordinate with the Engineer of Record to accomplish the necessary design changes. The CM shall prepare a design change/verification request (DCVR) for submission to and for the approval of the Engineer of Record. If the required changes to the design are not covered within the original design scope of service, the CM will prepare a design scope amendment; solicit a fee proposal for the amendment on behalf of GWA, and assist with the negotiations.

**Task B15.0: Construction Monitoring, Special Inspection, and Quality Control Monitoring.**

The CM shall provide construction management and onsite inspection observation services to ensure that the work is accomplished in accordance with the Contract documents. Project field staff shall review project documents, conduct daily observations, special inspections (where applicable), prepare and submit daily observation and special inspection reports; communicate deficiency issues and resolve with Contractor; and update a non-

compliance log. It is anticipated that during peak construction as many as four (4) field staff may be present at the site during normal working hours.

**Task B15.1: Project Manager.** The CM will assign a part time Project Manager (PM) to the Guam Northern and Southern GWA Reservoir project. The PM will be responsible for general over-sight of the project, formal correspondence with GWA and the Contractor, and the professional and technical accuracy of all work and materials of the project.

**Task B15.2: Resident Engineer.** A full time Resident Engineer (RE) shall be assigned to manage all three (3) sites and will be at one (1) of the sites during normal working hours unless attending project related meetings or during holidays, vacation, or sick days. The Resident Engineer (RE) will determine along with the Project Manager (PM), which field staff will be onsite but it may be comprised of civil, structural, electrical, or mechanical field staff with the intent that there will be at least one (1) of them on site during normal working hours and will be supported by additional Special Inspectors as described in Task 15.4.

**Task B15.3: Onsite Construction Inspector.** The CM shall provide construction inspector staff at each of the three (3) sites to monitor the construction. The Resident Engineer and onsite field staff shall have demonstrable experience (satisfactory to GWA) relative to the discipline and type of work being performed. Project field staff shall review project documents, conduct daily observations, special inspections (where applicable), prepare and submit daily observation and special inspection reports, communicate deficiency issues and resolve with Contractor, and update a non-compliance log.

**Task B15.4: Special Inspector.** In addition to general compliance inspections, the CM shall provide special inspections services in accordance with IBC 2009, Chapter 17 by a person with demonstrable experience (satisfactory to GWA) related to concrete placement, structural field welding, field welding of reinforcement, concrete anchoring, expansion bolts, shotcrete application, high strength bolting, reinforcing steel placement, pre-stressing operations, grading, excavation, backfilling, foundation probing and injection, and other operations that require special inspections. The Special Inspections staff shall be accepted by DPW and approved by GWA before inspection.

SCADA, mechanical, and electrical inspections will be handled by competent staff on an “on-call” basis to periodically observe these phases of the construction. The same staff will be used to provide discipline specific submittal, shop drawing, and RFI review and response support. The staff shall have demonstrable experience relative to the discipline and type of work being performed.

#### **Task B16.0: Testing (Quality Assurance).**

**Task B16.1: Contactor Testing.** Schedule, observe, approve or reject, and document testing required under the Contract to be performed by the Contractor.

**Task B16.2: Construction Quality Assurance Testing.** The CM shall provide the following CQA testing to monitor the Contractor’s independent testing firm:

SPECIAL TESTING	STANDARD	FREQUENCY
Concrete Compressive Testing: Water tank, structures, encasement, hand holds,	ASTM C-39	See attached QA Summary of Services

electrical and communication vaults, pavement, retaining walls, drilled piles, etc.		
Backfill Compaction Testing: Over-excavation, tank foundation, structure foundations, manholes, vaults, electrical & communication hand holes, pavement, etc.	ASTM D-698 ASTM D-6938	See attached QA Summary of Services
Soil and Aggregate Analysis: Subgrade, limestone, base course, general fill, and structural fill, etc.	ASTM C-136 ASTM C-117 ASTM C-40 ASTM D-1140 ASTM D-1183 ASTM D-4318	See attached QA Summary of Services

**Task B16.2: GWA Testing.** Coordinate and monitor testing required to be performed by GWA.

**Task B17.0: Acceptance.** The CM shall promptly reject, orally, or in writing, any construction work that does not fully comply with Contract documents. Within 24 hours of notification to the Contractor that work elements have been rejected, the CM shall provide a written description of the deficiency to the GWA Chief Engineer for his/her concurrence. When concurrence has been obtained, the Contractor shall be directed to correct the work. The CM shall promptly advise the GWA Project Manager or the GWA Chief Engineer if the Contractor fails to correct or remove the defective work.

The CM shall issue written stop work orders to the Contractor and immediately provide GWA with a copy for a portion of or the entire Contract non-compliance issues as follows:

- If condition of work or Contractor actions threaten the health and safety of Contractor personnel, GWA representatives, or the public in such cases, stop work orders may be oral depending on the circumstances with written stop work order to follow.
- With prior notification and approval of the GWA Chief Engineer or Project Manager in all other cases.

**Task B18.0: Construction QA Survey Services.** The CM shall conduct survey and field measurements as necessary to verify that the work is located according to the plans and specifications. Changes to the horizontal and vertical alignments and elevations shall be made only with the approval of the GWA Chief Engineer.

- Pipeline Alignments and Location of Structures: Spot check Contractor's construction staking to verify the pipeline alignments and structure locations are as called for on the plan and specifications and in order to ensure that the work is in a location within lawful and approved Rights-of-Way and easements.
- Elevations: Spot check with Contractor's elevations for foundations, pads, pipe line inverts, backfill thickness, manholes, and other structures for which vertical elevations is a critical design element.
- Construction Survey Quality Assurance: The CM shall provide, at the minimum, the following CQA survey to monitor the Contractor's independent survey firm.
- See attached QA Summary of Services for a project specific list of those items to be verified. In general, the following work shall be provided: under-tank piping, over-excavation, tank foundation, vaults, pavement, water line, bench marks, etc.



**Task B19.0: Project Closeout (Punch List and Project Closeout Inspections).** Throughout the construction of the project, the CM shall prepare and maintain a list of defects and deficiencies in the work which must be corrected by the Contractor prior to final acceptance of work. The list shall be provided to all members of the pre-final and final inspection team. The list shall be revised after inspections to reflect additional items identified during the inspection. Coordinate with the Contractor to ensure that all punch list items have been completed. When all items have been completed, inform GWA in writing recommending that the work be accepted.

Schedule, arrange, and conduct preliminary, pre-final, and final inspections of work with Contractor, GWA, GEPA, DPW, and other stakeholders in this project.

**Task B19.1: Deficiency Log.** Prepare and maintain a list of defects and deficiencies in the work which must be corrected by the Contractor prior to final acceptance of work.

**Task B19.2: Preliminary Inspection.** Preliminary inspections shall be arranged as necessary for specific work elements that require the certification and approval of other agencies.

**Task B19.3: Pre-final Inspection.** A pre-final inspection shall be conducted after substantial completion of the work.

**Task B19.4: Final Inspection.** The final inspection shall be conducted after correction of pre-final inspection punch list items.

**Task B20.0: Train and Warranty Periods.**

**Task B20.1: Startup Training & Maintenance Procedures Coordination.** The CM shall coordinate with the Contractor to schedule and conduct startup training and standard maintenance procedures required by the Contract documents.

**Task B20.2: Master Warranty Package.** The CM shall maintain a copy of the warranties and compile associated Manufacturer and Contractor warranty documents. Warranty information shall be included in the final project report. All original warranty documents shall be provided to GWA along with Lien Release Information from the Contractor.

**Task B21.0: Equipment.**

**Task B21.1: Pressure Data Loggers.** The CM shall provide GWA with 15 water pressure data loggers, batteries, lock boxes, chains, padlocks, and associated fittings. The water pressure data loggers shall contain USB downloading, water resistant case, delay start feature, and 0-300 PSI range. For the purposes of this proposal, the cost of five (5) data loggers has been carried in each of the three (3) projects. Product data for the above has been included as an attachment to this document.

**Task B21.2: Equipment.** The CM shall provide GWA with a Panasonic Toughbook 20 with Windows Pro operating system per the attached product data. For the purposes of this proposal, the cost of Toughbook has been divided equally and 1/3 of the cost was carried in each of the projects.

**Task B22.0: Expenses.** The CM has summarized the costs associated with reports & reproduction, mileage, live video fee, website access & maintenance, project management information system (EADOC), QA soil & aggregate analysis, QA backfill compaction testing, QA concrete compressive strength testing, QA survey verification, etc. as a single total for all three (3) projects and carried the average amount equally in each of the projects.

#### C. POST-CONSTRUCTION SERVICES:

**Task C1.0: Final Report.** The CM shall prepare a final report after written acceptance of the work by GWA. The final report shall include a narrative documentation of all significant design and construction events and issues and shall become a historical record for the project. The Final Report shall include:

- All communication documentation
- All design documentation
- All construction documentation
- Warranty information
- Operation and maintenance information
- Asset management registry

**Deliverables** (electronic pdf files and 5 hard copies):

- CM Final Report

**Task C2.0: Record Drawings.** After the conclusion of the project, the CM shall review and approve the official record drawings prepared by the Contractor.

**Deliverables** (electronic pdf files and 5 hard copies):

- As-Built Record Drawings

#### IV. CLARIFICATIONS AND ASSUMPTIONS:

1) For this project, the CM's onsite presence shall consist of the following:

- a) **One (1) part time Project Manager** (assumed 45%) equally distributed to each of the three (3) project locations.
- b) **One (1) full time Resident Engineer** (assumed 100%) equally distributed to each of the three (3) project locations.
- c) **Three (3) full time Civil/Structural Inspector** (assume 100%), one at each of the three (3) project locations.
- d) **One (1) part time Structural Special Inspector** (assumed 24%), equally distributed to each of the three (3) project locations.
- e) **One (1) part time SCADA Inspector** (assume 21%), equally distributed to each of the three (3) project locations.
- f) **One (1) part time equivalent of Mechanical Engineer/ Mechanical Inspector** (assume 21%), equally distributed to each of the three (3) project locations.
- g) **One (1) part time equivalent of Electrical Engineer/ Electrical Inspector** (assume 21%), equally distributed to each of the three (3) project locations.

- h) **One (1) part time equivalent of Submittal Manager/Project Manager Assistant** (assume 45%) at each of the three (3) project locations, and various part time support as needed from the Principal, additional inspectors, engineers, etc.
- 2) Per the June 27, 2017 CM Services scoping meeting with GWA, the following project durations were used:
- a) Santa Rosa GWA Reservoir Replacement **(365 calendar days).**
  - b) Santa Rita GWA Reservoir Replacement **(410 calendar days).**
  - c) Sinifa GWA Reservoir Replacement **(365 calendar days).**

As requested by GWA, the CM shall provide limited close-out services for a period of 30 to 60 days after substantial completion provided all the construction work is complete and support is mainly at an administrative level (i.e. does not require full time staff to be assigned to the job site).

- 3) In an effort to reduce costs, the following assumptions have been made:
- a) Preparation of Construction Management Plan (CMP) assumes a single document can be prepared for all three projects. One third effort carried in each fee proposal.
  - b) Contract Bidding effort assumes preparation of a single Pre-Bid Meeting, Contract Bidding Management effort, Bid Opening, Review of Bid Packages, Preparation of Recommendation Memorandum, and Technical Memorandums for all three (3) projects as a single bid package. One third of the effort has been carried in each fee proposal.
  - c) At the end of the project, the CM will turn-over each of the EarthCam - Construction Cam Lite HD to GWA. It is our understanding that GWA will have the cameras permanently installed at each of the three (3) sites by others. The cameras have an approximate value of **\$45,000.00** excluding software support and archiving services which are excluded. Note, GHD access to the EarthCam environment is subject to compliance with their terms of use for the service. GHD is a subscriber to the service only and has no control over the performance of the EarthCam Service but will take all reasonable measures and actions within our power to ensure good performance of the system.
- 4) Inspection and testing of any existing steel storage reservoirs including draining and cleaning is excluded for this scope of services.
- 5) An amount of \$18,930.00 for the Project Management Information System (PMIS), Bentley's ProjectWise Construction Management Service (EADOC), was budgeted for each project. Our fee assumes a total of 15 users for each project at a cost of approximately \$180.00 per user per quarter as follows:
- a) Client – **two (2)**
  - b) Construction Manager – **five (5)**
  - c) Contractor – **five (5)**
  - d) Spare – **three (3)**

Additional users can be provided at the request of GWA via Change Order. Note, GHD Access to the ProjectWise Construction Management environment is subject to compliance

with the Bentley Systems terms of use for the service. GHD is a subscriber to the ProjectWise Construction Management service only and has no control over the performance of Bentley's ProjectWise Construction Management Service but will take all reasonable measures and actions within our power to ensure good performance of the system.

- 6) The CM will use Primavera P6 project management software to track the Contractor's project schedule, construction cost, resource tracking, and cost management.
- 7) The CM shall conduct random employee interviews every two (2) weeks for two (2) employees to verify the pay request information.
- 8) Job Site Safety is the sole responsibility of the Contractor. The CM assumes the Contractor shall perform all work in accordance with the requirements of the Contract Documents, applicable federal and local regulations, compliance with regulations of public agencies having jurisdiction, including safety and health requirements of the Territory of Guam and the Occupational Safety and Health Administration of the US Department of Labor (OSHA) as may be required.

In the event that the GHD believes that the Contractor is not conducting their work in compliance with OSHA requirements, we may request GWA to bring in an independent third party safety expert to determine the extent of the Contractor's compliance and potential mitigation for non-compliance. We recommend that GWA include language in the contract documents requiring the contractor to pay for this additional cost in the event it is necessary.

- 9) **Stop Work Orders:** It is understood that the CM may issue written stop work orders to the Contractor in accordance with GWA policies for a portion of or the entire project for Contract non-compliance issues as follows:
  - a) If in the opinion of the CM, the condition of work or Contractor actions threaten the health and safety of Contractor's personnel, GWA representatives, CM Staff, or the public in such cases, stop work orders may be oral depending on the circumstances (with written stop work order to follow).
  - b) With prior notification and approval of the GWA Chief Engineer or GWA Project Manager in all other cases.
- 10) **Authority to Direct Contractor Operations:** The CM shall direct the Contractor's Operations under the following conditions:
  - a) **Safety and Public Convenience:** In order to minimize inconvenience to the public and businesses, and in order to protect the safety of the public.
  - b) **Compliance:** In order to affect compliance with local and federal regulations, such as those dealing with traffic control, environmental protection, cultural protection, and historic protection.
- 11) No formal Partnering Program will be provided but GHD will incorporate partnering to the extent practicable to ensure that environmental commitments are met; complete the

project on time by resolving disputes quickly; finish within budget by proactively monitoring costs and facilitating creative solutions when faced with potential cost increases; ensure that quality is met by adequate oversight by the Contractor and CM.

- 12) An amount has been budgeted as detailed in the attached **QA Services Summary** to provide QA Testing. Material laboratory testing, Compaction testing, and Concrete Compressive Strength Testing shall be provided by a licensed geotechnical engineering firm. If additional services are required, it shall be brought to GWA's attention and a fee negotiated.
- 13) An amount has been budgeted as detailed in the attached **QA Services Summary** to provide QA Field Survey verification services. Survey verification services will be provided by a licensed land surveyor. If additional work is required it will be brought to GWA's attention and a fee negotiated.
- 14) No generator, fuel storage or pump systems are part of the project.
- 15) No project specific permitting services are included in this scope of work, but GHD will assist GWA, the designer, and the Contractor on a limited basis to help facilitate procurement of permits as expeditiously as possible.
- 16) No Archeological survey, Section 106 Historic Preservation, biological resource monitoring, Section 7 Endangered Species Act or related work is included.
- 17) Any and all permit fees are excluded.
- 18) The scope assumes the processing of up to **100 RFIs** (Task B10.0) per project, with the understanding that the EOR will provide responses to all design related RFIs. The scope also assumes **five (5) change orders** for (Task B13.0) and **three (3) design changes** for (Task B14.0). If additional work is required it will be brought to GWA's attention and a fee negotiated.
- 19) Warranty follow-up is not included in the scope. If required, a fee will be negotiated with GWA.
- 20) These CM Services are being provided for the construction of improvements shown on the **90% Design package**. If additional improvements are added to the construction contract then a fee for additional CM Services will be negotiated with GWA.
- 21) The Construction contract shall include requirements that the Construction Contractor pay for all overtime for inspection and special inspection requested by the Contractor outside of the normal 40 hour work week and this requirement will be strictly enforced and supported by GWA with payment coming out of the Contractor's Pay Request and then distributed to GHD by GWA via change order.
- 22) GWA agrees to negotiate with GHD for change orders for additional construction phase services due to construction delays, time extensions, additional work, adverse weather delays (**in excess of 30 days**), or any other reason not due to negligent acts of GHD until final acceptance of the project is achieved.

**VI. FEE SCHEDULE****TABLE 01 - SANTA RITA GWA RESERVOIR**

<b>Task Description</b>	<b>Amount</b>
Pre-Construction	\$45,820.00
Construction	\$905,939.38
Post-Construction	\$31,802.00
SUBTOTAL	\$983,561.38
GRT	\$40,985.00
<b>Santa Rita Total</b>	<b>\$1,024,546.39</b>

**TABLE 02 - SANTA ROSA GWA RESERVOIR**

<b>Task Description</b>	<b>Amount</b>
Pre-Construction	\$45,820.00
Construction	\$859,665.38
Post-Construction	\$31,802.00
SUBTOTAL	\$937,287.38
GRT	\$39,056.77
<b>Santa Rosa Total</b>	<b>\$976,344.15</b>

**TABLE 03 - SINIFA GWA RESERVOIR**

<b>Task Description</b>	<b>Amount</b>
Pre-Construction	\$45,820.00
Construction	\$859,665.38
Post-Construction	\$31,802.00
SUBTOTAL	\$937,287.38
GRT	\$39,056.77
<b>Sinifa Total</b>	<b>\$976,344.15</b>

**TABLE 04 - SANTA RITA SANTA ROSA & SINIFA GWA RESERVOIR**

<b>Task Description</b>	<b>Amount</b>
Pre-Construction	\$137,460.00
Construction	\$2,625,270.15
Post-Construction	\$95,406.00
SUBTOTAL	\$2,858,136.15
GRT	\$119,098.53
<b>GRAND TOTAL</b>	<b>\$2,977,234.69</b>

See attached spreadsheets for detailed information. Note, work to be invoiced monthly based on prorated effort.

**Santa Rosa, Sinifa, and Santa Rita Tank System Upgrades  
Fee Summary  
09/22/2017**

	<b>Amount</b>
Pre-Construction	\$45,820.00
Construction	\$905,939.38
Post-Construction	\$31,802.00
SUBTOTAL	\$983,561.38
GRT	\$40,985.00
<b>Santa Rita TOTAL</b>	<b>\$1,024,546.39</b>

	<b>Amount</b>
Pre-Construction	\$45,820.00
Construction	\$859,665.38
Post-Construction	\$31,802.00
SUBTOTAL	\$937,287.38
GRT	\$39,056.77
<b>Santa Rosa TOTAL</b>	<b>\$976,344.15</b>

	<b>Amount</b>
Pre-Construction	\$45,820.00
Construction	\$859,665.38
Post-Construction	\$31,802.00
SUBTOTAL	\$937,287.38
GRT	\$39,056.77
<b>Sinifa TOTAL</b>	<b>\$976,344.15</b>

	<b>Amount</b>
Pre-Construction	\$137,460.00
Construction	\$2,625,270.15
Post-Construction	\$95,406.00
SUBTOTAL	\$2,858,136.15
GRT	\$119,098.53
<b>GRAND TOTAL</b>	<b>\$2,977,234.69</b>

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

FEE PROPOSAL

09/22/2017

SANTA RITA GWA RESERVOIR REPLACEMENT

Activity Number	Task Description	Principal Engineer	Project Manager	QA Manager/Design Review	Resident Engineer	Civil Inspector	Civil/Structural Inspector	Special Inspector	SCADA Specialty	SR, Mechanical Engineer	Mechanical Inspector	SR, Electrical Engineer	Electrical Inspector	CADD Support	Scheduler Mgmt	Submittal/RFI Manager	Estimating Support	Project Manager Asst	Amount
	HOURLY LABOR RATES	\$246	\$166	\$226	\$126	\$126	\$136	\$196	\$175	\$155	\$125	\$155	\$125	\$121	\$150	\$126	\$110	\$96	
<b>A</b>	<b>PRECONSTRUCTION PHASE SERVICES</b>																		
A1.0	Design Document Review																		
A1.1	Design Document Review (100% 1 ea.)	-	8	16	24	-	-	-	-	-	-	-	-	-	-	-	-	-	7,968
A1.4	Final Design Review Report	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-	2,244
A2.0	CM Quality Assurance																		
A2.1	Review Contractor CM Quality Control Plan	-	4	4	4	8	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A2.2	Prepare Construction Quality Assurance Plan	-	8	16	20	60	-	-	-	-	-	-	-	-	-	-	-	-	15,024
A3.0	Construction Management Plan																		
A3.1	Prepare Construction Management Plan (assume 1 for all tanks)	-	4	4	8	4	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A4.0	Contract Bidding (assume all tanks bid together)																		
A4.1	Pre-Bid Meeting Preparation & Conduct	-	2	2	12	8	-	-	-	-	-	-	-	-	-	-	-	-	3,304
A4.2	Contract Bidding Management	-	2	2	20	4	-	-	-	-	-	-	-	-	-	-	-	-	3,808
A4.3	Bid Opening	-	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	1,288
A4.4	Review Bid Packages	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
A4.5	Prepare Recommendation Memorandum	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,340
A4.6	Prepare Technical Memorandum(s)	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
	PRECONSTRUCTION PHASE HOURS SUBTOTAL	-	38	54	110	98	-	-	-	-	-	-	-	-	-	-	-	-	300
	PRECONSTRUCTION PHASE SUBTOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	44,720
	PRECONSTRUCTION PHASE EXPENSES SUBTOTAL																		1,100
	PRECONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	45,820
<b>B</b>	<b>CONSTRUCTION PHASE SERVICES</b>																		
B1.0	Project Records & Document Control																		385
B2.0	Daily Construction Reports (assumes 5 days/wk @ 54 weeks = 270 logs)		68		44		405												36,960
B3.0	Progress Photo Log & Live Video Feed																		71,912
B3.1	Progress Photo Log						270												36,720
B3.2	Live Video Feed (also see expenses)													54					6,534
B4.0	Submittal and Shop Drawings																		
B4.1	Submittal Review (assume 350)				29	-	150	-	16	24		24				365			80,284
B4.2	Shop Drawing Review (assume 75)				6	-	75	60	16	24		24				75			42,406
B4.3	Plan Review (Traffic Control, Demolition, Dewatering, etc.)				6	-	40												6,196
B5.0	Contractor Project Schedules (assume 13)		13		8										100				18,166
B6.0	Payment Request (assume 13)		8		8														2,336
B7.0	Payroll Report																		
B7.1	Review Payroll Submittals (assume 26)				8		52												8,080
B7.2	Conduct Random Employee Interviews (assume 2 per week)						108												14,688
B8.0	Project Meetings																		
B8.1	Pre-Construction		4	4	4		4										4		3,120
B8.2	Conduct Weekly Progress Meetings (54 x 2 hours plus prep & minutes)		54		108		54												29,916
B8.3	Special/ Stakeholder Coordination Meetings (assume 13 total @ 2.0 hours ea)		26		26		13												9,360
B9.0	As-Built Drawing Reviews																		
B9.1	Weekly Review of Contractor's Red-Line Drawings (assume 1 hour/week)					-	54												7,344
B9.2	Maintain CM As-Built Drawings (assume 2 hours/week)					9	54												8,478
B10.0	Request for Information (assumes 100 RFI's at 2 hours ea.)		25		50	-			24	24		24				100			34,690
B11.0	General Compliance Monitoring																		
B11.1	Regulations				13														1,638
B11.2	Labor Laws				8														1,008
B11.3	Licensure		4		4														1,168
B11.4	Permit Compliance		16		5														3,286
B11.5	Insurance		4																664
B12.0	Claims and Disputes																		



GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

FEE PROPOSAL

09/22/2017

SANTA RITA GWA RESERVOIR REPLACEMENT

Activity Number	Task Description	Principal Engineer	Project Manager	QA Manager/Design Review	Resident Engineer	Civil Inspector	Civil/Structural Inspector	Special Inspector	SCADA Specialty	SR, Mechanical Engineer	Mechanical Inspector	SR, Electrical Engineer	Electrical Inspector	CADD Support	Scheduler Mgmt	Submittal/RFI Manager	Estimating Support	Project Manager Asst	Amount
B12.1	Claims Records				13	-	20	20											8,278
B12.2	Claims Review & Interpretation		20		13				8	8		8					100		19,838
B13.0	Change Order Review and Negotiations																		
B13.1	Change Order Review		20		13	-	20	20											11,598
B13.2	Change Order Negotiations with Contractor		20		13														4,958
B13.3	Change Order Documentation & Administration		20		13														4,958
B14.0	Design Changes and Verification Request																		
B14.1	CM Design/Technical Support Effort		20		13		40		6	6		6							13,308
B14.2	Prepare Design Change/Verification Requests (DCVR)													65					7,865
B14.3	Prepare EOR Design SOW Amendment & Fee Negotiations		20		13		20												7,678
B15.0	Construction Monitoring, Special Inspection, and Quality Control Monitoring																		
B15.1	Project Manager		9		239														31,608
B15.2	Resident Engineer (assume 1/3 Time @ 713 hrs)																		
B15.3	Onsite Construction Inspector (assumes Full Time @ 2,160 working hrs)					-	497												67,592
B15.4	Special Inspections (Prepare DPW Monthly Report)			108	13	-	-	80			40		40					156	66,702
B16.0	Testing (Quality Assurance)								12	12		12							5,820
B16.1	Contractor Testing (part of Task B15.1)					-	108												14,688
B16.2	CQA Testing & Monitoring (also see expenses)					-	108												14,688
B16.3	GWA Testing (part of Task B15.1)					-	24												3,264
B17.0	Acceptance																		
B17.1	Monitor, Document, & Manage Non-Compliance Issues				18		54												9,612
B18.0	Construction QA Survey Services (part of Task B22.4)				18		54												9,612
B19.0	Project Closeout (Punch List and Project Closeout Inspections)																		
B19.1	Deficiency Log				18	-	54												9,612
B19.2	Preliminary Inspection				8	-	8		8	8		8							5,976
B19.3	Pre-Final Inspection				8	-	8		8	8		8							5,976
B19.4	Final Inspection				8	-	8		8	8		8							5,976
B20.0	Train and Warranty Periods																		
B20.1	Startup Training & Maintenance Procedures Coordination				8	-	20												3,728
B20.2	Master Warranty Package				8		20												3,728
B21.0	Equipment																		
B21.1	Data Loggers (15 ea.)																		6,309
B22.2	Panasonic Toughbook 20																		880
B22.0	Expenses																		
B22.1	QA Soil & Aggregate Analysis																		3,245
B22.2	QA Backfill Compaction Testing																		3,595
B22.3	QA Concrete Compressive Strength Testing																		28,937
B22.4	QA Survey Verification																		38,638
B22.5	Live Video Feed, Website Access & Maintenance																		32,607
B22.6	Project Management Information System																		18,150
B22.7	Mileage																		8,263
B22.8	Other																		3,300
	CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	-	351	112	773	-	2,342	180	106	122	40	122	40	119	100	544	100	541	1,566
	CONSTRUCTION PHASE HOUR UTILIZATION		15%	5%	33%		100%	8%	5%	5%	2%	5%	2%	5%	4%	23%	4%	23%	
	CONSTRUCTION PHASE SERVICES SUBTOTAL	-	58,266	25,312	97,398	-	318,512	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	762,017
	CONSTRUCTION PHASE EXPENSES SUBTOTAL																		143,922
	CONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	58,266	25,312	97,398	-	318,512	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	905,939

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

FEE PROPOSAL

09/22/2017

SANTA RITA GWA RESERVOIR REPLACEMENT

Activity Number	Task Description	Principal Engineer	Project Manager	QA Manager/Design Review	Resident Engineer	Civil Inspector	Civil/Structural Inspector	Special Inspector	SCADA Specialty	SR, Mechanical Engineer	Mechanical Inspector	SR, Electrical Engineer	Electrical Inspector	CADD Support	Scheduler Mgmt	Submittal/RFI Manager	Estimating Support	Project Manager Asst	Amount
<b>C</b>	<b>POST CONSTRUCTION SERVICES</b>																		
<b>C1.0</b>	<b>Final Report</b>																		
<b>C1.1</b>	Final Report		8		20		40										-		9,288
<b>C1.2</b>	Asset Management				80														10,080
<b>C2.0</b>	<b>Record Drawings</b>																		
<b>C2.1</b>	Signed & Sealed As-built Drawings				4		40							40			-		10,784
	<b>POST CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL</b>	-	8	-	104	-	80	-	-	-	-	-	-	40	-	-	-	-	232
	<b>POST CONSTRUCTION PHASE SERVICES SUBTOTAL</b>	-	1,328	-	13,104	-	10,880	-	-	-	-	-	-	4,840	-	-	-	-	30,152
	<b>POST CONSTRUCTION PHASE EXPENSES SUBTOTAL</b>	-																	1,650
	<b>POST CONSTRUCTION PHASE SERVICES &amp; EXPENSES TOTAL</b>	-	1,328	-	13,104	-	10,880	-	-	-	-	-	-	4,840	-	-	-	-	31,802
<b>ALL</b>	<b>TOTAL CONSTRUCTION HOURS</b>	-	397	166	987	98	2,422	180	106	122	40	122	40	159	100	544	100	541	6,124
<b>ALL</b>	<b>TOTAL CONSTRUCTION SERVICES</b>	-	65,902	37,516	124,362	12,348	329,392	35,280	18,550	18,910	5,000	18,910	5,000	19,239	15,000	68,544	11,000	51,936	836,889
<b>ALL</b>	<b>TOTAL CONSTRUCTION EXPENSES</b>																		146,672
<b>ALL</b>	<b>TOTAL CONSTRUCTION SERVICES &amp; EXPENSES</b>	-	65,902	37,516	124,362	12,348	329,392	35,280	18,550	18,910	5,000	18,910	5,000	19,239	15,000	68,544	11,000	51,936	983,561
<b>ALL</b>	<b>SUBTOTAL</b>																		983,561
<b>ALL</b>	<b>GRT AT 4.167%</b>																		40,985
<b>ALL</b>	<b>GRAND TOTAL</b>																		1,024,546

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

FEE PROPOSAL

09/22/2017

SANTA ROSA GWA RESERVOIR REPLACEMENT

Activity Number	Task Description	Principal Engineer	Project Manager	QA Manager/Design Review	Resident Engineer	Civil Inspector	Civil/Structural Inspector	Special Inspector	SCADA Specialty	SR Mechanical Engineer	Mechanical Inspector	SR Electrical Engineer	Electrical Inspector	CADD Support	Scheduler Mgmt	Submittal/RFI Manager	Estimating Support	Project Manager Ass't	Amount
	HOURLY LABOR RATES	\$246	\$166	\$226	\$126	\$126	\$136	\$196	\$175	\$155	\$125	\$155	\$125	\$121	\$150	\$126	\$110	\$96	
<b>A</b>	<b>PRECONSTRUCTION PHASE SERVICES</b>																		
A1.0	Design Document Review																		
A1.1	Design Document Review (100% 1 ea.)	-	8	16	24	-	-	-	-	-	-	-	-	-	-	-	-	-	7,968
A1.4	Final Design Review Report	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-	2,244
A2.0	CM Quality Assurance																		0
A2.1	Review Contractor CM Quality Control Plan	-	4	4	4	8	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A2.2	Prepare Construction Quality Assurance Plan	-	8	16	20	60	-	-	-	-	-	-	-	-	-	-	-	-	15,024
A3.0	Construction Management Plan																		0
A3.1	Prepare Construction Management Plan (assume 1 for all tanks)	-	4	4	8	4	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A4.0	Contract Bidding (assume all tanks bid together)																		0
A4.1	Pre-Bid Meeting Preparation & Conduct	-	2	2	12	8	-	-	-	-	-	-	-	-	-	-	-	-	3,304
A4.2	Contract Bidding Management	-	2	2	20	4	-	-	-	-	-	-	-	-	-	-	-	-	3,808
A4.3	Bid Opening	-	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	1,288
A4.4	Review Bid Packages	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
A4.5	Prepare Recommendation Memorandum	-	2		4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,340
A4.6	Prepare Technical Memorandum(s)	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
	PRECONSTRUCTION PHASE HOURS SUBTOTAL	-	38	54	110	98	-	-	-	-	-	-	-	-	-	-	-	-	300
	PRECONSTRUCTION PHASE SUBTOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	44,720
	PRECONSTRUCTION PHASE EXPENSES SUBTOTAL																		1,100
	PRECONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	45,820
<b>B</b>	<b>CONSTRUCTION PHASE SERVICES</b>																		
B1.0	Project Records & Document Control																	385	36,960
B2.0	Daily Construction Reports (assumes 5 days/wk @ 54 weeks = 270 logs)		68		44		405												71,912
B3.0	Progress Photo Log & Live Video Feed																		0
B3.1	Progress Photo Log						270												36,720
B3.2	Live Video Feed (also see expenses)													54					6,534
B4.0	Submittal and Shop Drawings																		0
B4.1	Submittal Review (assume 350)				29	-	150	-	16	24		24				365			80,284
B4.2	Shop Drawing Review (assume 75)				6		75	60	16	24		24				75			42,406
B4.3	Plan Review (Traffic Control, Demolition, Dewatering, etc.)				6	-	40												6,196
B5.0	Contractor Project Schedules (assume 13)		13		8										100				18,166
B6.0	Payment Request (assume 13)		8		8														2,336
B7.0	Payroll Report																		0
B7.1	Review Payroll Submittals (assume 26)				8		52												8,080
B7.2	Conduct Random Employee Interviews (assume 2 per week)						108												14,688
B8.0	Project Meetings																		0
B8.1	Pre-Construction		4	4	4		4									4			3,120
B8.2	Conduct Weekly Progress Meetings (54 x 2 hours plus prep & minutes)		54		108		54									-			29,916
B8.3	Special/ Stakeholder Coordination Meetings (assume 13 total @ 2.0 hours ea)		26		26		13												9,360
B9.0	As-Built Drawing Reviews																		0
B9.1	Weekly Review of Contractor's Red-Line Drawings (assume 1 hour/week)					-	54												7,344
B9.2	Maintain CM As-Built Drawings (assume 2 hours/week)				9	-	54												8,478
B10.0	Request for Information (assumes 100 RFIs at 2 hours ea.)		25		50	-			24	24		24				100			34,680
B11.0	General Compliance Monitoring																		0
B11.1	Regulations				13														1,638
B11.2	Labor Laws				8														1,008
B11.3	Licensure		4		4														1,168
B11.4	Permit Compliance		16		5														3,286
B11.5	Insurance		4																664
B12.0	Claims and Disputes																		0

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

FEE PROPOSAL

09/22/2017

SANTA ROSA GWA RESERVOIR REPLACEMENT

B12.1	Claims Records					13	-	20	20										8,278
B12.2	Claims Review & Interpretation		20			13				8	8		8				100		19,838
B13.0	Change Order Review and Negotiations																		0
B13.1	Change Order Review		20			13	-	20	20										11,598
B13.2	Change Order Negotiations with Contractor		20			13													4,958
B13.3	Change Order Documentation & Administration		20			13													4,958
B14.0	Design Changes and Verification Request																		0
B14.1	CM Design/Technical Support Effort		20			13		40		6	6		6						13,308
B14.2	Prepare Design Change/Verification Requests (DCVR)														65				7,865
B14.3	Prepare EOR Design SOW Amendment & Fee Negotiations		20			13		20											7,678
B15.0	Construction Monitoring, Special Inspection, and Quality Control Monitoring																		0
B15.1	Project Manager					161													20,286
B15.2	Resident Engineer (assume 1/3 Time @ 713 hrs)																		0
B15.3	Onsite Construction Inspector (assumes Full Time @ 2,160 working hrs)						-	240											32,640
B15.4	Special Inspections (Prepare DPW Monthly Report)			108		13		-	80			40		40				156	66,702
B16.0	Testing (Quality Assurance)									12	12		12						5,820
B16.1	Contractor Testing (part of Task B15.1)						-	108											14,688
B16.2	CQA Testing & Monitoring (also see expenses)						-	108											14,688
B16.3	GWA Testing (part of Task B15.1)						-	24											3,264
B17.0	Acceptance																		0
B17.1	Monitor, Document, & Manage Non-Compliance Issues					18		54											9,612
B18.0	Construction QA Survey Services (part of Task B22.4)					18		54											9,612
B19.0	Project Closeout (Punch List and Project Closeout Inspections)																		0
B19.1	Deficiency Log					18	-	54											9,612
B19.2	Preliminary Inspection					8	-	8		8	8		8						5,976
B19.3	Pre-Final Inspection					8	-	8		8	8		8						5,976
B19.4	Final Inspection					8	-	8		8	8		8						5,976
B20.0	Train and Warranty Periods																		0
B20.1	Startup Training & Maintenance Procedures Coordination					8	-	20											3,728
B20.2	Master Warranty Package					8		20											3,728
B21.0	Equipment																		0
B21.1	Data Loggers (15 ea.)																		6,309
B22.2	Panasonic Toughbook 20																		880
B22.0	Expenses																		
B22.1	QA Soil & Aggregate Analysis																		3,245
B22.2	QA Backfill Compaction Testing																		3,595
B22.3	QA Concrete Compressive Strength Testing																		28,937
B22.4	QA Survey Verification																		38,638
B22.5	Live Video Feed, Website Access & Maintenance																		32,607
B22.6	Project Management Information System																		18,150
B22.7	Mileage																		8,263
B22.8	Other																		3,300
	CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	-	342	112	695	-	2,085	180	106	122	40	122	40	119	100	544	100	541	1,566
	CONSTRUCTION PHASE HOUR UTILIZATION	0%	16%	5%	33%	0%	100%	9%	5%	6%	2%	6%	2%	6%	5%	26%	5%	26%	
	CONSTRUCTION PHASE SERVICES SUBTOTAL	-	56,772	25,312	87,570	-	283,560	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	715,743
	CONSTRUCTION PHASE EXPENSES SUBTOTAL																		143,922
	CONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	56,772	25,312	87,570	-	283,560	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	859,665

## GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

**FEE PROPOSAL**

09/22/2017

**SANTA ROSA GWA RESERVOIR REPLACEMENT**[illegible]

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

FEE PROPOSAL

09/22/2017

SINIFA GWA RESERVOIR REPLACEMENT

Activity Number	Task Description	Principal Engineer	Project Manager	QA Manager/Design Review	Resident Engineer	Civil Inspector	Civil/Structural Inspector	Special Inspector	SCADA Specialty	SR Mechanical Engineer	Mechanical Inspector	SR Electrical Engineer	Electrical Inspector	CADD Support	Scheduler Mgmt	Submittal/RFI Manager	Estimating Support	Project Manager Ass't	Amount
	HOURLY LABOR RATES	\$246	\$166	\$226	\$126	\$126	\$136	\$196	\$175	\$155	\$125	\$155	\$125	\$121	\$150	\$126	\$110	\$96	
<b>A</b>	<b>PRECONSTRUCTION PHASE SERVICES</b>																		
A1.0	Design Document Review																		
A1.1	Design Document Review (100% 1 ea.)	-	8	16	24	-	-	-	-	-	-	-	-	-	-	-	-	-	7,968
A1.4	Final Design Review Report	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-	2,244
A2.0	CM Quality Assurance																		0
A2.1	Review Contractor CM Quality Control Plan	-	4	4	4	8	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A2.2	Prepare Construction Quality Assurance Plan	-	8	16	20	60	-	-	-	-	-	-	-	-	-	-	-	-	15,024
A3.0	Construction Management Plan																		0
A3.1	Prepare Construction Management Plan (assume 1 for all tanks)	-	4	4	8	4	-	-	-	-	-	-	-	-	-	-	-	-	3,080
A4.0	Contract Bidding (assume all tanks bid together)																		0
A4.1	Pre-Bid Meeting Preparation & Conduct	-	2	2	12	8	-	-	-	-	-	-	-	-	-	-	-	-	3,304
A4.2	Contract Bidding Management	-	2	2	20	4	-	-	-	-	-	-	-	-	-	-	-	-	3,808
A4.3	Bid Opening	-	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	1,288
A4.4	Review Bid Packages	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
A4.5	Prepare Recommendation Memorandum	-	2		4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,340
A4.6	Prepare Technical Memorandum(s)	-	2	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1,792
	PRECONSTRUCTION PHASE HOURS SUBTOTAL	-	38	54	110	98	-	-	-	-	-	-	-	-	-	-	-	-	300
	PRECONSTRUCTION PHASE SUBTOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	44,720
	PRECONSTRUCTION PHASE EXPENSES SUBTOTAL																		1,100
	PRECONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	6,308	12,204	13,860	12,348	-	-	-	-	-	-	-	-	-	-	-	-	45,820
<b>B</b>	<b>CONSTRUCTION PHASE SERVICES</b>																		
B1.0	Project Records & Document Control																	385	36,960
B2.0	Daily Construction Reports (assumes 5 days/wk @ 54 weeks = 270 logs)		68		44		405												71,912
B3.0	Progress Photo Log & Live Video Feed																		0
B3.1	Progress Photo Log						270												36,720
B3.2	Live Video Feed (also see expenses)													54					6,534
B4.0	Submittal and Shop Drawings																		0
B4.1	Submittal Review (assume 350)				29	-	150	-	16	24		24				365			80,284
B4.2	Shop Drawing Review (assume 75)				6		75	60	16	24		24				75			42,406
B4.3	Plan Review (Traffic Control, Demolition, Dewatering, etc.)				6	-	40												6,196
B5.0	Contractor Project Schedules (assume 13)		13		8										100				18,166
B6.0	Payment Request (assume 13)		8		8														2,336
B7.0	Payroll Report																		0
B7.1	Review Payroll Submittals (assume 26)				8		52												8,080
B7.2	Conduct Random Employee Interviews (assume 2 per week)						108												14,688
B8.0	Project Meetings																		0
B8.1	Pre-Construction		4	4	4		4									4			3,120
B8.2	Conduct Weekly Progress Meetings (54 x 2 hours plus prep & minutes)		54		108		54									-			29,916
B8.3	Special/ Stakeholder Coordination Meetings (assume 13 total @ 2.0 hours ea)		26		26		13												9,360
B9.0	As-Built Drawing Reviews																		0
B9.1	Weekly Review of Contractor's Red-Line Drawings (assume 1 hour/week)					-	54												7,344
B9.2	Maintain CM As-Built Drawings (assume 2 hours/week)				9	-	54												8,478
B10.0	Request for Information (assumes 100 RFIs at 2 hours ea.)		25		50	-			24	24		24				100			34,680
B11.0	General Compliance Monitoring																		0
B11.1	Regulations				13														1,638
B11.2	Labor Laws				8														1,008
B11.3	Licensure		4		4														1,168
B11.4	Permit Compliance		16		5														3,286
B11.5	Insurance		4																664
B12.0	Claims and Disputes																		0

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

FEE PROPOSAL

09/22/2017

SINIFA GWA RESERVOIR REPLACEMENT

B12.1	Claims Records					13	-	20	20										8,278
B12.2	Claims Review & Interpretation		20			13				8	8		8				100		19,838
B13.0	Change Order Review and Negotiations																		0
B13.1	Change Order Review		20			13	-	20	20										11,598
B13.2	Change Order Negotiations with Contractor		20			13													4,958
B13.3	Change Order Documentation & Administration		20			13													4,958
B14.0	Design Changes and Verification Request																		0
B14.1	CM Design/Technical Support Effort		20			13		40		6	6		6			65			13,308
B14.2	Prepare Design Change/Verification Requests (DCVR)																		7,865
B14.3	Prepare EOR Design SOW Amendment & Fee Negotiations		20			13		20											7,678
B15.0	Construction Monitoring, Special Inspection, and Quality Control Monitoring																		0
B15.1	Project Manager	-				161													20,286
B15.2	Resident Engineer (assume 1/3 Time @ 713 hrs)																		0
B15.3	Onsite Construction Inspector (assumes Full Time @ 2,160 working hrs)						-	240											32,640
B15.4	Special Inspections (Prepare DPW Monthly Report)				108	13		-	80			40			40			156	66,702
B16.0	Testing (Quality Assurance)									12	12			12					5,820
B16.1	Contractor Testing (part of Task B15.1)						-	108											14,688
B16.2	COA Testing & Monitoring (also see expenses)						-	108											14,688
B16.3	GWA Testing (part of Task B15.1)						-	24											3,264
B17.0	Acceptance																		0
B17.1	Monitor, Document, & Manage Non-Compliance Issues					18		54											9,612
B18.0	Construction QA Survey Services (part of Task B22.4)					18		54											9,612
B19.0	Project Closeout (Punch List and Project Closeout Inspections)																		0
B19.1	Deficiency Log					18	-	54											9,612
B19.2	Preliminary Inspection					8	-	8		8	8		8						5,976
B19.3	Pre-Final Inspection					8	-	8		8	8		8						5,976
B19.4	Final Inspection					8	-	8		8	8		8						5,976
B20.0	Train and Warranty Periods																		0
B20.1	Startup Training & Maintenance Procedures Coordination					8	-	20											3,728
B20.2	Master Warranty Package					8		20											3,728
B21.0	Equipment																		0
B21.1	Data Loggers (15 ea.)																		6,309
B22.2	Panasonic Toughbook 20																		880
B22.0	Expenses																		
B22.1	QA Soil & Aggregate Analysis																		3,245
B22.2	QA Backfill Compaction Testing																		3,595
B22.3	QA Concrete Compressive Strength Testing																		28,937
B22.4	QA Survey Verification																		38,638
B22.5	Live Video Feed, Website Access & Maintenance																		32,607
B22.6	Project Management Information System																		18,150
B22.7	Mileage																		8,263
B22.8	Other																		3,300
	CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	-	342	112	695	-	2,085	180	106	122	40	122	40	119	100	544	100	541	1,566
	CONSTRUCTION PHASE HOUR UTILIZATION	0%	16%	5%	33%	0%	100%	9%	5%	6%	2%	6%	2%	6%	5%	26%	5%	26%	
	CONSTRUCTION PHASE SERVICES SUBTOTAL	-	56,772	25,312	87,570	-	283,560	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	715,743
	CONSTRUCTION PHASE EXPENSES SUBTOTAL																		143,922
	CONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	56,772	25,312	87,570	-	283,560	35,280	18,550	18,910	5,000	18,910	5,000	14,399	15,000	68,544	11,000	51,936	859,665

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

FEE PROPOSAL

09/22/2017

SINIFA GWA RESERVOIR REPLACEMENT

C	POST CONSTRUCTION SERVICES																		
C1.0	Final Report																		
C1.1	Final Report		8		20		40										-		9,288
C1.2	Asset Management				80														10,080
C2.0	Record Drawings																		
C2.1	Signed & Sealed As-built Drawings				4		40							40			-		10,784
	POST CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	-	8	-	104	-	80	-	-	-	-	-	-	40	-	-	-	-	232
	POST CONSTRUCTION PHASE SERVICES SUBTOTAL	-	1,328	-	13,104	-	10,880	-	-	-	-	-	-	4,840	-	-	-	-	30,152
	POST CONSTRUCTION PHASE EXPENSES SUBTOTAL	-																	1,650
	POST CONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	1,328	-	13,104	-	10,880	-	-	-	-	-	-	4,840	-	-	-	-	31,802
																			0
ALL	TOTAL CONSTRUCTION HOURS	-	388	166	909	98	2,165	180	106	122	40	122	40	159	100	544	100	541	5,780
ALL	TOTAL CONSTRUCTION SERVICES	-	64,408	37,516	114,534	12,348	294,440	35,280	18,550	18,910	5,000	18,910	5,000	19,239	15,000	68,544	11,000	51,936	790,615
ALL	TOTAL CONSTRUCTION EXPENSES																		146,672
ALL	TOTAL CONSTRUCTION SERVICES & EXPENSES	-	64,408	37,516	114,534	12,348	294,440	35,280	18,550	18,910	5,000	18,910	5,000	19,239	15,000	68,544	11,000	51,936	937,287
ALL	SUBTOTAL																		937,287
ALL	GRT AT 4.167%																		39,057
ALL	GRAND TOTAL																		976,344



<b>GHD - PROJECT ESTIMATING SHEET - GHD QA SERVICES SUMMARY</b>	
<b>Project Name:</b> Santa Rosa, Sinifa, and Santa Rita Tank & System Upgrades	<b>Attachment:</b>
<b>GHD Project Number:</b>	<b>of:</b>
<b>Description:</b> SANTA RITA	<b>Checked By:</b> P. Baron
<b>Prepared by:</b> B. Ryley	<b>Date:</b> 09/22/17
<b>QA SURVEY ESTIMATE</b>	
<u>Under Tank Piping:</u>	<u>Quantity</u>
Inlet Piping & Top of Flange	\$1,200
Outlet Piping & Top of Flange	\$1,200
Over-Flow Piping & Top of Flange	\$1,200
Drain Line Piping & Top of Flange	\$1,200
Wash Down Piping	\$1,200
<u>Tank Foundation:</u>	
Top of Formwork	\$1,200
<u>Control Building 1</u>	
Subgrade	\$800
Footing	\$800
Building Corners	\$800
FFE	\$800
<u>Control Building 2</u>	
Subgrade	\$800
Footing	\$800
Building Corners	\$800
FFE	\$800
<u>Manhole:</u>	
Below Base	\$800
Top of Manhole	\$800
Bottom of Pipe	\$800
<u>Ponding Basin 1</u>	
Subgrade	\$800
<u>Ponding Basin 2</u>	
Subgrade	\$800
<u>Vaults:</u>	
Top Outlet Meter Vault Footing Formwork	\$800
Top Outlet Meter Vault Roof Slab Formwork	\$800
Top Inlet Meter Vault Footing Formwork	\$800
Top Inlet Meter Vault Roof Slab Formwork	\$800
Top Electrical Handhole	\$800
<u>Pavement:</u>	
Pavement Formwork	\$800
Sidewalk Formwork	\$800
<u>Fencing</u>	
Corners	\$800

Drilled Piles

Cast In Place Drilled Piles	\$5,500
-----------------------------	---------

Bench Marks:

Establish bench marks on top of all vaults, top of retaining wall, top of footing at water height guauge, over-flow, drian, & outlet.	\$1,200
---	---------

Contingency	25%	\$7,675
-------------	-----	---------

<b>TOTAL ESTIMATED BUDGET</b>	<b>\$38,375</b>
-------------------------------	-----------------

	<u>Rate</u>
Half Day	\$800
Full Day	\$1,200
Hourly	\$150

**CQA TESTING ESTIMATE****Material Laboratory Testing:**

<u>Procotor &amp; Sieve Analysis:</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Cost</u>
Subgrade	\$295.00	2	\$590.00
Limestone	\$295.00	2	\$590.00
Base course	\$295.00	2	\$590.00
General Fill	\$295.00	2	\$590.00
	Contingency	25%	\$590.00
	<b>TOTAL ESTIMATED BUDGET:</b>		<b>\$2,950.00</b>

**Compaction Testing:**

<u>Control Building 1</u>			
Subgrade	\$74.00	1	\$74.00
Limestone	\$74.00	1	\$74.00
Base course	\$74.00	1	\$74.00
<u>Control Building 2</u>			
Subgrade	\$74.00	1	\$74.00
Limestone	\$74.00	1	\$74.00
Base course	\$74.00	1	\$74.00
<u>Reservoir Access Road</u>			
Subgrade	\$74.00	1	\$74.00
Limestone	\$74.00	2	\$148.00
<u>Ponding Basin 1 Access Road</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	1	\$74.00
General Fill	\$74.00	1	\$74.00
<u>Ponding Basin 2 Access Road</u>			

Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	1	\$74.00
<u>Manhole</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	3	\$222.00
<u>Outlet Meter Vault</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	3	\$222.00
<u>Inlet Meter Vault</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	3	\$222.00
<u>Electrical Handhole (estimated)</u>			
Below Foundation	\$74.00	1	\$74.00
<u>Pavement:</u>			
Subgrade	\$74.00	1	\$74.00
Limestone	\$74.00	2	\$148.00
Base course	\$74.00	1	\$74.00
Contingency 25%			\$573.50
<b>TOTAL ESTIMATED BUDGET:</b>			<b>\$2,867.50</b>

	<u>Rate</u>
1st Test	\$55
2nd Test	\$19
	<hr/>
	\$74

**Concrete Testing:**

<u>Outlet Meter Vault:</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Cost</u>
Footing	\$305.00	1	\$305.00
Walls	\$305.00	1	\$305.00
Roof Slab	\$305.00	1	\$305.00
<u>Inlet Meter Vault:</u>			
Footing	\$305.00	1	\$305.00
Walls	\$305.00	1	\$305.00
Roof Slab	\$305.00	1	\$305.00
<u>Encasement:</u>			
Inlet Piping	\$305.00	1	\$305.00
Outlet Piping	\$305.00	1	\$305.00
Over-Flow Piping	\$305.00	1	\$305.00
Drain Line Piping	\$305.00	1	\$305.00
Wash Down Piping	\$305.00	1	\$305.00
Electrical & Communications Ducts	\$305.00	1	\$305.00

<u>Handholes:</u>				
Electrical	\$305.00	1		\$305.00
<u>Pavement:</u>				
Pavement	\$305.00	1		\$305.00
<u>Control Building 1</u>				
Footing	\$305.00	1		\$305.00
Building Corners	\$305.00	1		\$305.00
<u>Control Building 2</u>				
Footing	\$305.00	1		\$305.00
Building Corners	\$305.00	1		\$305.00
<u>Manhole</u>				
Pre-Cast Sections	\$305.00	1		\$305.00
<u>Drilled Piles</u>				
Cast In Drilled Piles	\$305.00	77		\$23,485.00
<u>Water Tank:</u>				
Foundation	\$305.00	1		\$305.00
Core Walls	\$305.00	7		\$2,135.00
Columns	\$305.00	9		\$2,745.00
Column Footings	\$305.00	9		\$2,745.00
Roof Slab	\$305.00	1		\$305.00
Shotcrete	\$305.00	2		\$610.00
		170		
		Contingency	15%	\$5,718.75

**TOTAL ESTIMATED BUDGET: \$43,843.75**

**DESCRIPTION OF TESTS:**

Compressive Strength of Cylindrical Concrete Specimens (4 at \$17.00 ea.):	\$68.00
Curing and Disposal of Cylindrical Concrete Specimens without test, each:	\$12.00
Air Content of Freshly Mixed Concrete by the Pressure/Volumetric Method, per test:	\$50.00
Unit Weight and Yield of Fresh Concrete, each:	\$50.00
Slump Test & Making Concrete Specimens in the field (2.5 Hours of Labor):	\$125.00

SUBTOTAL: **\$305.00**

**QA SPECIAL INSPECTIONS****Special Inspections:**Outlet Meter Vault:

Footing	hours	2	110	\$220
Walls	hours	2	110	\$220
Roof Slab	hours	2	110	\$220

Inlet Meter Vault:

Footing	hours	2	110	\$220
Walls	hours	2	110	\$220

Roof Slab	hours	2	110	\$220
<u>Encasement:</u>				
Inlet Piping	hours	2	110	\$210
Outlet Piping	hours	2	110	\$210
Over-Flow Piping	hours	2	110	\$210
Drain Line Piping	hours	2	110	\$210
Wash Down Piping	hours	2	110	\$210
Electrical & Communications Ducts	hours	2	110	\$210
<u>Handholes:</u>				
Electrical	hours	2	110	\$210
<u>Pavement:</u>				
Pavement	hours	4	110	\$420
<u>Manhole:</u>				
Pre-Cast Sections	hours	2	110	\$210
<u>Drilled Piles</u>				
Cast In Drilled Piles	hours	616	110	\$67,760
<u>Water Tank:</u>				
Foundation	hours	8	110	\$880
Core Walls	hours	14	110	\$1,540
Columns	hours	18	110	\$1,980
Column Footings	hours	18	110	\$1,980
Roof Slab	hours	12	110	\$1,320
Shotcrete	hours	24	110	\$2,640
Vertical Post-tensioning	hours	8	110	\$880
Circumferential Pre-stressing	hours	16	110	\$1,760
		<b>766</b>		<b>\$84,160</b>
Contingency 10%				\$8,416.00
<b>TOTAL ESTIMATED BUDGET:</b>				<b>\$92,576.00</b>
<b>GRAND TOTAL:</b>				<b>\$177,662.25</b>

<b>GHD - PROJECT ESTIMATING SHEET - GHD QA SERVICES SUMMARY</b>	
<b>Project Name:</b> Santa Rosa, Sinifa, and Santa Rita Tank & System Upgrades	<b>Attachment:</b>
<b>GHD Project Number:</b>	<b>of:</b>
<b>Description:</b> SANTA ROSA	<b>Checked By:</b> P. Baron
<b>Prepared by:</b> B. Ryley	<b>Date:</b> 09/22/17
<b>QA SURVEY ESTIMATE</b>	
<u>Under Tank Piping:</u>	<u>Quantity</u>
Inlet Piping & Top of Flange	\$1,200
Outlet Piping & Top of Flange	\$1,200
Over-Flow Piping & Top of Flange	\$1,200
Drain Line Piping & Top of Flange	\$1,200
Wash Down Piping	\$1,200
<u>Over Excavation:</u>	
Bottom of Over Excavation	\$800
Top of Base course	\$800
Top of Limestone	\$800
<u>Tank Foundation:</u>	
Top of Formwork	\$1,200
<u>Hydropneumatic Tank Pad</u>	
Top of Formwork	\$800
<u>Control and Pump Room Building</u>	
Subgrade	\$800
Footing	\$800
Building Corners	\$800
FFE	\$800
<u>Manhole:</u>	
Below Base	\$800
Top of Manhole	\$800
Bottom of Pipe	\$800
<u>Ponding Basin</u>	
Subgrade	\$800
<u>Vaults:</u>	
Top Outlet Meter Vault Footing Formwork	\$800
Top Outlet Meter Vault Roof Slab Formwork	\$800
Top Inlet Meter Vault Footing Formwork	\$800
Top Inlet Meter Vault Roof Slab Formwork	\$800
Top Drain Vault Footing Formwork	\$800
Top Drain Vault Roof Slab Formwork	\$800
Top Outlet Check Valve Vault Footing Formwork	\$800
Top Outlet Check Valve Vault Roof Slab Formwork	\$800
<u>Retaining Wall</u>	
Top of Formwork	\$1,200
<u>Pavement:</u>	
Pavement Formwork	\$800

Sidewalk Formwork	\$800
-------------------	-------

Fencing

Corners	\$800
---------	-------

Bench Marks:

Establish bench marks on top of all vaults, top of retaining wall, top of footing at water height gauge, over-flow, drain, & outlet.	\$1,200
--	---------

Contingency	25%	\$7,000
-------------	-----	---------

<b>TOTAL ESTIMATED BUDGET</b>	<b>\$35,000</b>
-------------------------------	-----------------

	<b><u>Rate</u></b>
Half Day	\$800
Full Day	\$1,200
Hourly	\$150

**CQA TESTING ESTIMATE****Material Laboratory Testing:**

<u>Proctor &amp; Sieve Analysis:</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Cost</u>
Subgrade	\$295.00	2	\$590.00
Limestone	\$295.00	2	\$590.00
Base course	\$295.00	2	\$590.00
General Fill	\$295.00	2	\$590.00
Structural Fill	\$295.00	2	\$590.00
	Contingency	25%	\$737.50
	<b>TOTAL ESTIMATED BUDGET:</b>		<b>\$3,687.50</b>

**Compaction Testing:**

<u>Over-Excavation:</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	1	\$74.00
Limestone	\$74.00	1	\$74.00
<u>Control and Pump Room Building</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	1	\$74.00
Limestone	\$74.00	1	\$74.00
<u>Hydropneumatic Tank Pad</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	1	\$74.00
Limestone	\$74.00	1	\$74.00
<u>Access Road</u>			
Subgrade	\$74.00	1	\$74.00

Structural Fill	\$74.00	2	\$148.00
Limestone	\$74.00	1	\$74.00
<u>Pond Access Road</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	1	\$74.00
<u>Ponding Basin</u>			
General Fill	\$74.00	1	\$74.00
<u>Off-Site Gravel Road</u>			
Subgrade	\$74.00	1	\$74.00
General Fill	\$74.00	1	\$74.00
<u>AC Pavement</u>			
Subgrade	\$74.00	1	\$74.00
Structural Fill	\$74.00	1	\$74.00
Limestone	\$74.00	1	\$74.00
<u>Concrete Sidewalk</u>			
Subgrade	\$74.00	1	\$74.00
Structural Fill	\$74.00	1	\$74.00
Limestone	\$74.00	1	\$74.00
<u>Outlet Meter Vault</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	3	\$222.00
<u>Inlet Meter Vault</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	3	\$222.00
<u>Drain Vault</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	3	\$222.00
<u>Outlet Check Valve Vault</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	3	\$222.00
<u>Retaining Wall</u>			
Limestone	\$74.00	1	\$74.00
<u>Electrical Handhole (estimated)</u>			
Below Foundation	\$74.00	1	\$74.00
Contingency 25%			\$777.00
<b>TOTAL ESTIMATED BUDGET:</b>			<b>\$3,885.00</b>
1st Test	<u>Rate</u>		
2nd Test	\$55		
	\$19		



\$74

**Concrete Testing:**

<u>Outlet Meter Vault:</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Cost</u>
Footing	\$305.00	1	\$305.00
Walls	\$305.00	1	\$305.00
Roof Slab	\$305.00	1	\$305.00
<u>Inlet Meter Vault:</u>			
Footing	\$305.00	1	\$305.00
Walls	\$305.00	1	\$305.00
Roof Slab	\$305.00	1	\$305.00
<u>Drain Vault:</u>			
Footing	\$305.00	1	\$305.00
Walls	\$305.00	1	\$305.00
Roof Slab	\$305.00	1	\$305.00
<u>Outlet Check Valve Vault:</u>			
Footing	\$305.00	1	\$305.00
Walls	\$305.00	1	\$305.00
Roof Slab	\$305.00	1	\$305.00
<u>Encasement:</u>			
Inlet Piping	\$305.00	1	\$305.00
Outlet Piping	\$305.00	1	\$305.00
Over-Flow Piping	\$305.00	1	\$305.00
Drain Line Piping	\$305.00	1	\$305.00
Wash Down Piping	\$305.00	1	\$305.00
Electrical & Communications Ducts	\$305.00	1	\$305.00
<u>Handholes:</u>			
Electrical	\$305.00	1	\$305.00
<u>Pavement:</u>			
Pavement	\$305.00	1	\$305.00
<u>Retaining Wall</u>			
Footing	\$305.00	1	\$305.00
<u>Hydropneumatic Tank Pad</u>			
Foundation	\$305.00	1	\$305.00
<u>Water Tank:</u>			
Foundation	\$305.00	1	\$305.00
Core Walls	\$305.00	7	\$2,135.00
Columns	\$305.00	9	\$2,745.00
Column Footings	\$305.00	9	\$2,745.00
Roof Slab	\$305.00	1	\$305.00
Shotcrete	\$305.00	2	\$610.00
		<u>94</u>	
	Contingency	15%	\$2,333.25

**TOTAL ESTIMATED BUDGET: \$17,888.25**

**DESCRIPTION OF TESTS:**

Compressive Strength of Cylindrical Concrete Specimens (4 at \$17.00 ea.):	\$68.00
Curing and Disposal of Cylindrical Concrete Specimens without test, each:	\$12.00
Air Content of Freshly Mixed Concrete by the Pressure/Volumetric Method, per test:	\$50.00
Unit Weight and Yield of Fresh Concrete, each:	\$50.00
Slump Test & Making Concrete Specimens in the field (2.5 Hours of Labor):	\$125.00

**SUBTOTAL: \$305.00**

**QA SPECIAL INSPECTIONS**

**Special Inspections:**

Outlet Meter Vault:

Footing	hours	2	110	\$220
Walls	hours	2	110	\$220
Roof Slab	hours	2	110	\$220

Inlet Meter Vault:

Footing	hours	2	110	\$220
Walls	hours	2	110	\$220
Roof Slab	hours	2	110	\$220

Drain Vault:

Footing	hours	2	110	\$220
Walls	hours	2	110	\$220
Roof Slab	hours	2	110	\$220

Outlet Check Valve Vault:

Footing	hours	2	110	\$220
Walls	hours	2	110	\$220
Roof Slab	hours	2	110	\$220

Encasement:

Inlet Piping	hours	2	110	\$210
Outlet Piping	hours	2	110	\$210
Over-Flow Piping	hours	2	110	\$210
Drain Line Piping	hours	2	110	\$210
Wash Down Piping	hours	2	110	\$210
Electrical & Communications Ducts	hours	2	110	\$210

Handholes:

Electrical	hours	2	110	\$210
------------	-------	---	-----	-------

Pavement:

Pavement	hours	4	110	\$420
----------	-------	---	-----	-------

Retaining Wall

Footing	hours	2	110	\$210
Walls	hours	2	110	\$210

Water Tank:

Foundation	hours	8	110	\$880
Core Walls	hours	14	110	\$1,540
Columns	hours	18	110	\$1,980
Column Footings	hours	18	110	\$1,980
Roof Slab	hours	12	110	\$1,320
Shotcrete	hours	24	110	\$2,640
Vertical Post-tensioning	hours	8	110	\$880
Circumferential Pre-stressing	hours	16	110	\$1,760
		<b>164</b>		<b>\$17,930</b>
Contingency 10%				\$1,793.00
<b>TOTAL ESTIMATED BUDGET:</b>				<b>\$19,723.00</b>
<b>GRAND TOTAL:</b>				<b>\$76,496.25</b>

GHD - PROJECT ESTIMATING SHEET - GHD QA SERVICES SUMMARY	
Project Name: <b>Santa Rosa, Sinifa, and Santa Rita Tank &amp; System Upgrades</b>	Attachment:
GHD Project Number:	of:
Description: <b>SINIFA</b>	Checked By: <b>P. Baron</b>
Prepared by: <b>B. Ryley</b>	Date: <b>09/22/17</b>
<b>QA SURVEY ESTIMATE</b>	
<u>Under Tank Piping:</u>	<u>Quantity</u>
Inlet Piping & Top of Flange	\$1,200
Outlet Piping & Top of Flange	\$1,200
Over-Flow Piping & Top of Flange	\$1,200
Drain Line Piping & Top of Flange	\$1,200
Wash Down Piping	\$1,200
<u>Over Excavation:</u>	
Bottom of Over Excavation	\$800
Top of Base course	\$800
Top of Limestone	\$800
<u>Tank Foundation:</u>	
Top of Formwork	\$1,200
<u>Control Room</u>	
Subgrade	\$800
Footing	\$800
Building Corners	\$800
FFE	\$800
<u>Manhole:</u>	
Below Base	\$800
Top of Manhole	\$800
Bottom of Pipe	\$800
<u>Ponding Basin</u>	
Subgrade	\$800
<u>Vaults:</u>	
Top Outlet Meter Vault Footing Formwork	\$800
Top Outlet Meter Vault Roof Slab Formwork	\$800
Top Inlet Meter Vault Footing Formwork	\$800
Top Inlet Meter Vault Roof Slab Formwork	\$800
Top Drain Vault Footing Formwork	\$800
Top Drain Vault Roof Slab Formwork	\$800
<u>Retaining Wall</u>	
Top of Formwork	\$1,200
<u>Pavement:</u>	
Pavement Formwork	\$800
Sidewalk Formwork	\$800
<u>Fencing</u>	
Corners	\$800

**Bench Marks:**

Establish bench marks on top of all vaults,  
top of retaining wall, top of footing at water  
height gauge, over-flow, drain, & outlet.

\$1,200

Contingency 25% \$6,400

**TOTAL ESTIMATED BUDGET \$32,000**

	<u>Rate</u>
Half Day	\$800
Full Day	\$1,200
Hourly	\$150

**CQA TESTING ESTIMATE****Material Laboratory Testing:**

<u>Procotor &amp; Sieve Analysis:</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Cost</u>
Subgrade	\$295.00	2	\$590.00
Limestone	\$295.00	2	\$590.00
Base course	\$295.00	2	\$590.00
	Contingency 25%		\$442.50
<b>TOTAL ESTIMATED BUDGET:</b>			<b>\$2,212.50</b>

**Compaction Testing:**

<u>Over-Excavation:</u>			
Base course	\$74.00	1	\$74.00
Limestone	\$74.00	1	\$74.00
<u>Control Room</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	1	\$74.00
Limestone	\$74.00	1	\$74.00
<u>Ponding Basin Access Road</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	1	\$74.00
<u>Off-Site Gravel Road</u>			
Subgrade	\$74.00	1	\$74.00
General Fill	\$74.00	1	\$74.00
<u>AC Pavement</u>			
Subgrade	\$74.00	1	\$74.00
Limestone	\$74.00	1	\$74.00
Base course	\$74.00	1	\$74.00
<u>Concrete Sidewalk</u>			
Subgrade	\$74.00	1	\$74.00
Structural Fill	\$74.00	1	\$74.00

Limestone	\$74.00	1	\$74.00
<u>Outlet Meter Vault</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	3	\$222.00
<u>Inlet Meter Vault</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	3	\$222.00
<u>Drain Vault</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	3	\$222.00
<u>Retaining Wall</u>			
Limestone	\$74.00	1	\$74.00
<u>Manhole</u>			
Subgrade	\$74.00	1	\$74.00
Base course	\$74.00	3	\$222.00
<u>Electrical Handhole (estimated)</u>			
Below Foundation	\$74.00	1	\$74.00

Contingency 25% \$610.50

**TOTAL ESTIMATED BUDGET: \$3,052.50**

	<u>Rate</u>
1st Test	\$55
2nd Test	\$19
	<hr/>
	\$74

**Concrete Testing:**

<u>Outlet Meter Vault:</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Cost</u>
Footing	\$305.00	1	\$305.00
Walls	\$305.00	1	\$305.00
Roof Slab	\$305.00	1	\$305.00
<u>Inlet Meter Vault:</u>			
Footing	\$305.00	1	\$305.00
Walls	\$305.00	1	\$305.00
Roof Slab	\$305.00	1	\$305.00
<u>Drain Vault:</u>			
Footing	\$305.00	1	\$305.00
Walls	\$305.00	1	\$305.00
Roof Slab	\$305.00	1	\$305.00
<u>Control Room</u>			
Footing	\$305.00	1	\$305.00
Building Corners	\$305.00	1	\$305.00

Encasement:

Inlet Piping	\$305.00	1	\$305.00
Outlet Piping	\$305.00	1	\$305.00
Over-Flow Piping	\$305.00	1	\$305.00
Drain Line Piping	\$305.00	1	\$305.00
Wash Down Piping	\$305.00	1	\$305.00
Electrical & Communications Ducts	\$305.00	1	\$305.00

Pavement:

Pavement	\$305.00	1	\$305.00
----------	----------	---	----------

Retaining Wall

Footing	\$305.00	1	\$305.00
---------	----------	---	----------

Fencing

Posts	\$305.00	1	\$305.00
-------	----------	---	----------

Water Tank:

Foundation	\$305.00	1	\$305.00
Core Walls	\$305.00	7	\$2,135.00
Columns	\$305.00	9	\$2,745.00
Column Footings	\$305.00	9	\$2,745.00
Roof Slab	\$305.00	1	\$305.00
Shotcrete	\$305.00	2	\$610.00
		<u>90</u>	

Contingency 15% \$2,241.75

**TOTAL ESTIMATED BUDGET: \$17,186.75**

DESCRIPTION OF TESTS:

Compressive Strength of Cylindrical Concrete Specimens (4 at \$17.00 ea.):	\$68.00
Curing and Disposal of Cylindrical Concrete Specimens without test, each:	\$12.00
Air Content of Freshly Mixed Concrete by the Pressure/Volumetric Method, per test:	\$50.00
Unit Weight and Yield of Fresh Concrete, each:	\$50.00
Slump Test & Making Concrete Specimens in the field (2.5 Hours of Labor):	\$125.00

SUBTOTAL: **\$305.00**

**QA SPECIAL INSPECTIONS****Special Inspections:**Outlet Meter Vault:

Footing	hours	2	110	\$220
Walls	hours	2	110	\$220
Roof Slab	hours	2	110	\$220

Inlet Meter Vault:

Footing	hours	2	110	\$220
Walls	hours	2	110	\$220
Roof Slab	hours	2	110	\$220

Drain Vault:

Footing	hours	2	110	\$220
Walls	hours	2	110	\$220
Roof Slab	hours	2	110	\$220
<u>Encasement:</u>				
Inlet Piping	hours	2	110	\$210
Outlet Piping	hours	2	110	\$210
Over-Flow Piping	hours	2	110	\$210
Drain Line Piping	hours	2	110	\$210
Wash Down Piping	hours	2	110	\$210
Electrical & Communications Ducts	hours	2	110	\$210
<u>Control Room</u>				
Footing	hours	2	110	\$210
Walls	hours	2	110	\$210
<u>Pavement:</u>				
Pavement	hours	4	110	\$420
<u>Retaining Wall</u>				
Footing	hours	2	110	\$210
Walls	hours	2	110	\$210
<u>Water Tank:</u>				
Foundation	hours	8	110	\$880
Corewalls	hours	14	110	\$1,540
Columns	hours	18	110	\$1,980
Column Footings	hours	18	110	\$1,980
Roof Slab	hours	12	110	\$1,320
Shotcrete	hours	24	110	\$2,640
Vertical Post-tensioning	hours	8	110	\$880
Circumferential Pre-stressing	hours	16	110	\$1,760
		<b>160</b>		<b>\$17,480</b>
Contingency 10%				\$1,748.00
<b>TOTAL ESTIMATED BUDGET:</b>				<b>\$19,228.00</b>
<b>GRAND TOTAL:</b>				<b>\$71,467.25</b>



<b>GHD - PROJECT ESTIMATING SHEET- GHD EXPENSES</b>						
<b>Project Name: Santa Rosa, Sinifa, and Santa Rita Tank &amp; System Upgrades</b>				<b>Attachment:</b>		
<b>GHD Project Number:</b>				<b>of:</b>		
<b>Description: EXPENSE SUMMARY</b>				<b>Checked by: P.Baron</b>		
<b>Prepared by: B.Ryley</b>				<b>Date: 09/22/17</b>		
EXPENSE ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT	MARKUP at 10%	TOTAL
<b>PRECONSTRUCTION PHASE TASKS</b>						
Report Reproduction, misc.	3	lump sum	1,000.00	3,000.00	300.00	3,300.00
					-	
					-	
<b>SUBTOTAL</b>				<b>3,000.00</b>	<b>300.00</b>	<b>3,300.00</b>
<b>CONSTRUCTION PHASE TASKS</b>						
Mileage (1.50 vehicles x 30 miles x 321 days)	43,335	mile	0.52	22,534.20	2,253.42	24,787.62
Report Reproduction, misc	3	lump sum	3,000.00	9,000.00	900.00	9,900.00
Live Video Feed, Website Access & Maintenance	3	each	29,642.54	88,927.61	8,892.76	97,820.37
Project Mangment Information Systems	3	lump sum	16,500.00	49,500.00	4,950.00	54,450.00
Data Logger	3	lump sum	5,735.35	17,206.04	1,720.60	18,926.64
Panasonic Toughbook 20	1	ea.	2,399.00	2,399.00	239.90	2,638.90
QA Soil & Aggregate Analysis	3	lump sum	2,950.00	8,850.00	885.00	9,735.00
QA Compaction Testing	3	lump sum	3,268.33	9,805.00	980.50	10,785.50
QA Concrete Testing	3	lump sum	26,306.25	78,918.75	7,891.88	86,810.63
QA Survey Verification	3	lump sum	35,125.00	105,375.00	10,537.50	115,912.50
<b>SUBTOTAL</b>				<b>392,515.59</b>	<b>39,251.56</b>	<b>431,767.15</b>
<b>POST CONSTRUCTION SERVICES</b>						
Report Reproduction, misc.	3	lump sum	1,500.00	4,500.00	450.00	4,950.00
			-			
			-			
<b>SUBTOTAL</b>				<b>4,500.00</b>	<b>450.00</b>	<b>4,950.00</b>
<b>GRAND TOTAL</b>				<b>400,015.59</b>	<b>40,001.56</b>	<b>440,017.15</b>

GHD - PROJECT ESTIMATING SHEET- GHD EXPENSES						
Project Name: <b>Santa Rosa, Sinifa, and Santa Rita Tank &amp; System Upgrades</b>				Attachment:		
GHD Project Number:				of:		
Description: <b>VIDEO CAMERA EXPENSE BREAKDOWN</b>				Checked by: <b>P.Baron</b>		
Prepared by: <b>B.Ryley</b>				Date: <b>09/22/17</b>		
EXPENSE ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT	MARKUP at 10%	TOTAL
<b>PRECONSTRUCTION PHASE TASKS</b>						
<b>SUBTOTAL</b>						
<b>CONSTRUCTION PHASE TASKS</b>						
EarthCam - Construction Cam Lite HD	1	ea.	4,495.00	4,495.00	449.50	4,944.50
Solar Power Upgrade	1	ea.	4,022.00	4,022.00	402.20	4,424.20
Global Modem	1	ea.	1,399.00	1,399.00	139.90	1,538.90
Universal Pole Mount	1	ea.	99.00	99.00	9.90	108.90
Software Support & Archiving Services	1	ea.	575.00	575.00	57.50	632.50
FedEx International Economy S&H	1	ls.	2,722.76	2,722.76	272.28	2,995.04
Weather Station w/shipping	1	ea.	1,200.00	1,200.00	120.00	1,320.00
EarthCam Consulting Services	1	incl.	-	-	-	-
Website Development & MP Image Integration	1	incl.	-	-	-	-
Hand Edited Time-Lapse Move	1	incl.	-	-	-	-
Davis 6250 Weather Station	1	ea.	465.00	465.00	46.50	511.50
Davis 7654 Repeater	1	ea.	353.00	353.00	35.30	388.30
Davis 6555 Weather Link IP software	1	ea.	347.00	347.00	34.70	381.70
Cradlepoint ARC MBR 1400 Series Router	1	ea.	850.00	850.00	85.00	935.00
40GB high-speed HSPA data	18	mth.	140.00	2,520.00	252.00	2,772.00
30" Telescoping Light Mast w/Shipping	1	ea.	4,400.00	4,400.00	440.00	4,840.00
PCC Foundation (5' x 5' x 1') w/single delivery	1	ea.	2,000.00	2,000.00	200.00	2,200.00
Installation & Start up	1	ls.	1,500.00	1,500.00	150.00	1,650.00
<b>SUBTOTAL</b>				<b>26,947.76</b>	<b>2,694.78</b>	<b>29,642.54</b>
<b>POST CONSTRUCTION SERVICES</b>						
<b>SUBTOTAL</b>						
<b>TOTAL</b>				<b>26,947.76</b>	<b>2,694.78</b>	<b>29,642.54</b>

GHD - PROJECT ESTIMATING SHEET- GHD EXPENSES						
Project Name: <b>Santa Rosa, Sinifa, and Santa Rita Tank &amp; System Upgrades</b>				Attachment:		
GHD Project Number:				of:		
Description: <b>DATA LOGGER EXPENSE BREAKDOWN</b>				Checked by: <b>P. Baron</b>		
Prepared by: <b>B. Ryley</b>				Date: <b>09/22/17</b>		
EXPENSE ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT	MARKUP at 10%	TOTAL
<b>PRECONSTRUCTION PHASE TASKS</b>						
<b>SUBTOTAL</b>						
<b>CONSTRUCTION PHASE TASKS</b>						
Dickson PR325: Pressure Data Logger	15	ea.	499.00	7,485.00	748.50	8,233.50
Dickson A016: Software w/USB Download Cable	15	ea.	89.00	1,335.00	133.50	1,468.50
Dickson 721: Locking Case	15	ea.	79.00	1,185.00	118.50	1,303.50
Dickson A220: Card Reader Kit	15	ea.	49.00	735.00	73.50	808.50
Dickson R022: Pressure Filter Kit	15	ea.	30.00	450.00	45.00	495.00
Dickson A061: USB Download Cable	15	ea.	19.00	285.00	28.50	313.50
Dickson A125: 3 Volt (3V) Lithium Battery	15	ea.	16.00	240.00	24.00	264.00
Dickson A791: Pressure Kit	15	ea.	149.00	2,235.00	223.50	2,458.50
4 ft. Double Loop Cable w/ Padlock	15	ea.	12.79	191.85	19.19	211.04
Budget for Miscellaneous, Fitting, Tubing, etc.	1	ls.	1,500.00	1,500.00	150.00	1,650.00
				-	-	-
				-	-	-
				-	-	-
				-	-	-
				-	-	-
				-	-	-
				-	-	-
				-	-	-
<b>SUBTOTAL</b>				<b>15,641.85</b>	<b>1,564.19</b>	<b>17,206.04</b>
<b>POST CONSTRUCTION SERVICES</b>						
<b>SUBTOTAL</b>						
<b>TOTAL</b>				<b>15,641.85</b>	<b>1,564.19</b>	<b>17,206.04</b>



**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. 14-FY2018**

Relative to Approval of Change Order to the Agat-Santa Rita Wastewater Treatment Plant Design Contract

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

The project is part of the of critical Court Order ("CO") projects that GWA is required to complete. The construction activities for WWTP are in the second phase of the project and critical process work is slated to be completed in March 2018 however the expectation of actual final completion, including non-process work and landscaping, etc., is May or June 2018. GWA management desires to continue designer services during construction until overall project completion. Services include A/E designer review and comment for any issues that arise during construction.

#### **Where is the location?**

The new Agat-Santa Rita Wastewater Treatment Plant, Agat

#### **How much will it cost?**

A portion of the scope and fee from the proposal submitted by Duenas Camacho and Associates was effectuated through Change Order #2 which is pending final signature and which exhausted all the contingency fund therefore GWA Management seeks CCU approval of additional funding for an additional Change Order at a cost of Three Hundred Ninety-Eight Thousand Six Hundred Ninety-Two Dollars and Thirty-Two Cents (\$398,692.32).

The total authorized contract value will be Five Million One Hundred Twenty-Seven Thousand Four Hundred Ninety-Seven Dollars and Twenty-Five Cents (\$5,127,497.25)

#### **When will it be completed?**

The WWTP construction is in the second phase of the project and is slated to be completed in March 2018 however the expectation of actual final completion is May or June 2018.

#### **What is the funding source?**

The source of funding for the change order will be from the Bond proceeds under CIP WW 11-08 "Agat/Sta Rita STP Replacement"

#### **The RFP/BID responses (if applicable):**

Not Applicable



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

## **GWA RESOLUTION NO. 14-FY2018**

### **RELATIVE TO APPROVAL OF CHANGE ORDER TO THE AGAT-SANTA RITA WASTEWATER TREATMENT PLANT REPLACEMENT DESIGN 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 Agat-Santa Rita Wastewater Treatment Plant (WWTP) (U.S. Court Order No. 02-00035, Section II.A) which was recommended to require improvements that ultimately resulted in GWA designing and constructing a new WWTP; and

**WHEREAS**, The CCU approved via Resolution 34-FY2014 for GWA management to enter into contract with Duenas Camacho and Associates to provide professional engineering services for design of the Agat-Santa Rita Wastewater Treatment Plant Replacement project, as well as design services during construction; and

**WHEREAS**, the above noted resolution approved the contract fee of Four Million Five Hundred Three Thousand Six Hundred Twenty-Three and Seventy-Four Cents (\$4,503,623.74), along with a five percent (5%) contingency of Two Hundred Twenty-Five Thousand One Hundred Eighty-One Dollars and Nineteen Cents (\$225,181.19) to bring the total authorized funding amount to Four Million Seven Hundred Twenty-Eight Thousand Eight Hundred Four and Ninety-Three Cents (\$4,728,804.93).; and

1       **WHEREAS**, to date GWA has executed two change orders with Duenas Camacho and  
2 Associates for additional services that expended all the approved contingency fund and which  
3 is expected to be exhausted by the end of January 2018; and

4  
5       **WHEREAS**, to date the construction work for the WWTP in the second phase of the  
6 project and is slated to be completed in March 2018 for all critical process related facilities,  
7 however the expectation of actual final completion for all site improvements including non-  
8 process related construction and landscaping, etc., is May or June 2018 thus GWA desires to  
9 continue designer services during construction until overall project completion; and

10  
11       **WHEREAS**, GWA management seeks to change order the existing contract with  
12 Duenas Camacho and Associates by extending their engineering services during construction  
13 to continue to provide designer review and comment for any issues that arise during  
14 construction the final stages of construction; and

15  
16       **WHEREAS**, GWA engineering negotiated with Duenas Camacho and Associates to  
17 provide continued design services during construction from which the scope and fee proposal  
18 Five Hundred Fifty Thousand Dollars (\$550,00.00) was found to be acceptable to GWA (See  
19 Exhibit A); and

20  
21       **WHEREAS**, a portion of the above-mentioned scope and fee from the proposal  
22 submitted by Duenas Camacho and Associates was effectuated through Change Order #2  
23 which is pending final signatures and which exhausted all the contingency fund as noted above,  
24 therefore GWA Management seeks CCU approval of the Change Order to provide continued  
25 design services during construction at a cost of the balance of funds required, specifically  
26 Three Hundred Ninety-Eight Thousand Six Hundred Ninety-Two Dollars and Thirty-Two  
27 Cents (\$398,692.32) which would then bring the total authorized contract value to Five Million  
28 One Hundred Twenty-Seven Thousand Four Hundred Ninety-Seven Dollars and Twenty-Five  
29 Cents (\$5,127,497.25); and

30       **WHEREAS**, the source of funding for the change order will be from the Bond  
31 proceeds under CIP WW 11-08 "Agat/Sta Rita STP Replacement"; and  
32

**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 change order proposal submitted by Duenas Camacho and Associates to be fair and reasonable.
3. The CCU finds that the terms of the conditions set by GWA relative to commencement of subsequent work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
4. The CCU hereby authorizes the management of GWA to accept a balance of the change order proposal from “Duenas Camacho and Associates” attached hereto as Exhibit A, and which is incorporated into this Resolution in its entirety.
5. The CCU hereby further authorizes the management to execute the change order with Duenas Camacho and Associates, in the amount of Three Hundred Ninety-Eight Thousand Six Hundred Ninety-Two Dollars and Thirty-Two Cents (\$398,692.32).
6. The CCU hereby further approves the increase contract value of Five Million One Hundred Twenty-Seven Thousand Four Hundred Ninety-Seven Dollars and Twenty-Five Cents (\$5,127,497.25).
7. The CCU hereby further approves the source of funding from Bond proceeds under CIP WW 11-08 “Agat/Sta Rita STP Replacement”.

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

**DULY AND REGULARLY ADOPTED**, this 23<sup>rd</sup> day of January, 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: \_\_\_\_\_

///

///

///

///

///

///

///

///





## Exhibit A

October 17, 2017

Thomas F. Cruz, P.E.  
Chief Engineer  
Gloria B. Nelson Public Service Building  
688 Route 15  
Mangilao, Guam, 96913

Attn: John M. Davis, P.E., Senior Engineering Supervisor

Ref: **Agat-Santa Rita Wastewater Treatment Plant (WWTP) Replacement Design**

Subj: **Change Order Request #2, Contract No. S14-002-BND**

Dear Mr. Cruz:

Duenas, Camacho & Associates, Inc and our design team have been providing continuous post design services for the referenced project. In order for our team to provide and continue the services needed for the ongoing construction efforts and the up coming start up and commissioning of the Agat-Santa Rita WWTP Phase II construction efforts, we are requesting a change order to increase our time and materials (T&M) limit based on the following.

- Addition RFI Review. The total number of RFIs to date for the project is 392, see attachment 1. As the designer of record, our team was asked to review nearly all the submitted RFIs. Our team provided and will continue to provide responses for the RFI's. It should be noted that some of the RFIs submitted were the result of changes to contractor means and methods in an effort to save on time and cost.
- Additional Submittal Review. The review of all the technical submittals was limited in our contract scope. As part of the construction support, the design team has reviewed 590 submittals, see attachment 1.
- Shop Drawing Review. Prompt and quick shop drawing review was needed for the Phase I of construction as well as the ongoing Phase II. Our structural design team has provided over 2,500 hours of shop drawing review to date, attachment 2. There are still more structures that are under construction and will require shop drawing review. In addition, our structural team has reviewed proposals from the contractor for various structural alternatives to the project.
- Focused Meetings. Personnel from our design team attend the weekly meetings and participate in focused weekly meetings. These meetings have resulted in improved construction and response times. Our design team recommends that these weekly meetings continue until substantial completion of the project.

October 17, 2017

- Additional Services: In an effort to expedite compliance and substantial completion the project was split into phases: clearing and grading, Phase I compliance construction and Phase II final construction. Our initial scope of services did not account for these phases and that construction will be complete at the end of 2017. The following services have been provided for as part of the Phase I:
  - a. Operation Manuals: Attachment 3a provides a cost breakdown of the services provided for this effort to date. Additional manuals may be needed for final start-up.
  - b. Training: Attachment 3b provides a cost breakdown of the services provided for this effort to date. Additional manuals may be needed for final start-up.
  - c. Start-up Support: Attachment 3c provides a cost breakdown of the services provided for this effort to date. Additional start-up services may be needed for final start-up.
  - d. Witness Testing: The design team used the T&M effort to cover the witness testing for the aerobic aerator. These services were to be provided by the contractor. Based on correspondence with the CM and contractor this service will be reimbursed to GWA by the construction contractor.
- The total cost of the additional services is \$170,912.50. Details for this are provided in attachment 3d. These services have been billed as part of our ongoing T&M effort.

In addition to our design team's post design efforts to provide submittal, RFI and shop drawings review, training and attend regular construction meetings, we have also provided the following:

1. Agat Laboratory Equipment. As part of the design team's T&M we have purchased a new spectrophotometer and reactor. This equipment will be used at the new Agat WWTP Lab. The team proposed to advance this purchase so that this equipment may be used for ongoing wastewater characterization. The fee for this service is \$10,358.00. A copy of the fee breakdown is enclosed as attachment 4 with this request.
2. Geotechnical Services. Given the site's complex geology and the slope failure located along the proposed site retaining wall, additional geotechnical services were needed. These services were taken out of the project team T&M effort. The fee for this service is \$10,729.51. A copy of this fee is enclosed as attachment 5 with this request.
3. Archeological Support. Monitoring of the new waterline was done as part of DCA's post design T&M effort. This monitoring was required in order to maintain compliance with the permit conditions. This is an ongoing service and will be billed later this year.

#### Additional Time and Service Request.

It is estimated that the design team services will be needed up to and at least two months past construction completion. We estimate that this will be ten (10) months from August 2017. Based on our past T&M billings the monthly billing used is approximately \$50,000. The additional not to exceed effort for our T&M post design services is \$500,000.

October 17, 2017

The total amount requested by this change order request:

Additional Time and Services Request:	\$500,000.00
Geotechnical Services:	\$ 10,729.51
Agat Laboratory Equipment:	\$ 10,358.00
Total:	\$521,087.51
Suggested NTE amount:	\$550,000.00

As part of this request we recommended that our post design services not to exceed amount be increased by **\$550,000** in order to account for possible unforeseen conditions. This not to exceed increase request will bring the design team post design services amount to \$1,459,661.21. This is less than 3% of the total construction cost to date.

The design team is available to further discuss any comments or questions GWA may have to this change order request.

Thank you,



Kenneth M. Rekdahl, P.E.  
Project Manger  
Duenas, Camacho & Associates, Inc.

Enclosures (4): Submittal and RFI Summary  
Additional Services Detail  
Laboratory Details  
Geotechnical Services Detail



# ATTACHMENT 1

## Agat-Santa Rita WWTP Replacement

[switch project](#)  
No Program

Bentley

Duenas Camacho &amp; Associates

Ken Rekdahl [logout](#)

10/16/2017, 11:22:51 AM Pacific/Guam

[Start](#)[Memo](#)[Dailylog](#)[Meeting](#)[Calendar](#)[Deficiency Log](#)[scheduler](#)[Start](#)[Work](#)[Documents](#)[Report](#)[Finance](#)[Profile](#)[Help](#)View:  [Customize](#)

Level: project

**Inbox**

1 CCR (new)  
 74 CRN Responses (new)  
 1 Correction Required Notice (new)  
 5 DCM Responses (new)  
 4 DCMs (new)  
 1 Inspection Report (new)  
 1 Memo (new)  
 1 Memo Response (new)  
 392 RFI Responses (new)  
 17 RFIs (new)  
 590 Submittal Responses (new)  
 4 Submittals (new)

**Calendar  
Overdue**

**Documents Due**  
 Submittal 01320-10  
 Submittal 01320-11  
 Submittal 01782-5

**Meetings****Outbox**

12 CRN Responses  
 1 Correction Required Notice  
 1 RFI  
 106 RFI Responses  
 26 Submittal Responses  
 3 Submittals

**Recent Documents**

RFI # 275 - RFI Response # 3  
 RFI # 272 - RFI Response # 1  
 RFI # 261 - RFI Response # 1  
 RFI # 261 - RFI Response # 3

**Common Tasks**

Create Memo  
 Create Meeting Invitation

**Spent:** 0.00  
**CCR Spent:** 0.00  
**Contracted:** 0.00  
**Contracted+CO:** 0.00  
**Contracted Spent:** 0.00%

**Pay Estimates Pending:** 0.00  
**Retention Pending:** 0.00  
**Pay Estimates Approved:** 0.00  
**Retention Approved:** 0.00  
**CCRs Pending:** 0.00  
**CCRs Approved:** 0.00  
**CO Pending:** 0.00  
**CO Approved:** 0.00  
**Risk Items Pending:** 0.00  
**Encumbered:** 0.00

**Project Days Remainin**  
**Completion Date:**

**Alerts**  
[Submittal Reminder](#)  
 13 Submittals

[Report Report](#)

**Additional Services**

GS&amp;P Invoice 0698905

Dated October 8, 2016

	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>	<b>Amount Remaining</b>
Scoped Services	\$41,448.78	\$108,315.61	\$164,984.60	\$445,926.26
Additional Services	\$15,220.21			
	<b>\$56,668.99</b>			<b>\$445,926.26</b>

The following additional services are being tracked and are listed for reference.

**Time Associated with Mechanical Submittals**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
9/20/2016	Clae Fuller	0.25	\$80.00	\$20.00	-	
9/21/2016	Clae Fuller	0.25	\$80.00	\$20.00	-	
9/20/2016	Ben Luke	2.00	\$125.00	\$250.00	-	
9/21/2016	Ben Luke	2.00	\$125.00	\$250.00	-	
				<b>\$540.00</b>	<b>-</b>	<b>\$540.00</b>

**Time Associated with Contractor Related Changes**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
8/30/2016	Ron Abraham <sup>1</sup>	4.00	\$225.00	\$900.00	-	
9/21/2016	Ron Abraham <sup>2</sup>	4.00	\$225.00	\$900.00	-	
8/31/2016	Clae Fuller <sup>1</sup>	0.75	\$80.00	\$60.00	-	
8/29/2016	Ben Luke <sup>1</sup>	2.00	\$125.00	\$250.00	-	
9/21/2016	Ben Luke <sup>2</sup>	1.50	\$125.00	\$187.50	-	
				<b>\$2,297.50</b>	<b>-</b>	<b>\$2,297.50</b>

<sup>1</sup> Oxidation Ditch Waterstop<sup>2</sup> Clarifier Hydraulics**Time Associated with Site Visits**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
8/23/2016	Ron Abraham	4.00	\$225.00	\$900.00	-	
8/30/2016	Ron Abraham	4.00	\$225.00	\$900.00	-	
				<b>\$1,800.00</b>	<b>-</b>	<b>\$1,800.00</b>

**Additional Services**

GS&amp;P Invoice 0698905

Dated October 8, 2016

**Time Associated with Developing Training Materials**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
9/14/2016	Ron Abraham	4.00	\$225.00	\$900.00	-	
9/16/2016	Ron Abraham	4.00	\$225.00	\$900.00	-	
9/19/2016	Ron Abraham	4.00	\$225.00	\$900.00	-	
9/21/2016	Ron Abraham	4.00	\$225.00	\$900.00	-	
8/16/2016	Seth Dobyns	1.00	\$100.00	\$100.00	-	
9/20/2016	Seth Dobyns	8.00	\$100.00	\$800.00	-	
9/23/2016	Seth Dobyns	8.00	\$100.00	\$800.00	-	
9/19/2016	David Johnson	1.00	\$225.00	\$225.00	-	
9/20/2016	David Johnson	2.00	\$225.00	\$450.00	-	
9/21/2016	David Johnson	2.00	\$225.00	\$450.00	-	
9/26/2016	David Johnson	3.00	\$225.00	\$675.00	-	
9/22/2016	Jacob Lampley	7.00	\$100.00	\$700.00	-	
9/26/2016	Jacob Lampley	2.50	\$100.00	\$250.00	-	
8/16/2016	Ben Luke	1.00	\$125.00	\$125.00	-	
9/19/2016	Ben Luke	3.50	\$125.00	\$437.50	-	
9/20/2016	Ben Luke	1.25	\$125.00	\$156.25	-	
9/22/2016	Ben Luke	1.00	\$125.00	\$125.00	-	
9/23/2016	Ben Luke	2.00	\$125.00	\$250.00	-	
8/16/2016	Kristi Schnell	1.00	\$165.00	\$165.00	-	
9/13/2016	Kristi Schnell	0.50	\$165.00	\$82.50	-	
9/19/2016	Kristi Schnell	1.00	\$165.00	\$165.00	-	
9/21/2016	Kristi Schnell	3.00	\$165.00	\$495.00	-	
9/22/2016	Kristi Schnell	0.50	\$165.00	\$82.50	-	
9/23/2016	Kristi Schnell	1.00	\$165.00	\$165.00	-	
				<b>\$10,298.75</b>	<b>-</b>	<b>\$10,298.75</b>

**Operator Training**

<b>Expense</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
Airfare for Dave Fletcher and Ben Barcinas	\$283.96		
	<b>\$283.96</b>	<b>-</b>	<b>\$283.96</b>

**TOTAL \$15,220.21****\$15,220.21**

## ATTACHMENT 2

**Exhibit B (Hourly Summary)**  
**Invoice 16A-22**  
**Phase 2 Time and Materials Services for Duenas, Camacho & Associates**  
**Through January 2, 2016**

	Hours	Rate	Amount
<b>Project Manager</b>			
Kenneth Rekdahl	110	\$ 106.00	\$ 11,660.00
Frankie Susuico	13	\$ 78.00	\$ 1,014.00
Ed Salanatin	5	\$ 113.00	\$ 565.00
<b>Civil Engineer</b>			
Jeff Bell	67	\$ 62.00	\$ 4,154.00
Murel Cabral	53	\$ 77.00	\$ 4,081.00
<b>Staff Engineer</b>			
Jeremy Mudd	40	\$ 47.00	\$ 1,880.00
Hana Johnston	21.5	\$ 52.00	\$ 1,118.00
Calvin Pagcu	33	\$ 47.00	\$ 1,551.00
<b>Secretary</b>			
Tamera Reyes	16.5	\$ 28.00	\$ 462.00
<b>Total</b>	<b>359</b>		<b>\$ 26,485.00</b>

**Expenses**

12/16/15	GFD Permit review fee	\$ 1,582.00
10/29/15	PEALs Clearance for Building permit fee	\$ 15.00
5/13/15	PEALs Clearance for Building permit fee	\$ 15.00
<b>Total</b>		<b>\$ 1,612.00</b>

**Total T&M, DCA (Less GRT) \$ 28,097.00**

1/21/16

**Exhibit B (Hourly Summary)****Invoice 16F-04****Phase 2 Time and Materials Services for Duenas, Camacho & Associates  
Through April 30, 2016**

	Hours	Rate	Amount
<b>Project Manager</b>			
Kenneth Rekdahl	100	\$ 117.53	\$ 11,753.00
Frankie Susuico	25	\$ 84.84	\$ 2,121.00
Ed Salanatin	3	\$ 124.45	\$ 373.35
<b>Civil Engineer</b>			
Jeff Bell	85	\$ 66.95	\$ 5,690.75
Murel Cabral	45	\$ 82.21	\$ 3,699.45
<b>Structural Engineer</b>			
Jeff Pangelinan	3	\$ 72.61	\$ 217.83
Elijah Soto	49	\$ 63.27	\$ 3,100.23
<b>Inspection/Shop Drawing</b>			
Vincent Pereda	43.5	\$ 55.37	\$ 2,408.60
Abner Sarmiento	28.75	\$ 56.97	\$ 1,637.89
<b>Staff Engineer</b>			
Jeremy Mudd	21	\$ 54.65	\$ 1,147.65
Celvin Pagcu	21	\$ 54.65	\$ 1,147.65
J.Dean Garcia	32.5	\$ 50.33	\$ 1,635.73
<b>Secretary</b>			
Tamara Reyes	1.5	\$ 29.62	\$ 44.43
<b>Cadd/Production</b>			
Arnold Cainguitan	5	\$ 44.44	\$ 222.20
Thomas Camacho Jr.	15.5	\$ 24.45	\$ 378.98
Jaelene Crisostomo	22.5	\$ 24.45	\$ 550.13
<b>Planning/Env</b>			
Claudine Camacho	11.5	\$ 89.98	\$ 1,034.77
Jessica Gross	9.5	\$ 56.97	\$ 541.22
<b>Total</b>	<b>522.25</b>		<b>\$ 34,977.55</b>
<b>Total T&amp;M, DCA</b>			<b>\$ 34,977.55</b>

6/1/16



**Exhibit B (Hourly Summary)****Invoice 16L-07****Phase 2 Time and Materials Services for Duenas, Camacho & Associates  
Through September 30, 2016**

	Hours		Rate		Amount
<b>Project Manager</b>					
Kenneth Rekdahl	83	\$	117.53	\$	9,754.99
Frankie Susuico	55	\$	84.04	\$	4,622.20
Ed Salanatin	1	\$	124.45	\$	124.45
<b>Civil Engineer</b>					
Jeff Bell	192	\$	66.95	\$	12,854.40
Murel Cabral	0	\$	82.21	\$	-
<b>Structural Engineer</b>					
Jeff Pangelinan	58	\$	72.61	\$	4,211.38
Elijah Soto	106.5	\$	63.27	\$	6,738.26
Hernan Bonsembiante	32	\$	71.90	\$	2,300.80
<b>Inspection/Shop Drawing</b>					
Vincent Pereda	232	\$	55.37	\$	12,845.84
Abner Sarmiento	202.5	\$	56.97	\$	11,536.43
<b>Staff Engineer</b>					
Jeremy Mudd	0	\$	54.65	\$	-
Celvin Pagcu	1.5	\$	54.65	\$	81.98
J.Dean Garcia	0	\$	50.33	\$	-
<b>Secretary</b>					
Tamara Reyes	0	\$	29.62	\$	-
<b>Cadd/Production</b>					
Paul Pangelinan	6	\$	53.32	\$	319.92
Arnold Cainguitan	0	\$	44.44	\$	-
Thomas Camacho Jr.	0	\$	24.45	\$	-
Jaelene Crisostomo	65.5	\$	23.73	\$	1,554.32
<b>Planning/Env</b>					
Claudine Camacho	13	\$	89.88	\$	1,168.44
Jessica Gross	12	\$	56.97	\$	683.64
<b>Survey</b>					
Worthy Basilius	9.85	\$	24.45	\$	240.83

## Exhibit B (Hourly Summary)

Invoice 17F-01

Phase 2 Time and Materials Services for Duenas, Camacho & Associates  
Through April 15, 2017

	2016			2017			TOTAL
	Hours	Rate	Amount	Hours	Rate	Amount	
<b>Project Manager</b>							
Kenneth Rekdahl	81.00	\$ 121.28	\$ 9,823.68	103.00	\$ 135.57	\$ 13,963.71	\$ 23,787.39
Frankie Susuico	55.00	\$ 86.72	\$ 4,769.60	58.00	\$ 91.05	\$ 5,280.90	\$ 10,050.50
<b>Civil Engineer</b>							
Jeff Bell	93.00	\$ 69.08	\$ 6,424.44	127.00	\$ 76.36	\$ 9,697.72	\$ 16,122.16
<b>Structural Engineer</b>							
Jeff Pangelinan	57.00	\$ 74.93	\$ 4,271.01	102.00	\$ 81.02	\$ 8,264.04	\$ 12,535.05
Elijah Soto	158.50	\$ 65.29	\$ 10,348.47	157.50	\$ 68.56	\$ 10,798.20	\$ 21,146.67
Hernan Bonsembiante	63.50	\$ 74.20	\$ 4,711.70	109.00	\$ 75.68	\$ 8,249.12	\$ 12,960.82
<b>Inspection/Shop Drawing</b>							
Vincent Pereda	134.00	\$ 57.13	\$ 7,655.42	120.00	\$ 57.13	\$ 6,855.60	\$ 14,511.02
Abner Sarmiento	236.75	\$ 58.78	\$ 13,916.17	287.00	\$ 60.54	\$ 17,374.98	\$ 31,291.15
<b>Staff Engineer</b>							
J. Dean Garcia	52.50	\$ 51.94	\$ 2,726.85	210.00	\$ 53.51	\$ 11,237.10	\$ 13,963.95
<b>Cadd/Production</b>							
Arnold Cainguitan	4.50	\$ 45.85	\$ 206.33	7.50	\$ 48.14	\$ 361.05	\$ 567.38
Paul Pangelinan	10.00	\$ 55.02	\$ 550.20	4.00	\$ 57.78	\$ 231.12	\$ 781.32
<b>Planning/Env</b>							
Claudine Camacho	12.50	\$ 92.74	\$ 1,159.25	8.00	\$ 95.62	\$ 764.96	\$ 1,924.21
Jessica Gross	22.00	\$ 59.21	\$ 1,302.62	9.50	\$ 59.98	\$ 569.81	\$ 1,872.43
Devin Keogh	9.00	\$ 44.52	\$ 400.68			\$	\$ 400.68
<b>Survey</b>							
Jacob Cruz		\$	\$	2.50	\$ 25.97	\$ 64.93	\$ 64.93
Vander Naputi		\$	\$	2.50	\$ 33.63	\$ 84.08	\$ 84.08
<b>Total</b>	<b>989.25</b>		<b>\$ 68,266.41</b>	<b>1307.50</b>		<b>\$ 93,797.31</b>	<b>\$ 162,063.72</b>
<b>Total T&amp;M, DCA</b>							<b>\$ 162,063.72</b>

## Exhibit B (Hourly Summary)

## Invoice 17I-12

Phase 2 Time and Materials Services for Duenas, Camacho & Associates  
Through June 03, 2017

		2017		
		Hours	Rate	Amount
<b>Project Manager</b>				
Ken Rekdahl	43.00	\$	135.57	\$ 5,829.48
Frankie Susuico	32.00	\$	91.05	\$ 2,913.67
<b>Civil Engineer</b>				
Jeff Bell	21.00	\$	76.36	\$ 1,603.59
Jeff Bell	55.00	\$	78.50	\$ 4,317.41
<b>Structural Engineer</b>				
Jeff Pangelinan	95.00	\$	81.02	\$ 7,697.00
Elijah Soto	80.00	\$	68.56	\$ 5,484.50
Hernan Bonsembiante	34.00	\$	75.68	\$ 2,573.09
<b>Inspection/Shop Drawing</b>				
Vincent Pereda	50.00	\$	57.13	\$ 2,856.51
Abner Sarmiento	122.50	\$	60.54	\$ 7,416.54
<b>Staff Engineer</b>				
J. Dean Garcia	100.50	\$	53.51	\$ 5,377.70
<b>Cadd/Production</b>				
Arnold Cainguitan	1.00	\$	48.14	\$ 48.14
Paul Pangelinan	1.50	\$	57.78	\$ 86.67
<b>Planning/Env</b>				
Jessica Gross	3.00	\$	59.98	\$ 179.94
<b>Total</b>	<b>638.50</b>		<b>\$</b>	<b>46,384.24</b>

**Additional Services**

GS&amp;P Invoice 0699843

Dated November 8, 2016

	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>	<b>Amount Remaining</b>
Scoped Services	\$23,528.54	\$149,764.39	\$173,292.93	-
Additional Services	\$45,439.95	\$15,220.21	\$60,660.16	-
	<b>\$68,968.49</b>	<b>\$164,984.60</b>	<b>\$233,953.09</b>	<b>\$376,957.77</b>

The following additional services are being tracked and are listed for reference.

**Time Associated with Mechanical Submittals**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
9/28/2016	Clae Fuller	0.25	\$80.00	\$20.00	-	-
9/28/2016	Ben Luke	2.00	\$125.00	\$250.00	-	-
10/24/2016	Ben Luke	0.75	\$125.00	\$93.75	-	-
10/14/2016	Seth Dobyns	1.00	\$125.00	\$125.00	-	-
				<b>\$488.75</b>	<b>\$540.00</b>	<b>\$1,028.75</b>

**Time Associated with Contractor Related Changes**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
10/13/2016	Ron Abraham <sup>1</sup>	4.00	\$225.00	\$900.00	-	
10/17/2016	Ron Abraham <sup>1</sup>	4.00	\$225.00	\$900.00	-	
10/13/2016	Ben Luke <sup>1</sup>	3.00	\$125.00	\$375.00	-	
10/14/2016	Ben Luke <sup>1</sup>	2.50	\$125.00	\$312.50	-	
10/13/2016	Andrew Bratcher <sup>1</sup>	4.00	\$135.00	\$540.00	-	
				<b>\$3,027.50</b>	<b>\$2,297.50</b>	<b>\$5,325.00</b>

<sup>1</sup> Clarifier and UV

**Time Associated with Site Visits**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
				<b>\$0.00</b>	<b>\$1,800.00</b>	<b>\$1,800.00</b>

**Time Associated with Conference Calls**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
10/11/2016	Ron Abraham	2.00	\$225.00	\$450.00		
10/18/2016	Ron Abraham	2.00	\$225.00	\$450.00		
				<b>\$900.00</b>	<b>-</b>	<b>\$900.00</b>

## ATTACHMENT 3 A

**Additional Services**

GS&amp;P Invoice 0699843

Dated November 8, 2016

**Time Associated with Developing Training Materials**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
9/29/2016	Ron Abraham	4.00	\$225.00	\$900.00	-	
9/27/2016	Kristi Schnell	1.00	\$165.00	\$165.00	-	
9/28/2016	Kristi Schnell	2.00	\$165.00	\$330.00	-	
9/27/2016	Seth Dobyns	5.00	\$125.00	\$625.00	-	
9/28/2016	Seth Dobyns	3.00	\$125.00	\$375.00	-	
9/29/2016	Seth Dobyns	8.00	\$125.00	\$1,000.00	-	
9/28/2016	Ben Luke	2.00	\$125.00	\$250.00	-	
9/29/2016	Ben Luke	4.00	\$125.00	\$500.00	-	
9/27/2016	Jacob Lampley	1.00	\$100.00	\$100.00	-	
9/28/2016	Jacob Lampley	1.00	\$100.00	\$100.00	-	
				<b>\$4,345.00</b>	<b>\$10,298.75</b>	<b>\$14,643.75</b>

Expense	Current Amount	Prior Amount	To-Date Amount
Training Materials	\$107.00	-	\$107.00
Printing	\$1,369.92	-	\$1,369.92
	<b>\$1,476.92</b>	<b>-</b>	<b>\$1,476.92</b>

**Operator Training**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
10/15/2016	Ken Baker	40.00	\$250.00	\$10,000.00	-	
9/30/2016	Kristi Schnell	6.00	\$165.00	\$990.00	-	
10/3/2016	Kristi Schnell	8.00	\$165.00	\$1,320.00	-	
10/4/2016	Kristi Schnell	3.00	\$165.00	\$495.00	-	
10/5/2016	Kristi Schnell	7.00	\$165.00	\$1,155.00	-	
9/30/2016	Dave Johnson	3.00	\$225.00	\$675.00	-	
10/4/2016	Dave Johnson	2.00	\$225.00	\$450.00	-	
10/5/2016	Dave Johnson	4.00	\$225.00	\$900.00	-	
9/29/2016	Ron Abraham	4.00	\$225.00	\$900.00	-	
9/30/2016	Ron Abraham	8.00	\$225.00	\$1,800.00	-	
10/3/2016	Ron Abraham	6.00	\$225.00	\$1,350.00	-	
10/4/2016	Ron Abraham	8.00	\$225.00	\$1,800.00	-	
10/5/2016	Ron Abraham	8.00	\$225.00	\$1,800.00	-	
9/30/2016	Seth Dobyns	8.00	\$125.00	\$1,000.00	-	
10/3/2016	Seth Dobyns	8.00	\$125.00	\$1,000.00	-	
10/4/2016	Seth Dobyns	8.00	\$125.00	\$1,000.00	-	
10/5/2016	Seth Dobyns	8.00	\$125.00	\$1,000.00	-	
9/30/2016	Ben Luke	8.00	\$125.00	\$1,000.00	-	
10/3/2016	Ben Luke	7.00	\$125.00	\$875.00	-	

**Additional Services**

GS&amp;P Invoice 0699843

Dated November 8, 2016

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
10/4/2016	Ben Luke	7.00	\$125.00	\$875.00	-	
10/5/2016	Ben Luke	5.00	\$125.00	\$625.00	-	
9/29/2016	Phillip Galbreath	0.25	\$85.00	\$21.25	-	
9/30/2016	Phillip Galbreath	0.50	\$85.00	\$42.50	-	
10/3/2016	Phillip Galbreath	0.25	\$85.00	\$21.25	-	
10/4/2016	Phillip Galbreath	0.25	\$85.00	\$21.25	-	
				<b>\$31,116.25</b>	<b>-</b>	<b>\$31,116.25</b>

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare for Dave Fletcher and Ben Barcinas	-	\$283.96	\$283.96
Hotel for Dave Fletcher and Ben Barcinas	\$2,975.91	-	\$2,975.91
Meals	\$23.01	-	\$23.01
Parking / Taxi	\$57.05	-	\$57.05
Rental Car / Fuel	\$828.14	-	\$828.14
Mileage	\$201.42	-	\$201.42
	<b>\$4,085.53</b>	<b>\$283.96</b>	<b>\$4,369.49</b>

**TOTAL    \$45,439.95    \$15,220.21    \$60,660.16**

**Additional Services**

GS&amp;P Invoice 0700739

Dated December 8, 2016

	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>	<b>Amount Remaining</b>
Scoped Services	\$15,726.81	\$173,292.93	\$189,019.74	-
Additional Services	\$3,317.36	\$60,660.16	\$63,977.52	-
	<b>\$19,044.17</b>	<b>\$233,953.09</b>	<b>\$252,997.26</b>	<b>\$357,913.60</b>

The following additional services are being tracked and are listed for reference.

**Time Associated with Mechanical Submittals**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
11/4/2016	Kristi Schnell	1.00	\$165.00	\$165.00		
11/1/2016	Ben Luke	0.50	\$125.00	\$62.50	-	-
11/4/2016	Ben Luke	0.50	\$125.00	\$62.50	-	-
11/8/2016	William Bennecker	1.00	\$125.00	\$125.00	-	-
11/4/2016	Clae Fuller	1.50	\$80.00	\$120.00	-	-
11/7/2016	Clae Fuller	0.50	\$80.00	\$40.00		
11/8/2016	Clae Fuller	0.75	\$80.00	\$60.00		
11/9/2016	Clae Fuller	1.00	\$80.00	\$80.00		
11/11/2016	Clae Fuller	0.25	\$80.00	\$20.00		
11/12/2016	Clae Fuller	-1.50	\$80.00	-\$120.00		
11/15/2016	Clae Fuller	1.00	\$80.00	\$80.00		
				<b>\$695.00</b>	<b>\$1,028.75</b>	<b>\$1,723.75</b>

**Time Associated with Contractor Related Changes**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
11/4/2016	Ron Abraham <sup>1</sup>	3.00	\$225.00	\$675.00	-	
11/22/2016	Ron Abraham <sup>2</sup>	3.00	\$225.00	\$675.00	-	
				<b>\$1,350.00</b>	<b>\$5,325.00</b>	<b>\$6,675.00</b>

<sup>1</sup> Oxidation Ditch<sup>2</sup> UV Structure**Time Associated with Site Visits**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
				-	-	-
				<b>\$0.00</b>	<b>\$1,800.00</b>	<b>\$1,800.00</b>

**Additional Services**

GS&amp;P Invoice 0702251

Dated January 8, 2017

	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>	<b>Amount Remaining</b>
Scoped Services	\$11,018.91	\$189,019.74	\$200,038.65	-
Additional Services	\$1,745.00	\$63,977.52	\$65,722.52	-
	<b>\$12,763.91</b>	<b>\$252,997.26</b>	<b>\$265,761.17</b>	<b>\$345,149.69</b>

The following additional services are being tracked and are listed for reference.

**Time Associated with Mechanical Submittals**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
12/8/2016	William Bennecker	2.50	\$125.00	\$312.50	-	-
12/13/2016	William Bennecker	0.50	\$125.00	\$62.50	-	-
11/28/2016	Clae Fuller	0.25	\$80.00	\$20.00		
12/6/2016	Clae Fuller	0.25	\$80.00	\$20.00		
12/8/2016	Clae Fuller	0.25	\$80.00	\$20.00		
12/15/2016	Clae Fuller	0.75	\$80.00	\$60.00		
				<b>\$495.00</b>	<b>\$1,723.75</b>	<b>\$2,218.75</b>

**Time Associated with Contractor Related Changes**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
					-	
					<b>\$6,675.00</b>	<b>\$6,675.00</b>

**Time Associated with Site Visits**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
				-	-	-
				<b>\$0.00</b>	<b>\$1,800.00</b>	<b>\$1,800.00</b>

**Time Associated with Conference Calls**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
12/15/2016	Ken Baker	2.00	\$250.00	\$500.00		
12/19/2016	Ken Baker	1.00	\$250.00	\$250.00		
12/22/2016	Ken Baker	1.00	\$250.00	\$250.00	-	-
				<b>\$1,000.00</b>	<b>\$900.00</b>	<b>\$1,900.00</b>



**Additional Services**

GS&amp;P Invoice 0702607

Dated February 8, 2017

	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>	<b>Amount Remaining</b>
Scoped Services	\$9,335.38	\$200,038.65	\$209,374.03	-
Additional Services	\$3,512.50	\$65,722.52	\$69,235.02	-
	<b>\$12,847.88</b>	<b>\$265,761.17</b>	<b>\$278,609.05</b>	<b>\$332,301.81</b>

The following additional services are being tracked and are listed for reference.

**Time Associated with Mechanical Submittals**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
1/10/2017	Seth Dobyns	8.00	\$125.00	\$1,000.00		
1/24/2017	Seth Dobyns	8.00	\$125.00	\$1,000.00		
1/25/2017	Seth Dobyns	4.00	\$125.00	\$500.00		
1/14/2017	Clae Fuller	0.50	\$80.00	\$40.00		
1/23/2017	Clae Fuller	0.25	\$80.00	\$20.00		
				<b>\$2,560.00</b>	<b>\$2,218.75</b>	<b>\$4,778.75</b>

**Time Associated with Contractor Related Changes**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
1/11/2017	Ben Luke <sup>1</sup>	2.00	\$125.00	\$250.00	-	
				<b>\$250.00</b>	<b>\$6,675.00</b>	<b>\$6,925.00</b>

<sup>1</sup>Specification revisions for crack repairs

**Time Associated with Site Visits**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
				-	-	-
				<b>-</b>	<b>\$1,800.00</b>	<b>\$1,800.00</b>

**Time Associated with Conference Calls**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
1/9/2017	Ken Baker	2.00	\$250.00	\$500.00		
1/9/2017	Kristi Schnell	1.00	\$165.00	\$165.00		
1/11/2017	David Johnson	1.00	\$225.00	\$225.00		
1/9/2017	Ben Luke	2.00	\$125.00	\$250.00	-	-
1/9/2017	Seth Dobyns	2.00	\$125.00	\$250.00		
				<b>\$640.00</b>	<b>\$1,900.00</b>	<b>\$2,540.00</b>

## ATTACHMENT 3B

**Additional Services**

GS&amp;P Invoice 0702607

Dated February 8, 2017

**Developing Training Materials**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				-	\$14,463.75	\$14,463.75

Expense	Current Amount	Prior Amount	To-Date Amount
Training Materials	-	\$107.00	\$107.00
Printing	-	\$1,369.92	\$1,369.92
	-	\$1,476.92	\$1,476.92

**Operator Training**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
1/13/2017	Ben Luke	0.50	\$125.00	\$62.50	-	-
				\$62.50	\$31,116.25	\$31,178.75

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare for Dave Fletcher and Ben Barcinas	-	\$283.96	\$283.96
Hotel for Dave Fletcher and Ben Barcinas	-	\$2,975.91	\$2,975.91
Meals	-	\$23.01	\$23.01
Parking / Taxi	-	\$57.05	\$57.05
Rental Car / Fuel	-	\$828.14	\$828.14
Mileage	-	\$273.78	\$273.78
	-	\$4,441.85	\$4,441.85

**Time associated with Witness Testing**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	
				-	\$1,450.00	\$1,450.00

**TOTAL    \$3,512.50    \$65,722.52    \$69,235.02**

**Additional Services**

GS&amp;P Invoice 0702251

Dated January 8, 2017

**Developing Training Materials**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				\$0.00	\$14,463.75	\$14,463.75

Expense	Current Amount	Prior Amount	To-Date Amount
Training Materials	-	\$107.00	\$107.00
Printing	-	\$1,369.92	\$1,369.92
	\$0.00	\$1,476.92	\$1,476.92

**Operator Training**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				\$0.00	\$31,116.25	\$31,116.25

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare for Dave Fletcher and Ben Barcinas	-	\$283.96	\$283.96
Hotel for Dave Fletcher and Ben Barcinas	-	\$2,975.91	\$2,975.91
Meals	-	\$23.01	\$23.01
Parking / Taxi	-	\$57.05	\$57.05
Rental Car / Fuel	-	\$828.14	\$828.14
Mileage	-	\$273.78	\$273.78
	\$0.00	\$4,441.85	\$4,441.85

**Time associated with Witness Testing**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
11/28/2016	Ken Baker	1.00	\$250.00	\$250.00	-	
				\$250.00	\$1,200.00	\$1,450.00

**TOTAL    \$1,745.00    \$63,977.52    \$65,722.52**

**Additional Services**

GS&amp;P Invoice 0700739

Dated December 8, 2016

**Time Associated with Conference Calls**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				\$0.00	\$900.00	\$900.00

**Developing Training Materials**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				\$0.00	\$14,463.75	\$14,463.75

Expense	Current Amount	Prior Amount	To-Date Amount
Training Materials	-	\$107.00	\$107.00
Printing	-	\$1,369.92	\$1,369.92
	\$0.00	\$1,476.92	\$1,476.92

**Operator Training**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				\$0.00	\$31,116.25	\$31,116.25

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare for Dave Fletcher and Ben Barcinas	-	\$283.96	\$
Hotel for Dave Fletcher and Ben Barcinas	\$	\$2,975.91	\$
Meals	\$	\$23.01	\$
Parking / Taxi	\$	\$57.05	\$
Rental Car / Fuel	\$	\$828.14	\$
Mileage	\$72.36	\$201.42	\$273.78
	\$72.36	\$4,369.49	\$

**Time associated with Witness Testing**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
11/1/2016	Ken Baker	1.00	\$250.00	\$250.00	-	
11/3/2016	Ken Baker	2.00	\$250.00	\$500.00	-	
11/1/2016	Ron Abraham	2.00	\$225.00	\$450.00	-	
				\$1,200.00	-	

**TOTAL    \$3,317.36    \$60,660.16    \$63,977.52**

**Additional Services**

GS&amp;P Invoice 0703530

Dated March 8, 2017

	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>	<b>Amount Remaining</b>
Scoped Services	\$9,321.71	\$209,374.03	\$218,695.74	-
Additional Services	\$12,525.75	\$69,235.02	\$81,760.77	-
	<b>\$21,847.46</b>	<b>\$278,609.05</b>	<b>\$300,456.51</b>	<b>\$310,454.35</b>

The following additional services are being tracked and are listed for reference.

**Time Associated with Mechanical Submittals**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
1/26/2017	Seth Dobyns	2.00	\$125.00	\$250.00	-	-
1/27/2017	Seth Dobyns	1.00	\$125.00	\$125.00	-	-
1/30/2017	Ben Luke	1.00	\$125.00	\$125.00	-	-
1/31/2017	Ben Luke	0.50	\$125.00	\$62.50	-	-
1/31/2017	Clae Fuller	0.50	\$80.00	\$40.00	-	-
				<b>\$602.50</b>	<b>\$4,778.75</b>	<b>\$5,381.25</b>

**Time Associated with Contractor Related Changes**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
02/01/2017	Mike Robertson	4.00	\$135.00	\$540.00	-	-
02/02/2017	Mike Robertson	2.00	\$135.00	\$270.00	-	-
02/03/2017	Mike Robertson	8.00	\$135.00	\$1,080.00	-	-
02/06/2017	Mike Robertson	8.00	\$135.00	\$1,080.00	-	-
02/07/2017	Mike Robertson	4.00	\$135.00	\$540.00	-	-
02/08/2017	Dave Johnson	1.00	\$225.00	\$225.00	-	-
02/09/2017	Dave Johnson	4.00	\$225.00	\$900.00	-	-
02/01/2017	Ron Abraham	4.00	\$225.00	\$900.00	-	-
02/08/2017	Ron Abraham	4.00	\$225.00	\$900.00	-	-
02/08/2017	Ben Luke	5.00	\$125.00	\$625.00	-	-
				<b>\$7,060.00</b>	<b>\$6,925.00</b>	<b>\$13,985.00</b>

<sup>1</sup>GWA requested changes for the digesters and sludge piping

**Time Associated with Site Visits**

<b>Date</b>	<b>Professional Personnel</b>	<b>Hours</b>	<b>Rate</b>	<b>Current Amount</b>	<b>Prior Amount</b>	<b>To-Date Amount</b>
				-	-	-
				-	<b>\$1,800.00</b>	<b>\$1,800.00</b>



G R E S H A M  
S M I T H   A N D  
P A R T N E R S

Duenas, Camacho & Associates  
Attn: Kenneth M. Rekdahl, Chief of Spec. Projects  
238 East Marine Corps Drive  
P.O. 8900  
Hagatna 96910

April 08, 2017  
Project No: 41192.00  
Invoice No: 0705286

**Project 41192.00 Agat - Santa Rita WWTP (Phase 2), GWA Project WW-08**

**Professional Services for the period ending March 27, 2017**

**Professional Personnel**

	Hours	Rate	Amount	
Principal				
Baker, Kenneth	67.00	250.00	16,750.00	
Sr. Technical Specialist				
Abraham, Ronald	112.00	225.00	25,200.00	
Johnson, David	16.50	225.00	3,712.50	
Sr. Project Manager				
Stewart, Kenneth	6.50	200.00	1,300.00	
Project Manager				
Schnell, Kristi	8.00	165.00	1,320.00	
Engineer II				
Dobyns, Thomas	22.00	125.00	2,750.00	
Luke, Benjamin	118.00	125.00	14,750.00	
Project Accountant				
Duffy, Melissa	3.00	120.00	360.00	
Administration				
Fuller, Claude	16.50	80.00	1,320.00	
Totals	369.50		67,462.50	
<b>Total Labor</b>				<b>67,462.50</b>

**Reimbursable Expenses**

Printing	71.16	
Travel	1,178.15	
Color Copy/Printing	18.50	
<b>Total Reimbursables</b>	<b>1,267.81</b>	<b>1,267.81</b>

**Billing Limits**

	Current	Prior	To-Date
Total Billings	68,730.31	300,456.51	369,186.82
Limit			610,910.86
Remaining			241,724.04
<b>Total this Invoice</b>			<b>\$68,730.31</b>

If you have any questions concerning this invoice,  
please contact Ken Stewart, Project Manager at 615.770.8422.

**Design and Consulting Solutions for the Built Environment**  
**Please remit payment along with attached invoice copy to:**  
Gresham, Smith and Partners / P.O. Box 440029 / Nashville, TN 37244-0029



G R E S H A M  
S M I T H   A N D  
P A R T N E R S

Duenas, Camacho & Associates  
Attn: Kenneth M. Rekdahl, Chief of Spec. Projects  
238 East Marine Corps Drive  
P.O. 8900  
Hagatna 96910

May 8, 2017  
Project No: 41192.00  
Invoice No: 0705875

**Project 41192.00 Agat - Santa Rita WWTP (Phase 2), GWA Project WW-08**

**Professional Services for the period ending April 25, 2017**

**Professional Personnel**

	Hours	Rate	Amount	
Principal				
Baker, Kenneth	36.00	250.00	9,000.00	
Sr. Technical Specialist				
Abraham, Ronald	52.00	225.00	11,700.00	
Johnson, David	8.00	225.00	1,800.00	
Sr. Project Manager				
Stewart, Kenneth	20.00	200.00	4,000.00	
Engineer II				
Dobyns, Thomas	16.00	125.00	2,000.00	
Luke, Benjamin	87.75	125.00	10,968.75	
Project Accountant				
Duffy, Melissa	3.00	120.00	360.00	
Administration				
Haider, Rebecca	6.25	85.00	531.25	
Administration				
Fuller, Claude	15.00	80.00	1,200.00	
Totals	244.00		41,560.00	
<b>Total Labor</b>				<b>41,560.00</b>

**Reimbursable Expenses**

Printing	16.52	
Office Supplies	33.08	
Travel	4,549.97	
Lodging	9,310.55	
Car Rental	600.00	
Mileage/Fuel	45.00	
Telephone	21.99	
Meals	1,097.36	
Color Copy/Printing	36.50	
<b>Total Reimbursables</b>	<b>15,710.97</b>	<b>15,710.97</b>

Billing Limits	Current	Prior	To-Date
Total Billings	57,270.97	369,186.82	426,457.79
Limit			610,910.86
Remaining			184,453.07


**Design Services for the Built Environment**

***Please remit payment along with attached invoice copy to:***

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0705875
Total this Invoice			\$57,270.97	

If you have any questions concerning this invoice,  
please contact Ken Stewart, Project Manager at 615.770.8422.



**Design Services for the Built Environment**

***Please remit payment along with attached invoice copy to:***

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029



Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0705875
<b>Billing Backup</b>			Thursday, May 4, 2017	
Gresham, Smith and Partners		Invoice 0705875 Dated 5/8/2017		9:00:33 AM

**Professional Personnel**

			Hours	Rate	Amount
Principal					
02550	167 - Baker, Kenneth	3/28/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	3/29/2017	3.00	250.00	750.00
02550	167 - Baker, Kenneth	3/30/2017	6.00	250.00	1,500.00
02550	167 - Baker, Kenneth	3/31/2017	3.00	250.00	750.00
02550	167 - Baker, Kenneth	4/17/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	4/18/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	4/19/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	4/20/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	4/21/2017	4.00	250.00	1,000.00
Sr. Technical Specialist					
04428	140 - Abraham, Ronald	3/28/2017	8.00	225.00	1,800.00
	Phase 1 Start up not in original scope				
04428	140 - Abraham, Ronald	3/29/2017	8.00	225.00	1,800.00
	Phase 1 Operator Training not in original scope				
04428	140 - Abraham, Ronald	3/31/2017	4.00	225.00	900.00
	Phase 1 Start up not in original scope				
04428	140 - Abraham, Ronald	4/3/2017	2.00	225.00	450.00
	Ken Stewart meeting				
04428	140 - Abraham, Ronald	4/12/2017	8.00	225.00	1,800.00
	Change orders requested by GWA				
04428	140 - Abraham, Ronald	4/14/2017	3.00	225.00	675.00
	Phase 1 Startup				
04428	140 - Abraham, Ronald	4/14/2017	3.00	225.00	675.00
	Phase 1 Startup				
04428	140 - Abraham, Ronald	4/20/2017	8.00	225.00	1,800.00
	Phase 1 Startup				
04428	140 - Abraham, Ronald	4/21/2017	8.00	225.00	1,800.00
	Phase 1 Training				
04331	139 - Johnson, David	4/3/2017	1.00	225.00	225.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	4/7/2017	1.00	225.00	225.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	4/21/2017	1.00	225.00	225.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	4/21/2017	2.00	225.00	450.00
	Plant Tk Drain Control Rev				
04331	139 - Johnson, David	4/24/2017	2.00	225.00	450.00
	Plant Tk Drain Control Rev				
04331	139 - Johnson, David	4/25/2017	1.00	225.00	225.00
	Processing/Checking Shop Drawings				
Sr. Project Manager					
02865	139 - Stewart, Kenneth	3/29/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	3/30/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	3/31/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	4/11/2017	1.00	200.00	200.00
	Project Update				
02865	139 - Stewart, Kenneth	4/13/2017	2.00	200.00	400.00
	Invoice Revision				

**Design Services for the Built Environment*****Please remit payment along with attached invoice copy to:***

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705875
02865	139 - Stewart, Kenneth	4/17/2017	2.00	200.00	400.00	
	Invoice Issues					
02865	139 - Stewart, Kenneth	4/19/2017	2.00	200.00	400.00	
	Invoice Issues					
02865	139 - Stewart, Kenneth	4/20/2017	1.00	200.00	200.00	
	Invoice Revision					
02865	139 - Stewart, Kenneth	4/21/2017	4.00	200.00	800.00	
	Invoice Issues					
02865	139 - Stewart, Kenneth	4/24/2017	3.50	200.00	700.00	
	Review Oxygen Transfer and set-up witness test trip; invoice issue					
02865	139 - Stewart, Kenneth	4/25/2017	2.00	200.00	400.00	
	Invoice Revision					
Engineer II						
04423	136 - Dobyns, Thomas	4/5/2017	5.00	125.00	625.00	
	submittal					
04423	136 - Dobyns, Thomas	4/6/2017	8.00	125.00	1,000.00	
	submittal					
04423	136 - Dobyns, Thomas	4/7/2017	3.00	125.00	375.00	
	submittal					
04515	136 - Luke, Benjamin	3/28/2017	2.00	125.00	250.00	
	RFIs					
04515	136 - Luke, Benjamin	3/28/2017	6.00	125.00	750.00	
	Operator Training					
04515	136 - Luke, Benjamin	3/29/2017	8.00	125.00	1,000.00	
	Operator Training					
04515	136 - Luke, Benjamin	3/30/2017	7.50	125.00	937.50	
	Operator Training					
04515	136 - Luke, Benjamin	3/31/2017	6.00	125.00	750.00	
	Startup and Commissioning					
04515	136 - Luke, Benjamin	3/31/2017	2.00	125.00	250.00	
	Submittal					
04515	136 - Luke, Benjamin	4/3/2017	2.00	125.00	250.00	
	Startup and Commissioning					
04515	136 - Luke, Benjamin	4/3/2017	4.00	125.00	500.00	
	Submittals					
04515	136 - Luke, Benjamin	4/3/2017	2.00	125.00	250.00	
	Operator Training Manuals					
04515	136 - Luke, Benjamin	4/4/2017	8.00	125.00	1,000.00	
	Submittals					
04515	136 - Luke, Benjamin	4/5/2017	4.00	125.00	500.00	
	Submittals					
04515	136 - Luke, Benjamin	4/5/2017	2.00	125.00	250.00	
	Centrifuge Changes					
04515	136 - Luke, Benjamin	4/6/2017	4.00	125.00	500.00	
	UV, Pump Changes					
04515	136 - Luke, Benjamin	4/6/2017	2.00	125.00	250.00	
	Submittals					
04515	136 - Luke, Benjamin	4/7/2017	2.00	125.00	250.00	
	RFI					
04515	136 - Luke, Benjamin	4/7/2017	1.50	125.00	187.50	
	UV, Pump Changes					
04515	136 - Luke, Benjamin	4/10/2017	3.50	125.00	437.50	
	RFIs					
04515	136 - Luke, Benjamin	4/11/2017	.50	125.00	62.50	
	RFI					
04515	136 - Luke, Benjamin	4/11/2017	1.50	125.00	187.50	
	Submittal					

**Design Services for the Built Environment**

***Please remit payment along with attached invoice copy to:***

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705875
04515	136 - Luke, Benjamin	4/11/2017	1.00	125.00	125.00	
	Guam Meeting					
04515	136 - Luke, Benjamin	4/12/2017	1.50	125.00	187.50	
	Submittal					
04515	136 - Luke, Benjamin	4/13/2017	2.00	125.00	250.00	
	Submittal					
04515	136 - Luke, Benjamin	4/13/2017	.50	125.00	62.50	
	Witness Testing Coordination					
04515	136 - Luke, Benjamin	4/17/2017	.50	125.00	62.50	
	Submittal					
04515	136 - Luke, Benjamin	4/18/2017	.25	125.00	31.25	
	Witness Testing Coordination					
04515	136 - Luke, Benjamin	4/19/2017	1.00	125.00	125.00	
	Mechanical Submittal					
04515	136 - Luke, Benjamin	4/19/2017	.50	125.00	62.50	
	Submittal					
04515	136 - Luke, Benjamin	4/20/2017	1.50	125.00	187.50	
	Submittal					
04515	136 - Luke, Benjamin	4/21/2017	4.00	125.00	500.00	
	Submittal					
04515	136 - Luke, Benjamin	4/24/2017	2.50	125.00	312.50	
	Submittals					
04515	136 - Luke, Benjamin	4/24/2017	.50	125.00	62.50	
	Witness Testing Coordination					
04515	136 - Luke, Benjamin	4/25/2017	2.50	125.00	312.50	
	Submittals					
04515	136 - Luke, Benjamin	4/25/2017	1.00	125.00	125.00	
	RFI					
	Project Accountant					
04622	103 - Duffy, Melissa	3/29/2017	1.00	120.00	120.00	
	Billing					
04622	103 - Duffy, Melissa	4/11/2017	1.00	120.00	120.00	
	Review Meeting					
04622	103 - Duffy, Melissa	4/24/2017	1.00	120.00	120.00	
	Invoice JTD Labor Review					
	Administration					
02779	148 - Haider, Rebecca	3/28/2017	.25	85.00	21.25	
	federal expressing marketing materials to Guam					
02779	148 - Haider, Rebecca	4/5/2017	4.00	85.00	340.00	
	Expense reports, filing					
02779	148 - Haider, Rebecca	4/13/2017	2.00	85.00	170.00	
	scanning, electronic filing and mailing of monthly invoices					
	Administration					
04885	146 - Fuller, Claude	3/28/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/28/2017	.75	80.00	60.00	
	Submittal Processing/Construction Photo Archiving					
04885	146 - Fuller, Claude	3/30/2017	.75	80.00	60.00	
	Submittal Processing/Construction Photo Archiving					
04885	146 - Fuller, Claude	3/30/2017	.50	80.00	40.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/31/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	4/1/2017	1.50	80.00	120.00	
	Submittal Processing/Construction Photo Archiving					
04885	146 - Fuller, Claude	4/3/2017	1.50	80.00	120.00	
	Submittal Processing					

**Design Services for the Built Environment**

***Please remit payment along with attached invoice copy to:***

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705875
04885	146 - Fuller, Claude	4/4/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	4/5/2017	.75	80.00	60.00	
	Construction Photo Archiving					
04885	146 - Fuller, Claude	4/6/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	4/7/2017	1.25	80.00	100.00	
	Submittal Processing/Construction Photo Archiving					
04885	146 - Fuller, Claude	4/10/2017	.50	80.00	40.00	
	RFI Processing					
04885	146 - Fuller, Claude	4/11/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	4/12/2017	1.50	80.00	120.00	
	Submittal Processing and Construction Photo Archiving					
04885	146 - Fuller, Claude	4/13/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	4/17/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	4/18/2017	1.00	80.00	80.00	
	Submittal Processing and Construction Photo Archiving					
04885	146 - Fuller, Claude	4/19/2017	1.00	80.00	80.00	
	Submittal Processing					
04885	146 - Fuller, Claude	4/20/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	4/25/2017	.75	80.00	60.00	
	Submittal Processing					
04885	146 - Fuller, Claude	4/25/2017	.25	80.00	20.00	
	RFI Processing					
	Totals		244.00		41,560.00	
	<b>Total Labor</b>					<b>41,560.00</b>

**Reimbursable Expenses**

Printing

JE 0004230	4/9/2017	Equitrac / Prints - 3/10/2017 - 04/09/2017	7.88
JE 0004230	4/9/2017	Equitrac / Prints - 3/10/2017 - 04/09/2017	8.64

Office Supplies

EX 0121808	3/16/2017	Luke, Benjamin / Groceries and Detergent / Groceries, Laundry Detergent, Etc. Itemized Not Available	30.13
EX 0121799	3/25/2017	Abraham, Ronald / In Guam for 18 days - purchased laundry detergent	2.95

Travel

EX 0121808	3/13/2017	Luke, Benjamin / Lyft to BNA	14.37
EX 0121808	3/14/2017	Luke, Benjamin / Taxi from Guam Airport to Hotel / Transportation. Paid Cash. No Receipt Available. \$25 Fare + \$5 Tip	30.00
EX 0121799	3/30/2017	Abraham, Ronald	15.00
EX 0121799	3/30/2017	Abraham, Ronald / In Guam for 18 days - spent \$24.00 to do laundry. Considerable savings - I've attached a copy of what the hotel charges to do laundry. Paid cash - no receipt provided.	24.00
EX 0120323	3/31/2017	Baker, Kenneth / Travel to Guam - project progress meetings & meeting w/the owners	1,178.15
EX 0121792	4/3/2017	Baker, Kenneth / Guam Airfare for Ken Baker and Ron Abraham - WWTP start-up / training	3,288.45

**Design Services for the Built Environment**

***Please remit payment along with attached invoice copy to:***

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0705875
<b>Lodging</b>				
EX 0121802	3/15/2017	Abraham, Ronald / operator training	976.80	
EX 0121808	3/17/2017	Luke, Benjamin / Sheraton Stay #1	976.80	
EX 0121808	3/19/2017	Luke, Benjamin / Hyatt Stay #1	521.70	
EX 0121802	3/20/2017	Abraham, Ronald / Agat-Santa Rita - Phase I	1,221.00	
EX 0121808	3/23/2017	Luke, Benjamin / Sheraton Stay #2	1,285.25	
EX 0121802	3/26/2017	Abraham, Ronald / Guam Travel - PHI operator training	1,198.80	
EX 0121802	3/29/2017	Abraham, Ronald / Guam Travel - PHI operator training	1,198.80	
EX 0121808	3/30/2017	Luke, Benjamin / Hyatt Stay #2	1,931.40	
<b>Car Rental</b>				
EX 0121802	4/1/2017	Abraham, Ronald / Phase I start up	300.00	
EX 0121802	4/1/2017	Abraham, Ronald / Phase I start up	300.00	
<b>Mileage/Fuel</b>				
EX 0121800	3/22/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	45.00	
<b>Telephone</b>				
EX 0121808	3/13/2017	Luke, Benjamin / Plane WiFi for Working / Purchased WiFi on Denver-Narita Flight for Working	21.99	
<b>Meals</b>				
EX 0121800	3/10/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	32.50	
EX 0121802	3/13/2017	Abraham, Ronald / Phase 1 Operator and Training	5.95	
EX 0121808	3/13/2017	Luke, Benjamin / 3/13 Dinner	23.00	
EX 0121808	3/13/2017	Luke, Benjamin / 3/13 Breakfast	5.45	
EX 0121800	3/14/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	13.50	
EX 0121800	3/15/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training (No itemized receipt was provided - no alcohol beverages were purchased.)	45.13	
EX 0121799	3/15/2017	Abraham, Ronald / Project start up meeting	11.25	
EX 0121808	3/15/2017	Luke, Benjamin / 3/15 Breakfast	8.00	
EX 0121808	3/16/2017	Luke, Benjamin / 3/16 Dinner / Itemized Not Available	42.00	
EX 0121808	3/16/2017	Luke, Benjamin / 3/16 Breakfast	11.00	
EX 0121800	3/16/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training (No itemized receipt was provided - no alcohol beverages were purchased.)	13.00	
EX 0121800	3/16/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	15.49	
EX 0121808	3/16/2017	Luke, Benjamin / 3/16 Lunch	14.50	
EX 0121802	3/16/2017	Abraham, Ronald / Start up - Agat WWTP	83.30	
EX 0121808	3/19/2017	Luke, Benjamin / 3/19 Dinner	10.74	
EX 0121808	3/20/2017	Luke, Benjamin / 3/20 Lunch	4.36	
EX 0121808	3/21/2017	Luke, Benjamin / 3/21 Lunch	13.05	
EX 0121801	3/22/2017	Abraham, Ronald / Guam Travel - Guam - Agat-Santa Rita WWTP (Phase 2)	3.58	
EX 0121801	3/22/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP (Phase 2)	27.48	
EX 0121808	3/22/2017	Luke, Benjamin / 3/22 Breakfast	2.48	
EX 0121808	3/22/2017	Luke, Benjamin / 3/22 Lunch	85.00	
EX 0121808	3/23/2017	Luke, Benjamin / 3/23 Lunch	12.68	
EX 0121808	3/23/2017	Luke, Benjamin / 3/23 Breakfast	3.50	

**Design Services for the Built Environment**

***Please remit payment along with attached invoice copy to:***

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0705875
EX 0121808	3/24/2017	Luke, Benjamin / 3/24 Breakfast	2.50	
EX 0121808	3/24/2017	Luke, Benjamin / 3/24 Lunch	35.00	
EX 0121802	3/25/2017	Abraham, Ronald / Guam Travel - PHI operator training	75.00	
EX 0121802	3/25/2017	Abraham, Ronald / Guam Travel - PHI operator training	22.00	
EX 0121802	3/26/2017	Abraham, Ronald / Guam Travel - PHI operator training	185.60	
EX 0121800	3/27/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	10.75	
EX 0121800	3/27/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP Operator Training	61.05	
EX 0121808	3/27/2017	Luke, Benjamin / 3/27 Lunch	65.00	
EX 0121808	3/27/2017	Luke, Benjamin / 3/27 Breakfast	5.50	
EX 0121799	3/28/2017	Abraham, Ronald / Project start up meeting discussion	112.87	
EX 0121808	3/29/2017	Luke, Benjamin / 3/29 Breakfast	10.50	
EX 0121801	3/31/2017	Abraham, Ronald / Travel - Guam - Agat-Santa Rita WWTP (Phase 2)	24.65	
Color Copy/Printing				
JE 0004230	4/9/2017	Equitrac / Prints - 3/10/2017 - 04/09/2017	.50	
JE 0004230	4/9/2017	Equitrac / Prints - 3/10/2017 - 04/09/2017	36.00	
<b>Total Reimbursables</b>			<b>15,710.97</b>	<b>15,710.97</b>
			<b>Total this Project</b>	<b>\$57,270.97</b>
			<b>Total this Report</b>	<b>\$57,270.97</b>

**Design Services for the Built Environment**

***Please remit payment along with attached invoice copy to:***

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

## Job-To-Date Summary

Gresham, Smith and Partners

Transactions for 3/28/2017 through 4/25/2017

	Current Amount	Prior Amount	To-Date Amount	Amount Remaining
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>				
<b>Scoped Services</b>	<b>\$16,136.77</b>	<b>\$236,975.40</b>	<b>\$253,112.17</b>	
<b>Additional Services</b>				
<b>Labor</b>	<b>\$25,476.25</b>	<b>\$120,990.00</b>	<b>\$146,466.25</b>	
<b>Expenses</b>	<b>\$15,657.95</b>	<b>\$11,221.42</b>	<b>\$26,879.37</b>	
<b>Total Additional Services</b>	<b>\$41,134.20</b>	<b>\$132,211.42</b>	<b>\$173,345.62</b>	
<b>Total Services</b>	<b>\$57,270.97</b>	<b>\$369,186.82</b>	<b>\$426,457.79</b>	<b>\$184,453.07</b>
<b>Total for 41192.00</b>	<b>\$57,270.97</b>	<b>\$369,186.82</b>	<b>\$426,457.79</b>	<b>\$184,453.07</b>

# Labor Detail

Friday, May 5, 2017

10:26:01 AM

Gresham, Smith and Partners - Prelim-All

Transactions for 3/28/2017 through 4/25/2017

				Additional Services		
		Date	Total Hours	Billing Rate	Total Billing	Prior Amount To Date Amount
<b>Project Number: 41192.00 Guam - Agat-Santa</b>						
<b>WBS2 Number: 200 Meetings</b>						
<b>WBS3 Number: 202 Internal Progress Meetings</b>						
04428	Abraham, Ronald	4/3/2017	2.00	225.00	450.00	
04515	Luke, Benjamin	4/11/2017	1.00	125.00	125.00	
<b>Total for 202</b>			<b>3.00</b>		<b>575.00</b>	
<b>Total for 200</b>			<b>3.00</b>		<b>575.00</b>	
<b>WBS2 Number: 300 Shop Drawings/Submittals</b>						
04331	Johnson, David	4/3/2017	1.00	225.00	225.00	
04331	Johnson, David	4/7/2017	1.00	225.00	225.00	
04331	Johnson, David	4/21/2017	1.00	225.00	225.00	
04331	Johnson, David	4/25/2017	1.00	225.00	225.00	
04423	Dobyns, Thomas	4/5/2017	5.00	125.00	625.00	
04423	Dobyns, Thomas	4/6/2017	8.00	125.00	1,000.00	
04423	Dobyns, Thomas	4/7/2017	3.00	125.00	375.00	
04515	Luke, Benjamin	3/31/2017	2.00	125.00	250.00	
04515	Luke, Benjamin	4/3/2017	4.00	125.00	500.00	
04515	Luke, Benjamin	4/4/2017	8.00	125.00	1,000.00	
04515	Luke, Benjamin	4/5/2017	4.00	125.00	500.00	
04515	Luke, Benjamin	4/6/2017	2.00	125.00	250.00	
04515	Luke, Benjamin	4/11/2017	1.50	125.00	187.50	
04515	Luke, Benjamin	4/12/2017	1.50	125.00	187.50	
04515	Luke, Benjamin	4/13/2017	2.00	125.00	250.00	
04515	Luke, Benjamin	4/17/2017	.50	125.00	62.50	
04515	Luke, Benjamin	4/19/2017	.50	125.00	62.50	
04515	Luke, Benjamin	4/20/2017	1.50	125.00	187.50	
04515	Luke, Benjamin	4/21/2017	4.00	125.00	500.00	
04515	Luke, Benjamin	4/24/2017	2.50	125.00	312.50	
04515	Luke, Benjamin	4/25/2017	2.50	125.00	312.50	
04885	Fuller, Claude	3/28/2017	.75	80.00	60.00	
04885	Fuller, Claude	3/30/2017	.75	80.00	60.00	
04885	Fuller, Claude	3/31/2017	.50	80.00	40.00	
04885	Fuller, Claude	4/1/2017	1.50	80.00	120.00	
04885	Fuller, Claude	4/3/2017	1.50	80.00	120.00	
04885	Fuller, Claude	4/4/2017	.50	80.00	40.00	
04885	Fuller, Claude	4/5/2017	.75	80.00	60.00	
04885	Fuller, Claude	4/6/2017	.50	80.00	40.00	
04885	Fuller, Claude	4/7/2017	1.25	80.00	100.00	
04885	Fuller, Claude	4/11/2017	.25	80.00	20.00	
04885	Fuller, Claude	4/12/2017	1.50	80.00	120.00	



GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

04885	Fuller, Claude	4/13/2017	.50	80.00	40.00
04885	Fuller, Claude	4/17/2017	.25	80.00	20.00
04885	Fuller, Claude	4/18/2017	1.00	80.00	80.00
04885	Fuller, Claude	4/19/2017	1.00	80.00	80.00
04885	Fuller, Claude	4/20/2017	.25	80.00	20.00
04885	Fuller, Claude	4/25/2017	.75	80.00	60.00
<b>Total for 300</b>			<b>70.00</b>		<b>8,542.50</b>

**WBS2 Number: 400 Requests for Information**

04515	Luke, Benjamin	3/28/2017	2.00	125.00	250.00
04515	Luke, Benjamin	3/31/2017	6.00	125.00	750.00
04515	Luke, Benjamin	4/3/2017	2.00	125.00	250.00
04515	Luke, Benjamin	4/7/2017	2.00	125.00	250.00
04515	Luke, Benjamin	4/10/2017	3.50	125.00	437.50
04515	Luke, Benjamin	4/11/2017	.50	125.00	62.50
04515	Luke, Benjamin	4/25/2017	1.00	125.00	125.00
04885	Fuller, Claude	3/28/2017	.25	80.00	20.00
04885	Fuller, Claude	3/30/2017	.50	80.00	40.00
04885	Fuller, Claude	4/10/2017	.50	80.00	40.00
04885	Fuller, Claude	4/25/2017	.25	80.00	20.00
<b>Total for 400</b>			<b>18.50</b>		<b>2,245.00</b>

**WBS2 Number: 700 Project Management**

02779	Haider, Rebecca	3/28/2017	.25	85.00	21.25
02779	Haider, Rebecca	4/5/2017	4.00	85.00	340.00
02865	Stewart, Kenneth	3/29/2017	.50	200.00	100.00
02865	Stewart, Kenneth	3/30/2017	1.00	200.00	200.00
02865	Stewart, Kenneth	3/31/2017	1.00	200.00	200.00
02865	Stewart, Kenneth	4/11/2017	1.00	200.00	200.00
02865	Stewart, Kenneth	4/13/2017	2.00	200.00	400.00
02865	Stewart, Kenneth	4/17/2017	2.00	200.00	400.00
02865	Stewart, Kenneth	4/19/2017	2.00	200.00	400.00
02865	Stewart, Kenneth	4/20/2017	1.00	200.00	200.00
02865	Stewart, Kenneth	4/21/2017	4.00	200.00	800.00
02865	Stewart, Kenneth	4/24/2017	3.50	200.00	700.00
02865	Stewart, Kenneth	4/25/2017	2.00	200.00	400.00
04622	Duffy, Melissa	3/29/2017	1.00	120.00	120.00
04622	Duffy, Melissa	4/11/2017	1.00	120.00	120.00
04622	Duffy, Melissa	4/24/2017	1.00	120.00	120.00
<b>Total for 700</b>			<b>27.25</b>		<b>4,721.25</b>

**WBS2 Number: 800 Additional Services**

**WBS3 Number: 801 Major Milestone Meetings/Site Visits**

1,800.00 1,800.00

**WBS3 Number: 802 Progress Meetings**

3,522.50 3,522.50

**WBS3 Number: 804 Equipment Witness Testing**

04515	Luke, Benjamin	4/13/2017	.50	125.00	62.50
04515	Luke, Benjamin	4/18/2017	.25	125.00	31.25
04515	Luke, Benjamin	4/24/2017	.50	125.00	62.50
<b>Total for 804</b>			<b>1.25</b>	<b>156.25</b>	<b>2,356.25</b>
					<b>2,512.50</b>

## ATTACHMENT 3C

**WBS3 Number: 805 Start-up and Commissioning**

02550	Baker, Kenneth	3/28/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	3/29/2017	3.00	250.00	750.00		
02550	Baker, Kenneth	3/30/2017	6.00	250.00	1,500.00		
02550	Baker, Kenneth	3/31/2017	3.00	250.00	750.00		
02550	Baker, Kenneth	4/17/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	4/18/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	4/19/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	4/20/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	4/21/2017	4.00	250.00	1,000.00		
02779	Haider, Rebecca	4/13/2017	2.00	85.00	170.00		
04428	Abraham, Ronald	4/14/2017	3.00	225.00	675.00		
04428	Abraham, Ronald	4/20/2017	8.00	225.00	1,800.00		
<b>Total for 805</b>			<b>49.00</b>		<b>11,645.00</b>	<b>44,850.00</b>	<b>56,495.00</b>

**WBS3 Number: 806 Develop Training Manuals**

**14,643.75    14,643.75**
**WBS3 Number: 808 Operator Training**

04428	Abraham, Ronald	4/14/2017	3.00	225.00	675.00		
04428	Abraham, Ronald	4/21/2017	8.00	225.00	1,800.00		
04515	Luke, Benjamin	3/28/2017	6.00	125.00	750.00		
04515	Luke, Benjamin	3/29/2017	8.00	125.00	1,000.00		
04515	Luke, Benjamin	3/30/2017	7.50	125.00	937.50		
04515	Luke, Benjamin	4/3/2017	2.00	125.00	250.00		
<b>Total for 808</b>			<b>34.50</b>		<b>5,412.50</b>	<b>31,178.75</b>	<b>36,591.25</b>

**WBS3 Number: 812 Contractor Changes**

04331	Johnson, David	4/21/2017	2.00	225.00	450.00		
04331	Johnson, David	4/24/2017	2.00	225.00	450.00		
04428	Abraham, Ronald	3/28/2017	8.00	225.00	1,800.00		
04428	Abraham, Ronald	3/29/2017	8.00	225.00	1,800.00		
04428	Abraham, Ronald	3/31/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	4/12/2017	8.00	225.00	1,800.00		
04515	Luke, Benjamin	4/5/2017	2.00	125.00	250.00		
04515	Luke, Benjamin	4/6/2017	4.00	125.00	500.00		
04515	Luke, Benjamin	4/7/2017	1.50	125.00	187.50		
<b>Total for 812</b>			<b>39.50</b>		<b>8,137.50</b>	<b>17,097.50</b>	<b>25,235.00</b>
<b>Total for 800</b>			<b>124.25</b>		<b>25,351.25</b>	<b>115,448.75</b>	<b>140,800.00</b>

**WBS2 Number: 900 Mechanical Submittals**

04515	Luke, Benjamin	4/19/2017	1.00	125.00	125.00		
<b>Total for 900</b>			<b>1.00</b>		<b>125.00</b>	<b>5,541.25</b>	<b>5,666.25</b>
<b>Total Additional Services</b>					<b>25,476.25</b>	<b>120,990.00</b>	<b>146,466.25</b>
<b>Total for 41192.00</b>			<b>244.00</b>		<b>41,560.00</b>		

## Expense Detail

Monday, May 01, 2017

11:22:06 AM

Gresham, Smith and Partners

Transactions for 3/28/2017 through 4/25/2017

Trans Type	Reference Number	Date	Billing Full Amount Description
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>			
<b>WBS2 Number: 000 NOT FOR TIMESHEET USE</b>			
<b>Reimbursable Expenses</b>			
<b>521.000 Printing</b>			
* JE	0004230	4/9/2017	8.64 Equitrac / Prints - 3/10/2017 - 04/09/2017
JE	0004230	4/9/2017	7.88 Equitrac / Prints - 3/10/2017 - 04/09/2017
<b>Total for 521.000</b>			<b>16.52</b>
<b>532.000 Color Copy/Printing</b>			
JE	0004230	4/9/2017	.50 Equitrac / Prints - 3/10/2017 - 04/09/2017
* JE	0004230	4/9/2017	36.00 Equitrac / Prints - 3/10/2017 - 04/09/2017
<b>Total for 532.000</b>			<b>36.50</b>
<b>Total for Reimb. Exp.</b>			<b>53.02</b>
<b>Total for 000</b>			<b>53.02</b>
<b>WBS2 Number: 800 Additional Services</b>			
<b>WBS3 Number: 802 Progress Meetings</b>			
<b>Reimbursable Expenses</b>			
<b>525.000 Travel</b>			
EX	0120323	3/31/2017	1,178.15 Baker, Kenneth
<b>Total for 802</b>			<b>1,178.15</b>
<b>WBS3 Number: 805 Start-up and Commissioning</b>			
<b>Reimbursable Expenses</b>			
<b>522.000 Office Supplies</b>			
EX	0121808	3/16/2017	30.13 Luke, Ben
<b>525.000 Travel</b>			
EX	0121808	3/13/2017	14.37 Luke, Ben
EX	0121808	3/14/2017	30.00 Luke, Ben
EX	0121792	4/3/2017	3,288.45 Baker, Kenneth
<b>Total for 525.000</b>			<b>3,332.82</b>
<b>525.020 Lodging</b>			
EX	0121808	3/17/2017	976.80 Luke, Benjamin / Sheraton Stay #1
EX	0121808	3/19/2017	521.70 Luke, Benjamin / Hyatt Stay #1
EX	0121802	3/20/2017	1,221.00 Abraham, Ronald
EX	0121808	3/23/2017	1,285.25 Luke, Benjamin / Sheraton Stay #2
EX	0121802	3/26/2017	1,198.80 Abraham, Ronald
EX	0121808	3/30/2017	1,931.40 Luke, Benjamin / Hyatt Stay #2
<b>Total for 525.020</b>			<b>7,134.95</b>
<b>525.030 Car Rental</b>			
EX	0121802	4/1/2017	300.00 Abraham, Ronald
EX	0121802	4/1/2017	300.00 Abraham, Ronald
<b>Total for 525.030</b>			<b>600.00</b>
<b>527.000 Telephone</b>			
EX	0121808	3/13/2017	21.99 Luke, Benjamin / Plane WiFi for Working
<b>528.000 Meals</b>			
EX	0121808	3/13/2017	23.00 Luke, Benjamin / 3/13 Dinner
EX	0121808	3/13/2017	5.45 Luke, Benjamin / 3/13 Breakfast
EX	0121799	3/15/2017	11.25 Abraham, Ronald
EX	0121808	3/15/2017	8.00 Luke, Benjamin / 3/15 Breakfast
EX	0121802	3/16/2017	83.30 Abraham, Ronald

EX	0121808	3/16/2017	14.50 Luke, Benjamin / 3/16 Lunch
EX	0121808	3/16/2017	42.00 Luke, Benjamin / 3/16 Dinner
EX	0121808	3/16/2017	11.00 Luke, Benjamin / 3/16 Breakfast
EX	0121808	3/19/2017	10.74 Luke, Benjamin / 3/19 Dinner
EX	0121808	3/20/2017	4.36 Luke, Benjamin / 3/20 Lunch
EX	0121808	3/21/2017	13.05 Luke, Benjamin / 3/21 Lunch
EX	0121801	3/22/2017	3.58 Abraham, Ronald
EX	0121801	3/22/2017	27.48 Abraham, Ronald
EX	0121808	3/22/2017	85.00 Luke, Benjamin / 3/22 Lunch
EX	0121808	3/22/2017	2.48 Luke, Benjamin / 3/22 Breakfast
EX	0121808	3/23/2017	12.68 Luke, Benjamin / 3/23 Lunch
EX	0121808	3/23/2017	3.50 Luke, Benjamin / 3/23 Breakfast
EX	0121808	3/24/2017	35.00 Luke, Benjamin / 3/24 Lunch
EX	0121808	3/24/2017	2.50 Luke, Benjamin / 3/24 Breakfast
EX	0121808	3/27/2017	5.50 Luke, Benjamin / 3/27 Breakfast
EX	0121808	3/27/2017	65.00 Luke, Benjamin / 3/27 Lunch
EX	0121799	3/28/2017	112.87 Abraham, Ronald
EX	0121808	3/29/2017	10.50 Luke, Benjamin / 3/29 Breakfast
EX	0121801	3/31/2017	24.65 Abraham, Ronald
<b>Total for 528.000</b>			<b>617.39</b>
<b>Total for Reimb. Exp.</b>			<b>11,737.28</b>
<b>Total for 805</b>			<b>11,737.28</b>
<b>WBS3 Number: 808 Operator Training</b>			
<b>Reimbursable Expenses</b>			
<b>522.000 Office Supplies</b>			
EX	0121799	3/25/2017	2.95 Abraham, Ronald
<b>525.000 Travel</b>			
EX	0121799	3/30/2017	15.00 Abraham, Ronald
EX	0121799	3/30/2017	24.00 Abraham, Ronald
<b>Total for 525.000</b>			<b>39.00</b>
<b>525.020 Lodging</b>			
EX	0121802	3/15/2017	976.80 Abraham, Ronald
<b>525.030 Mileage/Fuel</b>			
EX	0121800	3/22/2017	45.00 Abraham, Ronald
<b>528.000 Meals</b>			
EX	0121800	3/10/2017	32.50 Abraham, Ronald
EX	0121802	3/13/2017	5.95 Abraham, Ronald
EX	0121800	3/14/2017	13.50 Abraham, Ronald
EX	0121800	3/15/2017	45.13 Abraham, Ronald
EX	0121800	3/16/2017	13.00 Abraham, Ronald
EX	0121800	3/16/2017	15.49 Abraham, Ronald
EX	0121802	3/25/2017	75.00 Abraham, Ronald
EX	0121802	3/25/2017	22.00 Abraham, Ronald
EX	0121802	3/26/2017	185.60 Abraham, Ronald
EX	0121800	3/27/2017	10.75 Abraham, Ronald
EX	0121800	3/27/2017	61.05 Abraham, Ronald
<b>Total for Reimb. Exp.</b>			<b>479.97</b>
<b>Total for 808</b>			<b>1,543.72</b>
<b>WBS3 Number: 812 Contractor Changes</b>			
<b>Reimbursable Expenses</b>			
<b>525.020 Lodging</b>			
EX	0121802	3/29/2017	1,198.80 Abraham, Ronald
<b>Total for 812</b>			<b>1,198.80</b>
<b>Total for 800</b>			<b>15,657.95</b>
<b>Total for 41192.00</b>			<b>15,710.97</b>

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0705286
---------	----------	---------------------------------------	---------	---------

**Billing Backup**

Thursday, April 20, 2017

Gresham, Smith and Partners

Invoice 0705286 Dated 4/8/2017

4:47:17 PM

**Professional Personnel**

			Hours	Rate	Amount
<b>Principal</b>					
02550	167 - Baker, Kenneth	2/28/2017	1.00	250.00	250.00
02550	167 - Baker, Kenneth	3/13/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	3/14/2017	5.00	250.00	1,250.00
02550	167 - Baker, Kenneth	3/15/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	3/16/2017	3.00	250.00	750.00
02550	167 - Baker, Kenneth	3/17/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	3/20/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	3/21/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	3/23/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	3/24/2017	6.00	250.00	1,500.00
02550	167 - Baker, Kenneth	3/27/2017	8.00	250.00	2,000.00
<b>Sr. Technical Specialist</b>					
04428	140 - Abraham, Ronald	2/28/2017	2.00	225.00	450.00
	Ken Rekdahl				
04428	140 - Abraham, Ronald	3/6/2017	2.00	225.00	450.00
	Ken Rekdahl				
04428	140 - Abraham, Ronald	3/7/2017	8.00	225.00	1,800.00
	UV modifications to accomodate rerouted conduits, effluent wei, and eff PS piping				
04428	140 - Abraham, Ronald	3/8/2017	2.00	225.00	450.00
04428	140 - Abraham, Ronald	3/8/2017	2.00	225.00	450.00
04428	140 - Abraham, Ronald	3/10/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/13/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/14/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/15/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/16/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/17/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/20/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/21/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/22/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/23/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/24/2017	8.00	225.00	1,800.00
04428	140 - Abraham, Ronald	3/27/2017	8.00	225.00	1,800.00
04331	139 - Johnson, David	2/24/2017	1.00	225.00	225.00
	VFD conf call				
04331	139 - Johnson, David	2/28/2017	.50	225.00	112.50
	Coordinating Project With Others				
04331	139 - Johnson, David	3/1/2017	2.00	225.00	450.00
	Grit System review				
04331	139 - Johnson, David	3/7/2017	1.00	225.00	225.00
	08 vfd's				
04331	139 - Johnson, David	3/14/2017	6.00	225.00	1,350.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	3/17/2017	2.00	225.00	450.00
	Processing/Checking Shop Drawings				
04331	139 - Johnson, David	3/27/2017	4.00	225.00	900.00
	Processing/Checking Shop Drawings				

**Design and Consulting Solutions for the Built Environment****Please remit payment along with attached invoice copy to:**

Gresham, Smith and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705286
Sr. Project Manager						
02865	139 - Stewart, Kenneth	3/1/2017	1.00	200.00	200.00	
	Project Review					
02865	139 - Stewart, Kenneth	3/7/2017	1.00	200.00	200.00	
	Project Review					
02865	139 - Stewart, Kenneth	3/8/2017	1.50	200.00	300.00	
	Project Review					
02865	139 - Stewart, Kenneth	3/10/2017	.50	200.00	100.00	
	Unpaid invoices and projections					
02865	139 - Stewart, Kenneth	3/16/2017	.25	200.00	50.00	
	Aged AR					
02865	139 - Stewart, Kenneth	3/17/2017	.50	200.00	100.00	
	Project update					
02865	139 - Stewart, Kenneth	3/21/2017	.50	200.00	100.00	
	Project Review					
02865	139 - Stewart, Kenneth	3/23/2017	.50	200.00	100.00	
	RFI Review					
02865	139 - Stewart, Kenneth	3/24/2017	.75	200.00	150.00	
	Aged AR					
Project Manager						
02591	138 - Schnell, Kristi	2/27/2017	4.00	165.00	660.00	
02591	138 - Schnell, Kristi	2/28/2017	3.00	165.00	495.00	
02591	138 - Schnell, Kristi	2/28/2017	1.00	165.00	165.00	
Engineer II						
04423	136 - Dobyns, Thomas	2/28/2017	2.00	125.00	250.00	
	Grit submittal, RFI, and meeting					
04423	136 - Dobyns, Thomas	3/1/2017	8.00	125.00	1,000.00	
	submittal, RFI, and grit meetings					
04423	136 - Dobyns, Thomas	3/2/2017	2.00	125.00	250.00	
	Grit submittal, RFI, and meeting					
04423	136 - Dobyns, Thomas	3/8/2017	8.00	125.00	1,000.00	
	Submittals					
04423	136 - Dobyns, Thomas	3/10/2017	2.00	125.00	250.00	
	Hydro Grit System					
04515	136 - Luke, Benjamin	2/24/2017	2.50	125.00	312.50	
	RFIs					
04515	136 - Luke, Benjamin	2/24/2017	2.00	125.00	250.00	
	Witness Testing Coordination					
04515	136 - Luke, Benjamin	2/24/2017	1.50	125.00	187.50	
	Digester Piping					
04515	136 - Luke, Benjamin	2/27/2017	2.50	125.00	312.50	
	Digester Piping Descriptions					
04515	136 - Luke, Benjamin	2/27/2017	4.00	125.00	500.00	
	RFIs					
04515	136 - Luke, Benjamin	2/27/2017	1.50	125.00	187.50	
	Startup Conference Call					
04515	136 - Luke, Benjamin	2/28/2017	1.50	125.00	187.50	
	RFIs					
04515	136 - Luke, Benjamin	2/28/2017	.50	125.00	62.50	
	Progress Meeting					
04515	136 - Luke, Benjamin	2/28/2017	2.00	125.00	250.00	
	Submittal					
04515	136 - Luke, Benjamin	3/1/2017	2.00	125.00	250.00	
	Submittal					

**Design and Consulting Solutions for the Built Environment**  
**Please remit payment along with attached invoice copy to:**  
Gresham, Smith and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705286
04515	136 - Luke, Benjamin	3/1/2017	1.00	125.00	125.00	
	Witness Testing Coordination					
04515	136 - Luke, Benjamin	3/1/2017	2.00	125.00	250.00	
	RFIs					
04515	136 - Luke, Benjamin	3/2/2017	2.00	125.00	250.00	
	RFIs					
04515	136 - Luke, Benjamin	3/3/2017	2.00	125.00	250.00	
	Digester Loop Descriptions					
04515	136 - Luke, Benjamin	3/3/2017	2.50	125.00	312.50	
	RFIs					
04515	136 - Luke, Benjamin	3/3/2017	2.00	125.00	250.00	
	Submittal					
04515	136 - Luke, Benjamin	3/6/2017	2.50	125.00	312.50	
	Submittals					
04515	136 - Luke, Benjamin	3/6/2017	2.00	125.00	250.00	
	Contractor Changes					
04515	136 - Luke, Benjamin	3/6/2017	2.00	125.00	250.00	
	RFIs					
04515	136 - Luke, Benjamin	3/7/2017	2.50	125.00	312.50	
	Contractor Changes					
04515	136 - Luke, Benjamin	3/7/2017	1.00	125.00	125.00	
	Submittals					
04515	136 - Luke, Benjamin	3/8/2017	4.00	125.00	500.00	
	Submittal					
04515	136 - Luke, Benjamin	3/9/2017	1.00	125.00	125.00	
	Submittal					
04515	136 - Luke, Benjamin	3/9/2017	1.00	125.00	125.00	
	RFIs					
04515	136 - Luke, Benjamin	3/10/2017	2.00	125.00	250.00	
	Submittals					
04515	136 - Luke, Benjamin	3/13/2017	8.00	125.00	1,000.00	
	Startup and Commissioning					
04515	136 - Luke, Benjamin	3/14/2017	8.00	125.00	1,000.00	
	Startup and Commissioning					
04515	136 - Luke, Benjamin	3/15/2017	6.00	125.00	750.00	
	Startup and Commissioning					
04515	136 - Luke, Benjamin	3/15/2017	2.00	125.00	250.00	
	Submittals					
04515	136 - Luke, Benjamin	3/16/2017	2.00	125.00	250.00	
	Submittals					
04515	136 - Luke, Benjamin	3/16/2017	4.00	125.00	500.00	
	Startup and Commissioning					
04515	136 - Luke, Benjamin	3/17/2017	2.00	125.00	250.00	
	Startup and Commissioning					
04515	136 - Luke, Benjamin	3/17/2017	2.00	125.00	250.00	
	Submittals					
04515	136 - Luke, Benjamin	3/17/2017	2.00	125.00	250.00	
	RFIs					
04515	136 - Luke, Benjamin	3/19/2017	2.00	125.00	250.00	
	Submittal					
04515	136 - Luke, Benjamin	3/20/2017	8.00	125.00	1,000.00	
	Startup and Commissioning					
04515	136 - Luke, Benjamin	3/21/2017	8.00	125.00	1,000.00	
	Startup and Commissioning					
04515	136 - Luke, Benjamin	3/22/2017	4.00	125.00	500.00	
	Startup and Commissioning					

**Design and Consulting Solutions for the Built Environment**  
**Please remit payment along with attached invoice copy to:**  
 Gresham, Smith and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705286
04515	136 - Luke, Benjamin	3/22/2017	2.00	125.00	250.00	
	RFIs					
04515	136 - Luke, Benjamin	3/23/2017	2.00	125.00	250.00	
	RFIs					
04515	136 - Luke, Benjamin	3/23/2017	1.50	125.00	187.50	
	Startup and Commissioning					
04515	136 - Luke, Benjamin	3/24/2017	1.00	125.00	125.00	
	RFI					
04515	136 - Luke, Benjamin	3/24/2017	1.00	125.00	125.00	
	Submittal					
04515	136 - Luke, Benjamin	3/27/2017	1.00	125.00	125.00	
	Submittal					
04515	136 - Luke, Benjamin	3/27/2017	2.00	125.00	250.00	
	Startup and Commissioning					
	Project Accountant					
04622	103 - Duffy, Melissa	2/24/2017	1.00	120.00	120.00	
	Billing					
04622	103 - Duffy, Melissa	2/27/2017	1.00	120.00	120.00	
	Billing					
04622	103 - Duffy, Melissa	3/6/2017	1.00	120.00	120.00	
	Project Review					
	Administration					
04885	146 - Fuller, Claude	2/24/2017	1.25	80.00	100.00	
	Construction Photo Archiving					
04885	146 - Fuller, Claude	2/25/2017	-1.00	80.00	-80.00	
	Timesheet Day 2/22-2/23 Estimate Reconciliation					
04885	146 - Fuller, Claude	2/25/2017	-.50	80.00	-40.00	
	Timesheet Day 2/22-2/23 Estimate Reconciliation					
04885	146 - Fuller, Claude	2/28/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	2/28/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/1/2017	.50	80.00	40.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/2/2017	.75	80.00	60.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/3/2017	1.50	80.00	120.00	
	Construction Photo Archiving Strategizing and EADOC Help With K. Stewart					
04885	146 - Fuller, Claude	3/6/2017	1.00	80.00	80.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/6/2017	.50	80.00	40.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/7/2017	.75	80.00	60.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/8/2017	.75	80.00	60.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/9/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/10/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/13/2017	1.00	80.00	80.00	
	Construction Photo Archiving					
04885	146 - Fuller, Claude	3/14/2017	.75	80.00	60.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/16/2017	.50	80.00	40.00	
	Submittal Processing					

**Design and Consulting Solutions for the Built Environment**  
**Please remit payment along with attached invoice copy to:**  
Gresham, Smith and Partners / P.O. Box 440029 / Nashville, TN 37244-0029



Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0705286
04885	146 - Fuller, Claude	3/16/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/17/2017	.50	80.00	40.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/17/2017	1.75	80.00	140.00	
	Submittal Processing and Construction Photo Archiving					
04885	146 - Fuller, Claude	3/20/2017	1.00	80.00	80.00	
	Submittal Processing and Construction Photo Archiving					
04885	146 - Fuller, Claude	3/21/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/22/2017	.50	80.00	40.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/23/2017	.75	80.00	60.00	
	RFI Processing					
04885	146 - Fuller, Claude	3/23/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	3/24/2017	1.00	80.00	80.00	
	Submittal Processing and Construction Photo Archiving					
04885	146 - Fuller, Claude	3/27/2017	1.00	80.00	80.00	
	RFI Processing					
	Totals		369.50		67,462.50	
	<b>Total Labor</b>					<b>67,462.50</b>
<b>Reimbursable Expenses</b>						
Printing						
JE 0003230	3/9/2017	Equitrac / Prints - 2/10/2017 - 03/09/2017			68.12	
JE 0003230	3/9/2017	Equitrac / Prints - 2/10/2017 - 03/09/2017			2.48	
JE 0003230	3/9/2017	Equitrac / Prints - 2/10/2017 - 03/09/2017			.56	
Travel						
EX 0119875	2/22/2017	Abraham, Ronald			1,178.15	
Color Copy/Printing						
JE 0003230	3/9/2017	Equitrac / Prints - 2/10/2017 - 03/09/2017			5.50	
JE 0003230	3/9/2017	Equitrac / Prints - 2/10/2017 - 03/09/2017			13.00	
	<b>Total Reimbursables</b>				<b>1,267.81</b>	<b>1,267.81</b>
<b>Total this Project</b>						<b>\$68,730.31</b>
<b>Total this Report</b>						<b>\$68,730.31</b>

**Design and Consulting Solutions for the Built Environment**  
**Please remit payment along with attached invoice copy to:**  
 Gresham, Smith and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

## Job-To-Date Summary

Gresham, Smith and Partners

Transactions for 2/24/2017 through 3/27/2017

	Current Amount	Prior Amount	To-Date Amount	Amount Remaining
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>				
<b>Scoped Services</b>	<b>\$18,279.66</b>	<b>\$218,695.74</b>	<b>\$236,975.40</b>	
<b>Additional Services</b>				
<b>Labor</b>	<b>\$49,272.50</b>	<b>\$71,717.50</b>	<b>\$120,990.00</b>	
<b>Expenses</b>	<b>\$1,178.15</b>	<b>\$10,043.27</b>	<b>\$11,221.42</b>	
<b>Total Additional Services</b>	<b>\$50,450.65</b>	<b>\$81,760.77</b>	<b>\$132,211.42</b>	
<b>Total Services</b>	<b>\$68,730.31</b>	<b>\$300,456.51</b>	<b>\$369,186.82</b>	<b>\$241,724.04</b>
 <b>Total for 41192.00</b>	 <b>\$68,730.31</b>	 <b>\$300,456.51</b>	 <b>\$369,186.82</b>	 <b>\$241,724.04</b>

**Labor Detail**

Thursday, April 13, 2017

1:26:19 PM

Gresham, Smith and Partners

Transactions for 2/24/2017 through 3/27/2017

				<b>Additional Services</b>		
		<b>Date</b>	<b>Total Hours</b>	<b>Billing Rate</b>	<b>Total Billing</b>	<b>Prior Amount To Date Amount</b>
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>						
<b>WBS2 Number: 200 Meetings</b>						
<b>WBS3 Number: 202 Internal Progress Meetings</b>						
02550	Baker, Kenneth	2/28/2017	1.00	250.00	\$250.00	
02591	Schnell, Kristi	2/28/2017	1.00	165.00	\$165.00	
04331	Johnson, David	2/28/2017	.50	225.00	\$112.50	
04515	Luke, Benjamin	2/28/2017	.50	125.00	\$62.50	
<b>Total for 202</b>			<b>3.00</b>		<b>\$590.00</b>	
<b>Total for 200</b>			<b>3.00</b>		<b>\$590.00</b>	
<b>WBS2 Number: 300 Shop Drawings/Submittals</b>						
04331	Johnson, David	2/24/2017	1.00	225.00	\$225.00	
04331	Johnson, David	3/1/2017	2.00	225.00	\$450.00	
04331	Johnson, David	3/7/2017	1.00	225.00	\$225.00	
04331	Johnson, David	3/14/2017	6.00	225.00	\$1,350.00	
04331	Johnson, David	3/17/2017	2.00	225.00	\$450.00	
04331	Johnson, David	3/27/2017	4.00	225.00	\$900.00	
04423	Dobyns, Thomas	2/28/2017	2.00	125.00	\$250.00	
04423	Dobyns, Thomas	3/1/2017	8.00	125.00	\$1,000.00	
04423	Dobyns, Thomas	3/2/2017	2.00	125.00	\$250.00	
04423	Dobyns, Thomas	3/8/2017	8.00	125.00	\$1,000.00	
04423	Dobyns, Thomas	3/10/2017	2.00	125.00	\$250.00	
04428	Abraham, Ronald	3/8/2017	2.00	225.00	\$450.00	
04515	Luke, Benjamin	2/28/2017	2.00	125.00	\$250.00	
04515	Luke, Benjamin	3/1/2017	2.00	125.00	\$250.00	
04515	Luke, Benjamin	3/3/2017	2.00	125.00	\$250.00	
04515	Luke, Benjamin	3/6/2017	2.50	125.00	\$312.50	
04515	Luke, Benjamin	3/7/2017	1.00	125.00	\$125.00	
04515	Luke, Benjamin	3/8/2017	4.00	125.00	\$500.00	
04515	Luke, Benjamin	3/9/2017	1.00	125.00	\$125.00	
04515	Luke, Benjamin	3/10/2017	2.00	125.00	\$250.00	
04515	Luke, Benjamin	3/15/2017	2.00	125.00	\$250.00	
04515	Luke, Benjamin	3/16/2017	2.00	125.00	\$250.00	
04515	Luke, Benjamin	3/17/2017	2.00	125.00	\$250.00	
04515	Luke, Benjamin	3/19/2017	2.00	125.00	\$250.00	
04515	Luke, Benjamin	3/24/2017	1.00	125.00	\$125.00	
04515	Luke, Benjamin	3/27/2017	1.00	125.00	\$125.00	
04885	Fuller, Claude	2/24/2017	1.25	80.00	\$100.00	
04885	Fuller, Claude	2/25/2017	-1.00	80.00	-\$80.00	
04885	Fuller, Claude	2/28/2017	.50	80.00	\$40.00	
04885	Fuller, Claude	3/3/2017	1.50	80.00	\$120.00	

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

04885	Fuller, Claude	3/6/2017	1.00	80.00	\$80.00
04885	Fuller, Claude	3/7/2017	.75	80.00	\$60.00
04885	Fuller, Claude	3/8/2017	.75	80.00	\$60.00
04885	Fuller, Claude	3/9/2017	.50	80.00	\$40.00
04885	Fuller, Claude	3/10/2017	.25	80.00	\$20.00
04885	Fuller, Claude	3/13/2017	1.00	80.00	\$80.00
04885	Fuller, Claude	3/14/2017	.75	80.00	\$60.00
04885	Fuller, Claude	3/16/2017	.50	80.00	\$40.00
04885	Fuller, Claude	3/17/2017	1.75	80.00	\$140.00
04885	Fuller, Claude	3/20/2017	1.00	80.00	\$80.00
04885	Fuller, Claude	3/23/2017	.25	80.00	\$20.00
04885	Fuller, Claude	3/24/2017	1.00	80.00	\$80.00
<b>Total for 300</b>			<b>78.25</b>		<b>\$11,052.50</b>

**WBS2 Number: 400 Requests for Information**

04428	Abraham, Ronald	3/8/2017	2.00	225.00	\$450.00
04515	Luke, Benjamin	2/24/2017	2.50	125.00	\$312.50
04515	Luke, Benjamin	2/27/2017	4.00	125.00	\$500.00
04515	Luke, Benjamin	2/28/2017	1.50	125.00	\$187.50
04515	Luke, Benjamin	3/1/2017	2.00	125.00	\$250.00
04515	Luke, Benjamin	3/2/2017	2.00	125.00	\$250.00
04515	Luke, Benjamin	3/3/2017	2.50	125.00	\$312.50
04515	Luke, Benjamin	3/6/2017	2.00	125.00	\$250.00
04515	Luke, Benjamin	3/9/2017	1.00	125.00	\$125.00
04515	Luke, Benjamin	3/17/2017	2.00	125.00	\$250.00
04515	Luke, Benjamin	3/22/2017	2.00	125.00	\$250.00
04515	Luke, Benjamin	3/23/2017	2.00	125.00	\$250.00
04515	Luke, Benjamin	3/24/2017	1.00	125.00	\$125.00
04885	Fuller, Claude	2/25/2017	-.50	80.00	-\$40.00
04885	Fuller, Claude	3/16/2017	.25	80.00	\$20.00
04885	Fuller, Claude	3/17/2017	.50	80.00	\$40.00
04885	Fuller, Claude	3/21/2017	.25	80.00	\$20.00
04885	Fuller, Claude	3/22/2017	.50	80.00	\$40.00
04885	Fuller, Claude	3/23/2017	.75	80.00	\$60.00
04885	Fuller, Claude	3/27/2017	1.00	80.00	\$80.00
<b>Total for 400</b>			<b>29.25</b>		<b>\$3,732.50</b>

**WBS2 Number: 700 Project Management**

02591	Schnell, Kristi	2/27/2017	4.00	165.00	\$660.00
02591	Schnell, Kristi	2/28/2017	3.00	165.00	\$495.00
02865	Stewart, Kenneth	3/1/2017	1.00	200.00	\$200.00
02865	Stewart, Kenneth	3/7/2017	1.00	200.00	\$200.00
02865	Stewart, Kenneth	3/8/2017	1.50	200.00	\$300.00
02865	Stewart, Kenneth	3/10/2017	.50	200.00	\$100.00
02865	Stewart, Kenneth	3/16/2017	.25	200.00	\$50.00
02865	Stewart, Kenneth	3/17/2017	.50	200.00	\$100.00
02865	Stewart, Kenneth	3/21/2017	.50	200.00	\$100.00
02865	Stewart, Kenneth	3/23/2017	.50	200.00	\$100.00

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

02865	Stewart, Kenneth	3/24/2017	.75	200.00	\$150.00		
04622	Duffy, Melissa	2/24/2017	1.00	120.00	\$120.00		
04622	Duffy, Melissa	2/27/2017	1.00	120.00	\$120.00		
04622	Duffy, Melissa	3/6/2017	1.00	120.00	\$120.00		
<b>Total for 700</b>			<b>16.50</b>		<b>\$2,815.00</b>		
<b>WBS2 Number: 800 Additional Services</b>							
<b>WBS3 Number: 801 Major Milestone Meetings/Site Visits</b>						<b>\$1,800.00</b>	<b>\$1,800.00</b>
<b>WBS3 Number: 802 Progress Meetings</b>							
04428	Abraham, Ronald	2/28/2017	2.00	225.00	\$450.00		
04428	Abraham, Ronald	3/6/2017	2.00	225.00	\$450.00		
<b>Total for 802</b>			<b>4.00</b>		<b>\$900.00</b>	<b>\$2,622.50</b>	<b>\$3,522.50</b>
<b>WBS3 Number: 804 Equipment Witness Testing</b>							
04515	Luke, Benjamin	2/24/2017	2.00	125.00	\$250.00		
04515	Luke, Benjamin	3/1/2017	1.00	125.00	\$125.00		
<b>Total for 804</b>			<b>3.00</b>		<b>\$375.00</b>	<b>\$1,981.25</b>	<b>\$2,356.25</b>
<b>WBS3 Number: 805 Start-up and Commissioning</b>							
02550	Baker, Kenneth	3/13/2017	8.00	250.00	\$2,000.00		
02550	Baker, Kenneth	3/14/2017	5.00	250.00	\$1,250.00		
02550	Baker, Kenneth	3/15/2017	8.00	250.00	\$2,000.00		
02550	Baker, Kenneth	3/16/2017	3.00	250.00	\$750.00		
02550	Baker, Kenneth	3/17/2017	4.00	250.00	\$1,000.00		
02550	Baker, Kenneth	3/20/2017	8.00	250.00	\$2,000.00		
02550	Baker, Kenneth	3/21/2017	8.00	250.00	\$2,000.00		
02550	Baker, Kenneth	3/23/2017	8.00	250.00	\$2,000.00		
02550	Baker, Kenneth	3/24/2017	6.00	250.00	\$1,500.00		
02550	Baker, Kenneth	3/27/2017	8.00	250.00	\$2,000.00		
04428	Abraham, Ronald	3/10/2017	8.00	225.00	\$1,800.00		
04428	Abraham, Ronald	3/13/2017	8.00	225.00	\$1,800.00		
04428	Abraham, Ronald	3/14/2017	8.00	225.00	\$1,800.00		
04428	Abraham, Ronald	3/15/2017	8.00	225.00	\$1,800.00		
04428	Abraham, Ronald	3/16/2017	8.00	225.00	\$1,800.00		
04428	Abraham, Ronald	3/17/2017	8.00	225.00	\$1,800.00		
04428	Abraham, Ronald	3/20/2017	8.00	225.00	\$1,800.00		
04428	Abraham, Ronald	3/21/2017	8.00	225.00	\$1,800.00		
04428	Abraham, Ronald	3/22/2017	8.00	225.00	\$1,800.00		
04428	Abraham, Ronald	3/23/2017	8.00	225.00	\$1,800.00		
04428	Abraham, Ronald	3/24/2017	8.00	225.00	\$1,800.00		
04428	Abraham, Ronald	3/27/2017	8.00	225.00	\$1,800.00		
04515	Luke, Benjamin	2/27/2017	1.50	125.00	\$187.50		
04515	Luke, Benjamin	3/13/2017	8.00	125.00	\$1,000.00		
04515	Luke, Benjamin	3/14/2017	8.00	125.00	\$1,000.00		
04515	Luke, Benjamin	3/15/2017	6.00	125.00	\$750.00		
04515	Luke, Benjamin	3/16/2017	4.00	125.00	\$500.00		
04515	Luke, Benjamin	3/17/2017	2.00	125.00	\$250.00		
04515	Luke, Benjamin	3/20/2017	8.00	125.00	\$1,000.00		
04515	Luke, Benjamin	3/21/2017	8.00	125.00	\$1,000.00		

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

04515	Luke, Benjamin	3/22/2017	4.00	125.00	\$500.00		
04515	Luke, Benjamin	3/23/2017	1.50	125.00	\$187.50		
04515	Luke, Benjamin	3/27/2017	2.00	125.00	\$250.00		
<b>Total for 805</b>			<b>215.00</b>		<b>\$44,725.00</b>	<b>\$125.00</b>	<b>\$44,850.00</b>
<b>WBS3 Number: 806 Develop Training Manuals</b>						<b>\$14,643.75</b>	<b>\$14,643.75</b>
<b>WBS3 Number: 808 Operator Training</b>						<b>\$31,178.75</b>	<b>\$31,178.75</b>
<b>WBS3 Number: 812 Contractor Changes</b>							
04428	Abraham, Ronald	3/7/2017	8.00	225.00	\$1,800.00		
04515	Luke, Benjamin	2/24/2017	1.50	125.00	\$187.50		
04515	Luke, Benjamin	2/27/2017	2.50	125.00	\$312.50		
04515	Luke, Benjamin	3/3/2017	2.00	125.00	\$250.00		
04515	Luke, Benjamin	3/6/2017	2.00	125.00	\$250.00		
04515	Luke, Benjamin	3/7/2017	2.50	125.00	\$312.50		
<b>Total for 812</b>			<b>18.50</b>		<b>\$3,112.50</b>	<b>\$13,985.00</b>	<b>\$17,097.50</b>
<b>Total for 800</b>			<b>240.50</b>		<b>\$49,112.50</b>	<b>\$66,336.25</b>	<b>\$115,448.75</b>
<b>WBS2 Number: 900 Mechanical Submittals - Additional Services</b>							
04885	Fuller, Claude	2/28/2017	.25	80.00	\$20.00		
04885	Fuller, Claude	3/1/2017	.50	80.00	\$40.00		
04885	Fuller, Claude	3/2/2017	.75	80.00	\$60.00		
04885	Fuller, Claude	3/6/2017	.50	80.00	\$40.00		
<b>Total for 900</b>			<b>2.00</b>		<b>\$160.00</b>	<b>\$5,381.25</b>	<b>\$5,541.25</b>
<b>Total Additional Services</b>					<b>\$49,272.50</b>	<b>\$71,717.50</b>	<b>\$120,990.00</b>
<b>Total for 41192.00</b>			<b>369.50</b>		<b>67,462.50</b>		

**Expense Detail**

Thursday, April 13, 2017

4:16:19 PM

Gresham, Smith and Partners

Transactions for 2/24/2017 through  
3/27/2017

				<b>Additional Services</b>	
<b>Trans</b>	<b>Reference</b>	<b>Date</b>	<b>Billing Full</b>	<b>Prior</b>	<b>Amount To Date</b>
<b>Type</b>	<b>Number</b>		<b>Amount Description</b>		<b>Amount</b>
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>					
<b>WBS2 Number: 000 NOT FOR TIMESHEET USE</b>					
<b>Reimbursable Expenses</b>					
<b>521.000 Printing</b>					
JE	0003230	3/9/2017	68.12 Equitrac / Prints - 2/10/2017 - 03/09/2017		
* JE	0003230	3/9/2017	2.48 Equitrac / Prints - 2/10/2017 - 03/09/2017		
* JE	0003230	3/9/2017	.56 Equitrac / Prints - 2/10/2017 - 03/09/2017		
<b>Total for 521.000</b>			<b>71.16</b>		
<b>532.000 Color Copy/Printing</b>					
* JE	0003230	3/9/2017	5.50 Equitrac / Prints - 2/10/2017 - 03/09/2017		
JE	0003230	3/9/2017	13.00 Equitrac / Prints - 2/10/2017 - 03/09/2017		
<b>Total for 532.000</b>			<b>18.50</b>		
<b>Total for Reimb. Exp.</b>			<b>89.66</b>		
<b>Total for 000</b>			<b>89.66</b>		
<b>WBS2 Number: 800 Additional Services</b>					
<b>WBS3 Number: 802 Progress Meetings</b>					
				<b>0.00</b>	<b>0.00</b>
<b>WBS3 Number: 805 Start-up and Commissioning</b>					
<b>Reimbursable Expenses</b>					
<b>525.000 Travel</b>					
EX	0119875	2/22/2017	1,178.15 Abraham, Ronald		
<b>Total for 805</b>			<b>1,178.15</b>	<b>3254.95</b>	<b>4433.10</b>
<b>WBS3 Number: 806 Develop Training Manuals</b>					
				<b>2346.47</b>	<b>2346.47</b>
<b>WBS3 Number: 808 Operator Training</b>					
				<b>4441.85</b>	<b>4441.85</b>
<b>WBS3 Number: 812 Contractor Changes</b>					
				<b>0.00</b>	<b>0.00</b>
<b>Total for 800</b>			<b>1,178.15</b>	<b>10,043.27</b>	<b>11,221.42</b>
<b>Total for 41192.00</b>			<b>1,267.81</b>		
<b>Scoped Services</b>			<b>89.66</b>		

**Additional Services**

GS&amp;P Invoice 0703530

Dated March 8, 2017

**Time Associated with Conference Calls**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
02/10/2017	Kristi Schnell	0.50	\$165.00	\$82.50	-	-
				<b>\$82.50</b>	<b>\$2,540.00</b>	<b>\$2,622.50</b>

**Developing Training Materials**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				-	<b>\$14,463.75</b>	<b>\$14,463.75</b>

Expense	Current Amount	Prior Amount	To-Date Amount
Training Materials	-	\$107.00	\$107.00
Printing	-	\$1,369.92	\$1,369.92
Shipping	\$869.55	-	\$869.55
	<b>\$869.55</b>	<b>\$1,476.92</b>	<b>\$2,346.47</b>

**Operator Training**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
				-	-	-
				-	<b>\$31,178.75</b>	<b>\$31,178.75</b>

Expense	Current Amount	Prior Amount	To-Date Amount
Airfare for Dave Fletcher and Ben Barcinas	-	\$283.96	\$283.96
Hotel for Dave Fletcher and Ben Barcinas	-	\$2,975.91	\$2,975.91
Meals	-	\$23.01	\$23.01
Parking / Taxi	-	\$57.05	\$57.05
Rental Car / Fuel	-	\$828.14	\$828.14
Mileage	-	\$273.78	\$273.78
	-	<b>\$4,441.85</b>	<b>\$4,441.85</b>

**Time associated with Witness Testing**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
01/31/2017	Ben Luke	1.00	\$125.00	\$125.00	-	-
02/01/2017	Ben Luke	2.25	\$125.00	\$281.25	-	-
02/03/2017	Ben Luke	0.50	\$125.00	\$62.50	-	-
02/08/2017	Ben Luke	0.50	\$125.00	\$62.50	-	-
				<b>\$531.25</b>	<b>\$1,450.00</b>	<b>\$1,981.25</b>



**Additional Services**

GS&amp;P Invoice 0703530

Dated March 8, 2017

**Time associated with Start-up and Commissioning**

Date	Professional Personnel	Hours	Rate	Current Amount	Prior Amount	To-Date Amount
02/14/2017	Ben Luke	1.00	\$125.00	\$125.00	-	\$125.00
				<b>\$125.00</b>	-	<b>\$125.00</b>
Expense				Current Amount	Prior Amount	To-Date Amount
Airfare				\$3,254.95	-	\$3,254.95
				<b>\$3,254.95</b>	-	<b>\$3,254.95</b>

**TOTAL    \$12,525.75    \$69,235.02    \$81,760.77**



G R E S H A M  
S M I T H   A N D  
P A R T N E R S

Duenas, Camacho & Associates  
Attn: Kenneth M. Rekdahl, Chief of Spec. Projects  
238 East Marine Corps Drive  
P.O. 8900  
Hagatna 96910

June 8, 2017  
Project No: 41192.00  
Invoice No: 0706680

**Project 41192.00 Agat - Santa Rita WWTP (Phase 2), GWA Project WW-08**

**Professional Services for the period ending May 24, 2017**

**Professional Personnel**

	Hours	Rate	Amount	
Principal				
Baker, Kenneth	8.00	250.00	2,000.00	
Sr. Technical Specialist				
Abraham, Ronald	38.00	225.00	8,550.00	
Johnson, David	18.00	225.00	4,050.00	
Sr. Project Manager				
Stewart, Kenneth	67.00	200.00	13,400.00	
Engineer II				
Luke, Benjamin	38.00	125.00	4,750.00	
Sr. CADD				
Robertson, Michael	6.00	135.00	810.00	
Project Accountant				
Duffy, Melissa	1.00	120.00	120.00	
Administration				
Fuller, Claude	9.00	80.00	720.00	
Totals	185.00		34,400.00	
<b>Total Labor</b>				<b>34,400.00</b>

**Reimbursable Expenses**

Printing	22.86	
Travel	2,679.23	
Lodging	950.84	
Car Rental	300.00	
Telephone	50.00	
Meals	195.57	
Color Copy/Printing	117.50	
<b>Total Reimbursables</b>	<b>4,316.00</b>	<b>4,316.00</b>

**Billing Limits**

	Current	Prior	To-Date
Total Billings	38,716.00	426,457.79	465,173.79
Limit			610,910.86
Remaining			145,737.07

**Total this Invoice \$38,716.00**

If you have any questions concerning this invoice,  
please contact Ken Stewart, Project Manager at 615.770.8422.

**Design Services for the Built Environment**

**Please remit payment along with attached invoice copy to:**

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029



G R E S H A M  
S M I T H   A N D  
P A R T N E R S

Duenas, Camacho & Associates  
Attn: Kenneth M. Rekdahl, Chief of Spec. Projects  
238 East Marine Corps Drive  
P.O. 8900  
Hagatna 96910

July 08, 2017  
Project No: 41192.00  
Invoice No: 0707927

**Project 41192.00 Agat - Santa Rita WWTP (Phase 2), GWA Project WW-08**

**Professional Services for the period ending June 26, 2017**

**Professional Personnel**

	Hours	Rate	Amount	
Principal				
Baker, Kenneth	18.00	250.00	4,500.00	
Sr. Technical Specialist				
Abraham, Ronald	22.00	225.00	4,950.00	
Johnson, David	10.00	225.00	2,250.00	
Sr. Project Manager				
Stewart, Kenneth	12.25	200.00	2,450.00	
Engineer II				
Luke, Benjamin	12.50	125.00	1,562.50	
Project Accountant				
Duffy, Melissa	3.00	120.00	360.00	
Administration				
Fuller, Claude	5.50	80.00	440.00	
Totals	83.25		16,512.50	
<b>Total Labor</b>				<b>16,512.50</b>

**Reimbursable Expenses**

Printing	9.72
Color Copy/Printing	55.00
<b>Total Reimbursables</b>	<b>64.72</b>

**Billing Limits**

	Current	Prior	To-Date
Total Billings	16,577.22	465,173.79	481,751.01
Limit			610,910.86
Remaining			129,159.85
<b>Total this Invoice</b>			<b>\$16,577.22</b>

If you have any questions concerning this invoice,  
please contact Ken Stewart, Project Manager at 615.770.8422.

**Design Services for the Built Environment**

***Please remit payment along with attached invoice copy to:***

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029



G R E S H A M  
S M I T H   A N D  
P A R T N E R S

Kenneth Rekdahl  
Duenas, Camacho & Associates, Inc.  
238 East Marine Corps Drive  
P.O. 8900  
Hagatna, Guam 96910

August 8, 2017  
Project No: 41192.00  
Invoice No: 0709185

**Project 41192.00 Agat - Santa Rita WWTP (Phase 2), GWA Project WW-08**

**Professional Services for the period ending July 27, 2017**

**Professional Personnel**

	Hours	Rate	Amount	
Principal				
Baker, Kenneth	12.00	250.00	3,000.00	
Sr. Technical Specialist				
Abraham, Ronald	16.00	225.00	3,600.00	
Johnson, David	4.50	225.00	1,012.50	
Sr. Project Manager				
Stewart, Kenneth	8.50	200.00	1,700.00	
Engineer II				
Luke, Benjamin	8.25	125.00	1,031.25	
Project Accountant				
Duffy, Melissa	2.00	120.00	240.00	
Administration				
Fuller, Claude	5.25	80.00	420.00	
Totals	56.50		11,003.75	
<b>Total Labor</b>				<b>11,003.75</b>

**Reimbursable Expenses**

Printing	2.80	
Office Supplies	2,594.37	
Travel	6,065.18	
Lodging	666.00	
Car Rental	162.00	
Color Copy/Printing	20.00	
<b>Total Reimbursables</b>	<b>9,510.35</b>	<b>9,510.35</b>

**Billing Limits**

	Current	Prior	To-Date
Total Billings	20,514.10	481,751.01	502,265.11
Limit			610,910.86
Remaining			108,645.75
<b>Total this Invoice</b>			<b>\$20,514.10</b>

If you have any questions concerning this invoice,  
please contact Ken Stewart, Project Manager at 615.770.8422.

**Design Services for the Built Environment**

***Please remit payment along with attached invoice copy to:***

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0709185
---------	----------	---------------------------------------	---------	---------

**Billing Backup**

Sunday, August 6, 2017

Gresham, Smith and Partners

Invoice 0709185 Dated 8/8/2017

9:12:41 PM

**Professional Personnel**

			Hours	Rate	Amount
<b>Principal</b>					
02550	167 - Baker, Kenneth	7/6/2017	4.00	250.00	1,000.00
02550	167 - Baker, Kenneth	7/21/2017	8.00	250.00	2,000.00
<b>Sr. Technical Specialist</b>					
04428	140 - Abraham, Ronald	6/27/2017	4.00	225.00	900.00
04428	140 - Abraham, Ronald	7/14/2017	4.00	225.00	900.00
04428	140 - Abraham, Ronald	7/20/2017	8.00	225.00	1,800.00
04331	139 - Johnson, David	7/5/2017	2.00	225.00	450.00
Processing/Checking Shop Drawings					
04331	139 - Johnson, David	7/14/2017	2.50	225.00	562.50
Processing/Checking Shop Drawings					
<b>Sr. Project Manager</b>					
02865	139 - Stewart, Kenneth	6/27/2017	2.00	200.00	400.00
02865	139 - Stewart, Kenneth	6/28/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	6/29/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/30/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	7/6/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	7/11/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	7/12/2017	1.25	200.00	250.00
Invoice					
02865	139 - Stewart, Kenneth	7/19/2017	1.25	200.00	250.00
02865	139 - Stewart, Kenneth	7/20/2017	.50	200.00	100.00
AR Review					
<b>Engineer II</b>					
04515	136 - Luke, Benjamin	6/27/2017	.50	125.00	62.50
Submittal					
04515	136 - Luke, Benjamin	6/29/2017	.50	125.00	62.50
Submittal					
04515	136 - Luke, Benjamin	7/5/2017	.50	125.00	62.50
Submittal					
04515	136 - Luke, Benjamin	7/5/2017	3.50	125.00	437.50
RFI					
04515	136 - Luke, Benjamin	7/6/2017	.50	125.00	62.50
RFI					
04515	136 - Luke, Benjamin	7/12/2017	1.00	125.00	125.00
RFI					
04515	136 - Luke, Benjamin	7/12/2017	.75	125.00	93.75
Submittal					
04515	136 - Luke, Benjamin	7/13/2017	.50	125.00	62.50
Submittal					
04515	136 - Luke, Benjamin	7/16/2017	.50	125.00	62.50
Submittal					
<b>Project Accountant</b>					
04622	103 - Duffy, Melissa	6/30/2017	2.00	120.00	240.00
<b>Administration</b>					
04885	146 - Fuller, Claude	6/27/2017	.25	80.00	20.00
Submittal Processing					
04885	146 - Fuller, Claude	6/29/2017	.50	80.00	40.00

**Design Services for the Built Environment***Please remit payment along with attached invoice copy to:*

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0709185
	Construction Photo Archiving					
04885	146 - Fuller, Claude	7/5/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	7/5/2017	.75	80.00	60.00	
	RFI Processing					
04885	146 - Fuller, Claude	7/6/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	7/11/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	7/13/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	7/13/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	7/14/2017	.50	80.00	40.00	
	RFI/Submittal Processing					
04885	146 - Fuller, Claude	7/15/2017	.25	80.00	20.00	
	7/10/17 Timesheet Day Adjustment					
04885	146 - Fuller, Claude	7/17/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	7/19/2017	.75	80.00	60.00	
	Construction Photo Archiving					
	Totals		56.50		11,003.75	
	Total Labor					11,003.75
Reimbursable Expenses						
Printing						
JE	0007230	7/9/2017	Equitrac / Prints - 06/10/2017 - 07/09/2017		2.80	
Office Supplies						
EX	0126276	6/14/2017	Abraham, Ronald / This is for purchase of operator equipment Ultraviolet Transmittance analyzer		2,594.37	
Travel						
EX	0126273	6/23/2017	Baker, Kenneth / 2 round trip tickets to Guam for Ken Baker and Ron Abraham - Guam - UMATAC / Northern District Waste Water Treatment Plant - PHASE 2		4,059.45	
EX	0126273	7/28/2017	Baker, Kenneth / 2 round trip tickets to Guam for Ken Baker and Ron Abraham - Guam - UMATAC / Northern District Waste Water Treatment Plant - Phase 2		2,005.73	
Lodging						
EX	0126276	6/20/2017	Abraham, Ronald / Waste water treatment plant - start-up		666.00	
Car Rental						
EX	0126276	6/23/2017	Abraham, Ronald / Guam Water Authority - Operator Training		162.00	
Color Copy/Printing						
JE	0007230	7/9/2017	Equitrac / Prints - 06/10/2017 - 07/09/2017		5.00	
JE	0007230	7/9/2017	Equitrac / Prints - 06/10/2017 - 07/09/2017		15.00	
	Total Reimbursables				9,510.35	9,510.35
Total this Project						\$20,514.10
Total this Report						\$20,514.10

**Design Services for the Built Environment**

*Please remit payment along with attached invoice copy to:*

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

## Job-To-Date Summary

Gresham, Smith and Partners

Transactions for 6/27/2017 through 7/27/2017

	Current Amount	Prior Amount	To-Date Amount	Amount Remaining
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP</b>				
<b>Scoped Services</b>	<b>\$5,326.55</b>	<b>\$279,629.75</b>	<b>\$284,956.30</b>	
<b>Additional Services</b>				
Labor	\$5,700.00	\$171,066.25	\$176,766.25	
Expenses	\$9,487.55	\$31,055.01	\$40,542.56	
<b>Total Additional Services</b>	<b>\$15,187.55</b>	<b>\$202,121.26</b>	<b>\$217,308.81</b>	
<b>Total Services</b>	<b>\$20,514.10</b>	<b>\$481,751.01</b>	<b>\$502,265.11</b>	<b>\$108,645.75</b>
<b>Total for 41192.00</b>	<b>\$20,514.10</b>	<b>\$481,751.01</b>	<b>\$502,265.11</b>	<b>\$108,645.75</b>

**Labor Detail**

Monday, August 07, 2017

3:22:57 PM

Gresham, Smith and Partners

Transactions for 6/27/2017 through 7/27/2017

					<b>Additional Services</b>	
		<b>Date</b>	<b>Total Hours</b>	<b>Billing Rate</b>	<b>Total Billing</b>	<b>Prior Amount To Date Amount</b>
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>						
<b>WBS2 Number: 300 Shop Drawings/Submittals</b>						
04331	Johnson, David	7/5/2017	2.00	225.00	450.00	
04331	Johnson, David	7/14/2017	2.50	225.00	562.50	
04515	Luke, Benjamin	6/27/2017	.50	125.00	62.50	
04515	Luke, Benjamin	6/29/2017	.50	125.00	62.50	
04515	Luke, Benjamin	7/5/2017	.50	125.00	62.50	
04515	Luke, Benjamin	7/12/2017	.75	125.00	93.75	
04515	Luke, Benjamin	7/13/2017	.50	125.00	62.50	
04515	Luke, Benjamin	7/16/2017	.50	125.00	62.50	
04885	Fuller, Claude	6/27/2017	.25	80.00	20.00	
04885	Fuller, Claude	6/29/2017	.50	80.00	40.00	
04885	Fuller, Claude	7/5/2017	.50	80.00	40.00	
04885	Fuller, Claude	7/11/2017	.50	80.00	40.00	
04885	Fuller, Claude	7/13/2017	.50	80.00	40.00	
04885	Fuller, Claude	7/14/2017	.50	80.00	40.00	
04885	Fuller, Claude	7/17/2017	.25	80.00	20.00	
04885	Fuller, Claude	7/19/2017	.75	80.00	60.00	
<b>Total for 300</b>			<b>11.50</b>		<b>1,718.75</b>	
<b>WBS2 Number: 400 Requests for Information (RFI)</b>						
04428	Abraham, Ronald	6/27/2017	4.00	225.00	900.00	
04515	Luke, Benjamin	7/5/2017	3.50	125.00	437.50	
04515	Luke, Benjamin	7/6/2017	.50	125.00	62.50	
04515	Luke, Benjamin	7/12/2017	1.00	125.00	125.00	
04885	Fuller, Claude	7/5/2017	.75	80.00	60.00	
04885	Fuller, Claude	7/6/2017	.25	80.00	20.00	
04885	Fuller, Claude	7/13/2017	.25	80.00	20.00	
04885	Fuller, Claude	7/15/2017	.25	80.00	20.00	
<b>Total for 400</b>			<b>10.50</b>		<b>1,645.00</b>	
<b>WBS2 Number: 700 Project Management</b>						
02865	Stewart, Kenneth	6/27/2017	2.00	200.00	400.00	
02865	Stewart, Kenneth	6/28/2017	.50	200.00	100.00	
02865	Stewart, Kenneth	6/29/2017	1.00	200.00	200.00	
02865	Stewart, Kenneth	6/30/2017	.50	200.00	100.00	
02865	Stewart, Kenneth	7/6/2017	1.00	200.00	200.00	
02865	Stewart, Kenneth	7/11/2017	.50	200.00	100.00	



## ATTACHMENT 3D

		Date	Total Hours	Billing Rate	Total Billing	Prior Amount	To Date Amount
02865	Stewart, Kenneth	7/12/2017	1.25	200.00	250.00		
02865	Stewart, Kenneth	7/19/2017	1.25	200.00	250.00		
02865	Stewart, Kenneth	7/20/2017	.50	200.00	100.00		
04622	Duffy, Melissa	6/30/2017	2.00	120.00	240.00		
<b>Total for 700</b>			<b>10.50</b>		<b>1,940.00</b>		
<b>WBS2 Number: 800 Additional Services</b>							
<b>WBS3 Number: 801 Major Mileston Meetings/Site Visits</b>						<b>1,800.00</b>	<del>1,800.00</del>
<b>WBS3 Number: 802 Progress Meetings</b>						<b>3,522.50</b>	<del>3,522.50</del>
<b>WBS3 Number: 804 Equipment Witness Testing</b>						<b>11,562.50</b>	<del>11,562.50</del>
<b>WBS3 Number: 805 Start-up and Commissioning</b>						<b>59,245.00</b>	<del>59,245.00</del>
<b>WBS3 Number: 806 Develop Training Manuals</b>							
04428	Abraham, Ronald	7/14/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	7/20/2017	8.00	225.00	1,800.00		
<b>Total for 806</b>			<b>12.00</b>		<b>2,700.00</b>	<b>14,643.75</b>	<del>17,343.75</del>
<b>WBS3 Number: 808 Operator Training</b>							
02550	Baker, Kenneth	7/6/2017	4.00	250.00	1,000.00		
02550	Baker, Kenneth	7/21/2017	8.00	250.00	2,000.00		
<b>Total for 808</b>			<b>12.00</b>		<b>3,000.00</b>	<b>42,141.25</b>	<del>45,141.25</del>
<b>Total for 812</b>						<b>32,297.50</b>	<del>32,297.50</del>
<b>Total for 800</b>			<b>24.00</b>		<b>5,700.00</b>	<b>165,212.50</b>	<del>170,912.50</del>
<b>Total Additional Services</b>					<b>5,700.00</b>	<b>171,066.25</b>	<del>176,766.25</del>
<b>Total for 41192.00</b>			<b>56.50</b>		<b>11,003.75</b>		
<b>Scoped Services</b>					<b>5,303.75</b>		

# Expense Detail

Tuesday, August 08, 2017

1:47:53 PM

Gresham, Smith and Partners - Final-All

Transactions for 6/14/2017 through 7/28/2017

Trans Type	Reference Number	Date	Billing Amount	Full Description
<b>41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>				
WBS2 Number: 000 NOT FOR TIMESHEET USE				
Reimbursable Expenses				
<b>521.000 Printing</b>				
* JE	0007230	7/9/17	2.80	Equitrac / Prints - 06/10/2017 -
<b>532.000 Color Copy/Printing</b>				
* JE	0007230	7/9/17	15.00	Equitrac / Prints - 06/10/2017 -
JE	0007230	7/9/17	5.00	Equitrac / Prints - 06/10/2017 -
<b>Total for 532.000</b>			<b>20.00</b>	
<b>Total for Reimb. Exp.</b>			<b>22.80</b>	
<b>Total for 000</b>			<b>22.80</b>	
WBS2 Number: 800 Additional Services				
WBS3 Number: 801 Major Milestone Meetings/Site Visits				
Total for 801				
WBS3 Number: 802 Progress Meetings				
Total for 802				
WBS3 Number: 803 Technical Memorandums				
Total for 803				
WBS3 Number: 804 Equipment Witness Testing				
Total for 804				
WBS3 Number: 805 Start-up and Commissioning				
Total for 805				
WBS3 Number: 806 Develop Training Manuals				
Total for 806				
WBS3 Number: 807 Laboratory Testing				
Total for 807				
WBS3 Number: 808 Operator Training				
Reimbursable Expenses				
<b>522.000 Office Supplies</b>				
EX	0126276	6/14/17	2,594.37	Abraham, Ronald
<b>525.000 Travel</b>				
EX	0126273	6/23/17	4,059.45	Baker, Kenneth
EX	0126273	7/28/17	2,005.73	Baker, Kenneth
<b>Total for 525.000</b>			<b>6,065.18</b>	
<b>525.020 Lodging</b>				
EX	0126276	6/20/17	666.00	Abraham, Ronald
<b>525.030 Car Rental</b>				
EX	0126276	6/23/17	162.00	Abraham, Ronald
<b>Total for Reimb. Exp.</b>				
<b>Total for 808</b>			<b>9,487.55</b>	
WBS3 Number: 809 I&C Training				
Total for 809				
WBS3 Number: 810 Vendor O&M Manuals				
Total for 810				

Trans Type	Reference Number	Date	Billing Amount	Full Description
<b>WBS3 Number: 811 Standard Operating Procedures</b>				
<b>Total for 811</b>				
<b>WBS3 Number: 812 Contractor Changes</b>				
<b>Total for 812</b>				
<b>Total for 800</b>			<b>9,487.55</b>	
<b>Total for 41192.00</b>			<b>9,510.35</b>	
<b>Scoped Services</b>			<b>22.80</b>	

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)	Invoice	0707927
---------	----------	---------------------------------------	---------	---------

**Billing Backup**

Wednesday, July 05, 2017

Gresham, Smith and Partners

Invoice 0707927 Dated 7/8/2017

9:00:52 AM

**Professional Personnel**

			Hours	Rate	Amount
<b>Principal</b>					
02550	167 - Baker, Kenneth	5/26/2017	2.00	250.00	500.00
02550	167 - Baker, Kenneth	5/30/2017	1.00	250.00	250.00
02550	167 - Baker, Kenneth	6/15/2017	8.00	250.00	2,000.00
02550	167 - Baker, Kenneth	6/22/2017	5.00	250.00	1,250.00
02550	167 - Baker, Kenneth	6/23/2017	2.00	250.00	500.00
<b>Sr. Technical Specialist</b>					
04428	140 - Abraham, Ronald	6/1/2017	4.00	225.00	900.00
04428	140 - Abraham, Ronald	6/2/2017	4.00	225.00	900.00
04428	140 - Abraham, Ronald	6/2/2017	4.00	225.00	900.00
Thickening control modifications					
04428	140 - Abraham, Ronald	6/9/2017	2.00	225.00	450.00
UVT Agat and					
04428	140 - Abraham, Ronald	6/15/2017	4.00	225.00	900.00
04428	140 - Abraham, Ronald	6/22/2017	4.00	225.00	900.00
04331	139 - Johnson, David	5/25/2017	1.00	225.00	225.00
Processing/Checking Shop Drawings					
04331	139 - Johnson, David	6/9/2017	3.00	225.00	675.00
Processing/Checking Shop Drawings					
04331	139 - Johnson, David	6/14/2017	2.00	225.00	450.00
Processing/Checking Shop Drawings					
04331	139 - Johnson, David	6/26/2017	4.00	225.00	900.00
Processing/Checking Shop Drawings					
<b>Sr. Project Manager</b>					
02865	139 - Stewart, Kenneth	5/30/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	5/31/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/1/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/2/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/5/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/8/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/13/2017	2.00	200.00	400.00
Invoice and back-up					
02865	139 - Stewart, Kenneth	6/14/2017	2.00	200.00	400.00
Invoice and back-up					
02865	139 - Stewart, Kenneth	6/20/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	6/21/2017	.50	200.00	100.00
02865	139 - Stewart, Kenneth	6/22/2017	1.00	200.00	200.00
02865	139 - Stewart, Kenneth	6/26/2017	.25	200.00	50.00
<b>Engineer II</b>					
04515	136 - Luke, Benjamin	5/28/2017	1.00	125.00	125.00
RFI					
04515	136 - Luke, Benjamin	5/30/2017	1.00	125.00	125.00
Submittal					
04515	136 - Luke, Benjamin	6/1/2017	.50	125.00	62.50
Contractor Changes					
04515	136 - Luke, Benjamin	6/5/2017	4.00	125.00	500.00
Submittal					
04515	136 - Luke, Benjamin	6/8/2017	1.00	125.00	125.00
Submittals					

**Design Services for the Built Environment***Please remit payment along with attached invoice copy to:*

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

Project	41192.00	Guam - Agat-Santa Rita WWTP (Phase 2)			Invoice	0707927
04515	136 - Luke, Benjamin	6/9/2017	1.00	125.00	125.00	
	Submittals					
04515	136 - Luke, Benjamin	6/12/2017	.50	125.00	62.50	
	Submittal					
04515	136 - Luke, Benjamin	6/13/2017	1.00	125.00	125.00	
	Submittal					
04515	136 - Luke, Benjamin	6/14/2017	2.00	125.00	250.00	
	Submittals					
04515	136 - Luke, Benjamin	6/19/2017	.50	125.00	62.50	
	RFI					
Project Accountant						
04622	103 - Duffy, Melissa	5/30/2017	2.00	120.00	240.00	
04622	103 - Duffy, Melissa	6/1/2017	1.00	120.00	120.00	
	Project Review/AR Review					
Administration						
04885	146 - Fuller, Claude	5/25/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	5/30/2017	.25	80.00	20.00	
	RFI/Submittal Processing					
04885	146 - Fuller, Claude	6/3/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/5/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/8/2017	1.00	80.00	80.00	
	Submittal Processing + Construction Photo Archiving					
04885	146 - Fuller, Claude	6/9/2017	.75	80.00	60.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/12/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/13/2017	.50	80.00	40.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/14/2017	.25	80.00	20.00	
	Submittal Processing					
04885	146 - Fuller, Claude	6/19/2017	.25	80.00	20.00	
	RFI Processing					
04885	146 - Fuller, Claude	6/21/2017	.50	80.00	40.00	
	Submittal Processing + Construction Photo Archiving					
04885	146 - Fuller, Claude	6/26/2017	.75	80.00	60.00	
	Submittal Processing					
	Totals		83.25		16,512.50	
	Total Labor					16,512.50
Reimbursable Expenses						
Printing						
JE 0006230	6/9/2017	Equitrac / Prints - 5/10/2017 - 06/09/2017			9.72	
Color Copy/Printing						
JE 0006230	6/9/2017	Equitrac / Prints - 5/10/2017 - 06/09/2017			55.00	
	Total Reimbursables				64.72	64.72
Total this Project					\$16,577.22	
Total this Report					\$16,577.22	

**Design Services for the Built Environment**

*Please remit payment along with attached invoice copy to:*

Gresham, Smith, and Partners / P.O. Box 440029 / Nashville, TN 37244-0029

## Job-To-Date Summary

Gresham, Smith and Partners

Transactions for 5/25/2017 through 6/26/2017

	Current Amount	Prior Amount	To-Date Amount	Amount Remaining
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>				
<b>Scoped Services</b>	<b>\$8,864.72</b>	<b>\$270,765.03</b>	<b>\$279,629.75</b>	
<b>Additional Services</b>				
<b>Labor</b>	<b>\$7,712.50</b>	<b>\$163,353.75</b>	<b>\$171,066.25</b>	
<b>Expenses</b>	<b>\$0.00</b>	<b>\$31,055.01</b>	<b>\$31,055.01</b>	
<b>Total Additional Services</b>	<b>\$7,712.50</b>	<b>\$194,408.76</b>	<b>\$202,121.26</b>	
<b>Total Services</b>	<b>\$16,577.22</b>	<b>\$465,173.79</b>	<b>\$481,751.01</b>	<b>\$129,159.85</b>
<b>Total for 41192.00</b>	<b>\$16,577.22</b>	<b>\$465,173.79</b>	<b>\$481,751.01</b>	<b>\$129,159.85</b>

# Labor Detail

Thursday, July 13, 2017

1:14:10 PM

Gresham, Smith and Partners

Transactions for 5/25/2017 through 6/26/2017

			Additional Services			
		Date	Total Hours	Billing Rate	Total Billing	Prior Amount To Date Amount
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>						
<b>WBS2 Number: 300 Shop Drawings/Submittals</b>						
04331	Johnson, David	5/25/2017	1.00	225.00	225.00	
04331	Johnson, David	6/9/2017	3.00	225.00	675.00	
04331	Johnson, David	6/14/2017	2.00	225.00	450.00	
04331	Johnson, David	6/26/2017	4.00	225.00	900.00	
04428	Abraham, Ronald	6/2/2017	4.00	225.00	900.00	
04515	Luke, Benjamin	5/30/2017	1.00	125.00	125.00	
04515	Luke, Benjamin	6/5/2017	4.00	125.00	500.00	
04515	Luke, Benjamin	6/8/2017	1.00	125.00	125.00	
04515	Luke, Benjamin	6/9/2017	1.00	125.00	125.00	
04515	Luke, Benjamin	6/12/2017	.50	125.00	62.50	
04515	Luke, Benjamin	6/13/2017	1.00	125.00	125.00	
04515	Luke, Benjamin	6/14/2017	2.00	125.00	250.00	
04885	Fuller, Claude	5/25/2017	.50	80.00	40.00	
04885	Fuller, Claude	5/30/2017	.25	80.00	20.00	
04885	Fuller, Claude	6/3/2017	.25	80.00	20.00	
04885	Fuller, Claude	6/5/2017	.25	80.00	20.00	
04885	Fuller, Claude	6/8/2017	1.00	80.00	80.00	
04885	Fuller, Claude	6/9/2017	.75	80.00	60.00	
04885	Fuller, Claude	6/12/2017	.25	80.00	20.00	
04885	Fuller, Claude	6/13/2017	.50	80.00	40.00	
04885	Fuller, Claude	6/14/2017	.25	80.00	20.00	
04885	Fuller, Claude	6/21/2017	.50	80.00	40.00	
04885	Fuller, Claude	6/26/2017	.75	80.00	60.00	
<b>Total for 300</b>			<b>29.75</b>		<b>4,882.50</b>	
<b>WBS2 Number: 400 Requests for Information (RFI)</b>						
04428	Abraham, Ronald	6/1/2017	4.00	225.00	900.00	
04515	Luke, Benjamin	5/28/2017	1.00	125.00	125.00	
04515	Luke, Benjamin	6/19/2017	.50	125.00	62.50	
04885	Fuller, Claude	6/19/2017	.25	80.00	20.00	
<b>Total for 400</b>			<b>5.75</b>		<b>1,107.50</b>	
<b>WBS2 Number: 700 Project Management</b>						
02865	Stewart, Kenneth	5/30/2017	1.00	200.00	200.00	
02865	Stewart, Kenneth	5/31/2017	1.00	200.00	200.00	
02865	Stewart, Kenneth	6/1/2017	1.00	200.00	200.00	
02865	Stewart, Kenneth	6/2/2017	1.00	200.00	200.00	
02865	Stewart, Kenneth	6/5/2017	1.00	200.00	200.00	
02865	Stewart, Kenneth	6/8/2017	1.00	200.00	200.00	

		Date	Total Hours	Billing Rate	Total Billing	Prior Amount	To Date Amount
02865	Stewart, Kenneth	6/13/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	6/14/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	6/20/2017	.50	200.00	100.00		
02865	Stewart, Kenneth	6/21/2017	.50	200.00	100.00		
02865	Stewart, Kenneth	6/22/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	6/26/2017	.25	200.00	50.00		
04622	Duffy, Melissa	5/30/2017	2.00	120.00	240.00		
04622	Duffy, Melissa	6/1/2017	1.00	120.00	120.00		
Total for 700			15.25		2,810.00		
WBS2 Number: 800 Additional Services							
WBS3 Number: 801 Major Milestone Meetings/Site Visits						1,800.00	1,800.00
WBS3 Number: 802 Progress Meetings						3,522.50	3,522.50
WBS3 Number: 804 Equipment Witness Testing						11,562.50	11,562.50
WBS3 Number: 805 Start-up and Commissioning							
02550	Baker, Kenneth	5/26/2017	2.00	250.00	500.00		
02550	Baker, Kenneth	5/30/2017	1.00	250.00	250.00		
Total for 805			3.00		750.00	58,495.00	59,245.00
WBS3 Number: 806 Develop Training Manuals						14,643.75	14,643.75
WBS3 Number: 808 Operator Training							
02550	Baker, Kenneth	6/15/2017	8.00	250.00	2,000.00		
02550	Baker, Kenneth	6/22/2017	5.00	250.00	1,250.00		
02550	Baker, Kenneth	6/23/2017	2.00	250.00	500.00		
04428	Abraham, Ronald	6/15/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	6/22/2017	4.00	225.00	900.00		
Total for 808			23.00		5,550.00	36,591.25	42,141.25
WBS3 Number: 812 Contractor Changes							
04428	Abraham, Ronald	6/2/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	6/9/2017	2.00	225.00	450.00		
04515	Luke, Benjamin	6/1/2017	.50	125.00	62.50		
Total for 812			6.50		1,412.50	30,885.00	32,297.50
Total for 800			32.50		7,712.50	157,500.00	165,212.50
Total Additional Services					7,712.50	163,353.75	171,066.25
Total for 41192.00			83.25		16,512.50		
Scoped Services					8,800.00		



# Expense Detail

Thursday, July 13, 2017

1:58:47 PM

Gresham, Smith and Partners

Transactions for 5/25/2017 through 6/26/2017

Trans Type	Reference Number	Date	Billing Amount	Full Description
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>				
<b>WBS2 Number: 000 NOT FOR TIMESHEET USE</b>				
<b>Reimbursable Expenses</b>				
<b>521.000 Printing</b>				
JE	0006230	6/9/2017	9.72	Equitrac / Prints - 5/10/2017 - 06/09/2017
<b>532.000 Color Copy/Printing</b>				
JE	0006230	6/9/2017	55.00	Equitrac / Prints - 5/10/2017 - 06/09/2017
<b>Total for Reimb. Exp.</b>			<b>64.72</b>	
<b>Total for 000</b>			<b>64.72</b>	
<b>WBS2 Number: 800 Additional Services</b>				
<b>Total for 800</b>			<b>0.00</b>	
<b>Total for 41192.00</b>			<b>64.72</b>	
<b>Scoped Services</b>			<b>64.72</b>	

## Job-To-Date Summary

Gresham, Smith and Partners

Transactions for 4/26/2017 through 5/24/2017

	Current Amount	Prior Amount	To-Date Amount	Amount Remaining
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>				
<b>Scoped Services</b>	<b>\$17,652.86</b>	<b>\$253,112.17</b>	<b>\$270,765.03</b>	
<b>Additional Services</b>				
<b>Labor</b>	<b>\$16,887.50</b>	<b>\$146,466.25</b>	<b>\$163,353.75</b>	
<b>Expenses</b>	<b>\$4,175.64</b>	<b>\$26,879.37</b>	<b>\$31,055.01</b>	
<b>Total Additional Services</b>	<b>\$21,063.14</b>	<b>\$173,345.62</b>	<b>\$194,408.76</b>	
<b>Total Services</b>	<b>\$38,716.00</b>	<b>\$426,457.79</b>	<b>\$465,173.79</b>	<b>\$145,737.07</b>
<b>Total for 41192.00</b>	<b>\$38,716.00</b>	<b>\$426,457.79</b>	<b>\$465,173.79</b>	<b>\$145,737.07</b>

# Labor Detail

Tuesday, June 13, 2017

12:48:52 PM

Gresham, Smith and Partners

Transactions for 4/26/2017 through 5/24/2017

			Additional Services			
		Date	Total Hours	Billing Rate	Regular Billing	Prior Amount To Date Amount
<b>41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>						
<b>WBS2 Number: 200 Meetings</b>						
<b>WBS3 Number: 202 Internal Progress Meetings</b>						
04515	Luke, Benjamin	5/3/2017	.50	125.00	62.50	
<b>Total for 202</b>			<b>.50</b>		<b>62.50</b>	
<b>Total for 200</b>			<b>.50</b>		<b>62.50</b>	
<b>WBS2 Number: 300 Shop Drawings/Submittals</b>						
04331	Johnson, David	4/27/2017	2.00	225.00	450.00	
04331	Johnson, David	5/4/2017	4.00	225.00	900.00	
04331	Johnson, David	5/9/2017	4.00	225.00	900.00	
04428	Abraham, Ronald	4/28/2017	4.00	225.00	900.00	
04515	Luke, Benjamin	4/27/2017	1.00	125.00	125.00	
04515	Luke, Benjamin	5/2/2017	1.50	125.00	187.50	
04515	Luke, Benjamin	5/3/2017	1.50	125.00	187.50	
04515	Luke, Benjamin	5/4/2017	.50	125.00	62.50	
04515	Luke, Benjamin	5/15/2017	2.00	125.00	250.00	
04515	Luke, Benjamin	5/16/2017	6.50	125.00	812.50	
04515	Luke, Benjamin	5/17/2017	2.25	125.00	281.25	
04515	Luke, Benjamin	5/22/2017	2.00	125.00	250.00	
04885	Fuller, Claude	4/26/2017	.25	80.00	20.00	
04885	Fuller, Claude	4/27/2017	.50	80.00	40.00	
04885	Fuller, Claude	4/29/2017	.25	80.00	20.00	
04885	Fuller, Claude	5/1/2017	.25	80.00	20.00	
04885	Fuller, Claude	5/2/2017	.50	80.00	40.00	
04885	Fuller, Claude	5/3/2017	1.00	80.00	80.00	
04885	Fuller, Claude	5/4/2017	1.00	80.00	80.00	
04885	Fuller, Claude	5/5/2017	.25	80.00	20.00	
04885	Fuller, Claude	5/9/2017	1.00	80.00	80.00	
04885	Fuller, Claude	5/12/2017	.75	80.00	60.00	
04885	Fuller, Claude	5/16/2017	.50	80.00	40.00	
04885	Fuller, Claude	5/17/2017	.25	80.00	20.00	
04885	Fuller, Claude	5/22/2017	.50	80.00	40.00	
04885	Fuller, Claude	5/24/2017	.25	80.00	20.00	
<b>Total for 300</b>			<b>38.50</b>		<b>5,886.25</b>	
<b>WBS2 Number: 400 Requests for Information (RFI)</b>						
04323	Robertson, Michael	5/22/2017	2.00	135.00	270.00	
04323	Robertson, Michael	5/23/2017	2.00	135.00	270.00	
04323	Robertson, Michael	5/24/2017	2.00	135.00	270.00	
04428	Abraham, Ronald	4/28/2017	2.00	225.00	450.00	

GWA Work Session - January 16, 2017 - ISSUES FOR DECISION

		Date	Total Hours	Billing Rate	Regular Billing	Prior Amount	To Date Amount
04428	Abraham, Ronald	5/3/2017	8.00	225.00	1,800.00		
04428	Abraham, Ronald	5/12/2017	2.00	225.00	450.00		
04428	Abraham, Ronald	5/16/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	5/17/2017	2.00	225.00	450.00		
04515	Luke, Benjamin	4/26/2017	1.00	125.00	125.00		
04515	Luke, Benjamin	4/27/2017	.75	125.00	93.75		
04515	Luke, Benjamin	5/5/2017	.50	125.00	62.50		
04515	Luke, Benjamin	5/15/2017	6.00	125.00	750.00		
04515	Luke, Benjamin	5/16/2017	1.00	125.00	125.00		
04515	Luke, Benjamin	5/17/2017	1.50	125.00	187.50		
04515	Luke, Benjamin	5/22/2017	2.00	125.00	250.00		
04515	Luke, Benjamin	5/23/2017	2.00	125.00	250.00		
04885	Fuller, Claude	4/27/2017	.50	80.00	40.00		
04885	Fuller, Claude	5/5/2017	.25	80.00	20.00		
04885	Fuller, Claude	5/15/2017	.75	80.00	60.00		
04885	Fuller, Claude	5/22/2017	.25	80.00	20.00		
<b>Total for 400</b>			<b>40.50</b>		<b>6,843.75</b>		
<b>WBS2 Number: 700 Project Management</b>							
02865	Stewart, Kenneth	4/26/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	4/28/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	5/1/2017	6.00	200.00	1,200.00		
02865	Stewart, Kenneth	5/3/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	5/4/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	5/5/2017	5.00	200.00	1,000.00		
02865	Stewart, Kenneth	5/15/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	5/17/2017	.50	200.00	100.00		
02865	Stewart, Kenneth	5/22/2017	2.00	200.00	400.00		
02865	Stewart, Kenneth	5/23/2017	.50	200.00	100.00		
04622	Duffy, Melissa	4/27/2017	1.00	120.00	120.00		
<b>Total for 700</b>			<b>24.00</b>		<b>4,720.00</b>		
<b>WBS2 Number: 800 Additional Services</b>							
<b>WBS3 Number: 801 Major Milestone Meetings/Site Visits</b>						<b>1,800.00</b>	<b>1,800.00</b>
<b>WBS3 Number: 802 Progress Meetings</b>						<b>3,522.50</b>	<b>3,522.50</b>
<b>WBS3 Number: 804 Equipment Witness Testing</b>							
02865	Stewart, Kenneth	4/26/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	4/28/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	5/4/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	5/5/2017	1.00	200.00	200.00		
02865	Stewart, Kenneth	5/8/2017	8.00	200.00	1,600.00		
02865	Stewart, Kenneth	5/9/2017	8.00	200.00	1,600.00		
02865	Stewart, Kenneth	5/10/2017	8.00	200.00	1,600.00		
02865	Stewart, Kenneth	5/11/2017	8.00	200.00	1,600.00		
02865	Stewart, Kenneth	5/12/2017	8.00	200.00	1,600.00		
04515	Luke, Benjamin	5/4/2017	2.00	125.00	250.00		
<b>Total for 804</b>			<b>46.00</b>		<b>9,050.00</b>	<b>2,512.50</b>	<b>11,562.50</b>
<b>WBS3 Number: 805 Start-up and Commissioning</b>							

		Date	Total Hours	Billing Rate	Regular Billing	Prior Amount	To Date Amount
02550	Baker, Kenneth	4/27/2017	2.00	250.00	500.00		
02550	Baker, Kenneth	5/3/2017	6.00	250.00	1,500.00		
<b>Total for 805</b>			<b>8.00</b>		<b>2,000.00</b>	<b>56,495.00</b>	<b>58,495.00</b>
<b>WBS3 Number: 806 Develop Training Manuals</b>						<b>14,643.75</b>	<b>14,643.75</b>
<b>WBS3 Number: 808 Operator Training</b>						<b>36,591.25</b>	<b>36,591.25</b>
<b>WBS3 Number: 812 Contractor Changes</b>							
04331	Johnson, David	5/16/2017	4.00	225.00	900.00		
04331	Johnson, David	5/24/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	5/2/2017	8.00	225.00	1,800.00		
04428	Abraham, Ronald	5/12/2017	4.00	225.00	900.00		
04428	Abraham, Ronald	5/18/2017	4.00	225.00	900.00		
04515	Luke, Benjamin	5/24/2017	2.00	125.00	250.00		
<b>Total for 812</b>			<b>26.00</b>		<b>5,650.00</b>	<b>25,235.00</b>	<b>30,885.00</b>
<b>Total for 800</b>			<b>80.00</b>		<b>16,700.00</b>	<b>140,800.00</b>	<b>157,500.00</b>
<b>WBS2 Number: 900 Mechanical Submittals</b>							
04515	Luke, Benjamin	4/26/2017	1.50	125.00	187.50		
<b>Total for 900</b>			<b>1.50</b>		<b>187.50</b>	<b>5,666.25</b>	<b>5,853.75</b>
<b>Total Additional Services</b>					<b>16,887.50</b>	<b>146,466.25</b>	<b>163,353.75</b>
<b>Total for 41192.00</b>			<b>185.00</b>		<b>34,400.00</b>		
<b>Scoped Services</b>					<b>17,512.5</b>		

## Expense Detail

Tuesday, June 13, 2017

12:44:19 PM

Gresham, Smith and Partners

Transactions for 4/26/2017 through 5/24/2017

Trans Type	Reference Number	Date	Billing Amount	Full Description
<b>Project Number: 41192.00 Guam - Agat-Santa Rita WWTP (Phase 2)</b>				
<b>WBS2 Number: 000 NOT FOR TIMESHEET USE</b>				
<b>Reimbursable Expenses</b>				
<b>521.000 Printing</b>				
JE	0005230	5/9/17	4.74	Equitrac / Prints - 4/10/2017 - 05/09/2017
* JE	0005230	5/9/17	18.12	Equitrac / Prints - 4/10/2017 - 05/09/2017
<b>Total for 521.000</b>			<b>22.86</b>	
<b>532.000 Color Copy/Printing</b>				
* JE	0005230	5/9/17	97.50	Equitrac / Prints - 4/10/2017 - 05/09/2017
JE	0005230	5/9/17	20.00	Equitrac / Prints - 4/10/2017 - 05/09/2017
<b>Total for 532.000</b>			<b>117.50</b>	
<b>Total for Reimb. Exp.</b>			<b>140.36</b>	
<b>Total for 000</b>			<b>140.36</b>	
<b>WBS2 Number: 100 Addendums</b>				
<b>Total for 100</b>				
<b>WBS2 Number: 200 Meetings</b>				
<b>WBS3 Number: 201 Construction Kickoff Meeting</b>				
<b>Total for 201</b>				
<b>WBS3 Number: 202 Internal Progress Meetings</b>				
<b>Total for 202</b>				
<b>Total for 200</b>				
<b>WBS2 Number: 300 Shop Drawings/Submittals</b>				
<b>Total for 300</b>				
<b>WBS2 Number: 400 Requests for Information (RFI)</b>				
<b>Total for 400</b>				
<b>WBS2 Number: 500 O&amp;M Manuals</b>				
<b>Total for 500</b>				
<b>WBS2 Number: 600 Record Drawings</b>				
<b>Total for 600</b>				
<b>WBS2 Number: 700 Project Management</b>				
<b>Total for 700</b>				
<b>WBS2 Number: 800 Additional Services</b>				
<b>WBS3 Number: 801 Major Milestone Meetings/Site Visits</b>				
<b>Total for 801</b>				
<b>WBS3 Number: 802 Progress Meetings</b>				
<b>Total for 802</b>				
<b>WBS3 Number: 803 Technical Memorandums</b>				
<b>Total for 803</b>				
<b>WBS3 Number: 804 Equipment Witness Testing</b>				
<b>Reimbursable Expenses</b>				
<b>525.000 Travel</b>				
EX	0122976	4/26/17	2,650.23	Stewart, Kenneth
EX	0122976	4/26/17	29.00	Stewart, Kenneth
<b>Total for 525.000</b>			<b>2,679.23</b>	
<b>525.020 Lodging</b>				
EX	0123809	5/11/17	408.52	Stewart, Kenneth / Erlangen, Germany - Witness Test

	Trans Type	Reference Number	Date	Billing Amount	Full Description
<b>Total for 525.020</b>				<b>408.52</b>	
<b>528.000 Meals</b>					
	EX	0123809	5/11/17	7.61	Stewart, Kenneth / Erlangen, Germany - Witness Test
	EX	0123809	5/12/17	34.23	Stewart, Kenneth / Erlangen Germany - Witness Test
<b>Total for 528.000</b>				<b>41.84</b>	
<b>Total for Reimb. Exp.</b>				<b>3,129.59</b>	
<b>Total for 804</b>				<b>3,129.59</b>	
<b>WBS3 Number: 805 Start-up and Commissioning</b>					
<b>Reimbursable Expenses</b>					
<b>525.020 Lodging</b>					
	EX	0122980	4/21/17	271.16	Abraham, Ronald
<b>Total for 525.020</b>				<b>271.16</b>	
<b>525.030 Car Rental</b>					
	EX	0122980	4/22/17	150.00	Abraham, Ronald
<b>Total for 525.030</b>				<b>150.00</b>	
<b>527.000 Telephone</b>					
	EX	0122983	4/8/17	50.00	Luke, Benjamin / International Phone Passport
<b>Total for 527.000</b>				<b>50.00</b>	
<b>528.000 Meals</b>					
	EX	0122980	4/19/17	19.47	Abraham, Ronald
	EX	0122980	4/20/17	86.99	Abraham, Ronald
	EX	0122980	4/21/17	7.27	Abraham, Ronald
<b>Total for 528.000</b>				<b>113.73</b>	
<b>Total for Reimb. Exp.</b>				<b>584.89</b>	
<b>Total for 805</b>				<b>584.89</b>	
<b>WBS3 Number: 806 Develop Training Manuals</b>					
<b>Total for 806</b>					
<b>WBS3 Number: 807 Laboratory Testing</b>					
<b>Total for 807</b>					
<b>WBS3 Number: 808 Operator Training</b>					
<b>Reimbursable Expenses</b>					
<b>525.020 Lodging</b>					
	EX	0122980	4/21/17	271.16	Abraham, Ronald
<b>Total for 525.020</b>				<b>271.16</b>	
<b>525.030 Car Rental</b>					
	EX	0122980	4/22/17	150.00	Abraham, Ronald
<b>Total for 525.030</b>				<b>150.00</b>	
<b>528.000 Meals</b>					
	EX	0122980	4/21/17	40.00	Abraham, Ronald
<b>Total for 528.000</b>				<b>40.00</b>	
<b>Total for Reimb. Exp.</b>				<b>461.16</b>	
<b>Total for 808</b>				<b>461.16</b>	
<b>WBS3 Number: 809 I&amp;C Training</b>					
<b>Total for 809</b>					
<b>WBS3 Number: 810 Vendor O&amp;M Manuals</b>					
<b>Total for 810</b>					
<b>WBS3 Number: 811 Standard Operating Procedures</b>					
<b>Total for 811</b>					
<b>WBS3 Number: 812 Contractor Changes</b>					
<b>Total for 812</b>					

<b>Trans Type</b>	<b>Reference Number</b>	<b>Date</b>	<b>Billing Amount</b>	<b>Full Description</b>
Total for 800			4,175.64	
WBS2 Number: 900 Mechanical Submittals				
Total for 900				
Total for 41192.00			4,316.00	
Scoped Services			140.36	



BL

Below is a summary of the lab equipment required to carry out the WW characterization for Northern District. I have omitted everyday items such as glass fiber filters, glassware, etc. with the belief that these can be acquired from GWA's stock. The big purchases are the spectrophotometer and the digital reactor (data sheets attached) which will be turned over to the Agat lab following completion of the characterization. The test kits detailed below will likely be exhausted during the WW characterization. Prices are preliminary and do not include taxes or shipping.

HACH EQUIPMENT TO BUY			
Equipment	Quantity Required	Unit Price	Total Price
DR6000 Spectrophotometer	1	\$ 9,000.00	\$ 9,000.00
DRB200 Reactor (Dual 21x13mm, 4x20mm)	1	\$ 1,358.00	\$ 1,358.00
TNTPlus NH3-N (2-47mg/L N)	4	\$ 53.00	\$ 212.00
TNTPlus COD (20-1,500 mg/L)	12	\$ 54.00	\$ 648.00
TNTPlus TN (5-40mg/L N)	4	\$ 73.00	\$ 292.00
TNTPlus TP & Ortho (2-20mg/L PO4-P)	8	\$ 53.00	\$ 424.00
TNTPlus TKN (0-16mg/L TKN)	4	\$ 134.00	\$ 536.00
TNTPlus Alk (50-400mg/L CaCO3)	4	\$ 41.00	\$ 164.00
Reaction Tubes 20mm	5	\$ 19.00	\$ 95.00
			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
		<b>Total</b>	<b>\$ 12,729.00</b>

## ATTACHMENT 5

**Geo-Engineering & Testing, Inc.**

P O Box 8170  
 Tamuning, Guam 96931  
 Tel No. 646-7710  
 Fax No.646-6600

**INVOICE**

DATE	INVOICE #
3/29/2017	53-311.108A

BILL TO
Duenas,Camacho & Associates P.O.Box 8900 Tamuning, Guam 96931 Attn: Mr. Thomas P. Camacho

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

Project Number: \_\_\_\_\_

DESCRIPTION	AMOUNT
Test Boring at Retaining Wall Construction of Agat-Santa Rita WasteWater Treatment Plant	
Guam EPA soil boring permit and inspection	300.00
Site coordination, including site visit and plotting of borings	400.00
Site access clearing, including gravel backfill for set-up of drill rig (Contractor to provide at no cost to us )	
Mobilization/demobilization of drill rig and crew and set-up to drill	1,000.00
Test borings including logging and sampling, 2 test borings x 30 ft. x \$50/ft.	3,000.00
Laboratory testing	1,000.00
Engineering, report, manage	4,000.00
Drafting, clerical support	600.00
Subtotal	10,300.00
Add: 4.17% tax	429.51
Thank you for your business.	
<b>Total Due</b>	<b>\$10,729.51</b>

Invoice is due on presentation and is past-due after 30 days from invoice date. Finance charge of 1.5% per month will be added on past due accounts. Collection fee, if applicable, will be added to the account.



**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. 15-FY2018**

Relative to Approval of Change Order No. 2 for the GWA Line Replacement – Phase IV Construction Contract

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

The project is part of the continuing waterline replacement program to reduce water loss in the water distribution system throughout the island. The Change Order proposal is to increase the 6-inch diameter water main currently under contract to be installed to a larger 12-inch diameter water main so as to handle the volume of water that will be pumped from the soon to be completed AG-10 production well which is located adjacent to Chalan Koda. The AG-10 production well construction project is slated to start within 2018 therefore it would be incumbent upon GWA to address the watermain along Chalan Koda given the current waterline replacement scope along this stretch of roadway.

#### **Where is the location?**

The change order involves increasing the 6-inch diameter water main to be installed to a 12-inches diameter watermain along Chalan Koda in Dededo, along with changes to appurtenant fittings, valves and hydrant locations.

#### **How much will it cost?**

The fee proposal for the change order is One Million Fifty-Six Thousand Nine Hundred Thirty-Seven Dollars (\$1,056,937.00) to increase the watermain to 12-inch diameter which would then bring the total authorized contract value to Eight Million Nine Hundred Forty-Two Thousand Nine Hundred Eighty-Three Dollars and Fifty Cents (\$8,942,983.50). GWA management further seeks CCU approval of the total authorized funding of Nine Million Three Hundred Thirty-Eight Thousand Three Hundred Thirty-Five Dollars and Eighty-Three Cents (\$9,338,335.83) which still includes the original contingency fund of Three Hundred Ninety-Four Thousand Three Hundred Fifty-Two Dollars and Thirty-Three Cents (\$394,352.33).

#### **When will it be completed?**

The contractor is expected to complete the waterline installation by March 2019.

#### **What is the funding source?**

The source of funding for the change order will be from the Bond proceeds under CIP PW 09-03 "Water Distribution System Pipe Replacement" and funds from the System Development Charge fund.

#### **The RFP/BID responses (if applicable):**

NOT APPLICABLE



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

**GWA RESOLUTION NO. 15-FY2018**

**RELATIVE TO APPROVAL OF CHANGE ORDER No. 2 FOR THE GWA LINE  
REPLACEMENT – PHASE IV 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**, The CCU approved via Resolution 01-FY2016 for GWA management to enter into contract with Giant Construction Corporation to continue to provide construction services for water service lateral upgrades and replacement of existing old and leaking waterlines with new pipes ranging in size from 2 inches to 8 inches in diameter to reduce water loss in the potable water system throughout the island; and

**WHEREAS**, the above noted resolution approved the funding total of Seven Million Eight Hundred Eighty-Seven Thousand Forty-Six Dollars and Fifty Cents (\$7,887,046.50), along with a five percent (5%) contingency of Three Hundred Ninety-Four Thousand Three Hundred Fifty-Two Dollars and Thirty-Three Cents (\$394,352.33) to bring the total authorized funding amount to Eight Million Two Hundred Eighty-One Thousand Three Hundred Ninety-Eight Dollars and Eighty-Three Cents (\$8,281,398.83).; and

**WHEREAS**, GWA to date has replaced approximately 100,000 linear feet of waterline throughout the island and intends to continue the waterline replacement program as part of GWA’s efforts to reduce the non-revenue water rate as well as improvements to the system where service delivery has been below standard; and

1       **WHEREAS**, one of the locations slated for line replacement as part of Giant  
2 Construction's scope is along Chalan Koda in Dededo wherein the existing/old 2" water line is  
3 to be replaced with a 6" diameter watermain; and

4  
5       **WHEREAS**, adjacent to Chalan Koda is a proposed GWA production well AG-10  
6 which is slated for construction in the near future which requires a minimum water distribution  
7 line to be 12-inches in diameter to handle the volume of water pumped from the new  
8 production well into the water distribution system; and

9  
10       **WHEREAS**, GWA management seeks to change order the existing contract scope with  
11 Giant Construction by requiring an increase in size of over 13,800 linear feet of waterline from  
12 the 6-inch diameter water main currently under contract to be installed to a 12-inch diameter  
13 water main along Chalan Koda as a means of preparing for the new well project; and

14  
15       **WHEREAS**, GWA engineering negotiated with Giant Construction Corporation to  
16 increase the 6-inch diameter pipe to be installed to a 12-inch diameter pipe, including fittings,  
17 valves and hydrants (See Exhibit A) for an additional fee of One Million Fifty-Six Thousand  
18 Nine Hundred Thirty-Seven Dollars (\$1,056,937.00); and

19  
20       **WHEREAS**, GWA Management seeks CCU approval of the Change Order with Giant  
21 Construction Corporation to increase the pipe size from 6-inches in diameter to 12-inches at a  
22 cost of One Million Fifty-Six Thousand Nine Hundred Thirty-Seven Dollars (\$1,056,937.00)  
23 which would then bring the total authorized contract value to Eight Million Nine Hundred  
24 Forty-Two Thousand Nine Hundred Eighty-Three Dollars and Fifty Cents (\$8,942,983.50);  
25 and

26  
27       **WHEREAS**, the total authorized contract value to Eight Million Nine Hundred Forty-  
28 Two Thousand Nine Hundred Eighty-Three Dollars and Fifty Cents (\$8,942,983.50) plus the  
29 original five percent (5%) contingency of Three Hundred Ninety-Four Thousand Three  
30 Hundred Fifty-Two Dollars and Thirty-Three Cents (\$394,352.33) will bring the total  
31 authorized funding amount to Nine Million Three Hundred Thirty-Eight Thousand Three  
32 Hundred Thirty-Five Dollars and Eighty-Three Cents (\$9,338,335.83); and

1       **WHEREAS**, the source of funding for the change order will be from the Bond  
 2 proceeds under CIP PW 09-03 “Water Distribution System Pipe Replacement” and funds from  
 3 the System Development Charge fund; and

4  
 5       **NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities  
 6 does hereby approve and authorize the following:

- 7
- 8       1. The recitals set forth above hereby constitute the findings of the CCU.
- 9       2. The CCU finds that the terms of the change order proposal submitted by  
 10 Giant Construction Corp. to be fair and reasonable.
- 11       3. The CCU finds that the terms of the conditions set by GWA relative to  
 12 commencement of subsequent work activities are fair and reasonable and  
 13 serve as a measure of Quality Assurance/Quality Control (QA/QC).
- 14       4. The CCU hereby authorizes the management of GWA to accept the change  
 15 order proposal from “Giant Construction Corp.” attached hereto as Exhibit  
 16 A, and which is incorporated into this Resolution in its entirety.
- 17       5. The CCU hereby further authorizes the management to execute the change  
 18 order with “Giant Construction Corp.”, in the amount of One Million Fifty-  
 19 Six Thousand Nine Hundred Thirty-Seven Dollars (\$1,056,937.00).
- 20       6. The CCU hereby further approves the increased contract value of Eight  
 21 Million Nine Hundred Forty-Two Thousand Nine Hundred Eighty-Three  
 22 Dollars and Fifty Cents (\$8,942,983.50) plus the original five percent (5%)  
 23 contingency of Three Hundred Ninety-Four Thousand Three Hundred Fifty-  
 24 Two Dollars and Thirty Three Cents (\$394,352.33) to bring the total  
 25 authorized funding amount to Nine Million Three Hundred Thirty-Eight  
 26 Thousand Three Hundred Thirty-Five Dollars and Eighty Three Cents  
 27 (\$9,338,335.83).
- 28       7. The CCU hereby further approves the source of funding for the construction  
 29 project will be from the Bond proceeds under CIP PW 09-03 “Water  
 30 Distribution System Pipe Replacement” and/or funds from the System  
 31 Development Charge fund and further approves GWA Management to seek  
 32 PUC approval if applicable to use SDC funds.

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

3  
4       **DULY AND REGULARLY ADOPTED**, this 23<sup>rd</sup> day of January 2018.

5  
6 Certified by:

Attested by:

7  
8 \_\_\_\_\_  
9 **JOSEPH T. DUENAS**  
10 Chairperson

\_\_\_\_\_

**J. GEORGE BAMBA**  
Secretary

11  
12 I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as  
13 evidenced by my signature above do hereby certify as follows:

14 The foregoing is a full, true and accurate copy of the resolution duly adopted at a  
15 regular meeting by the members of the Guam Consolidated Commission on Utilities,  
16 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:

17 AYES: \_\_\_\_\_

18 NAYS: \_\_\_\_\_

19 ABSTENTIONS: \_\_\_\_\_

20 ABSENT: \_\_\_\_\_

21  
22  
23  
24  
25 ///



## Exhibit A (1 of 4)

### GIANT CONSTRUCTION CORP.

P.O. Box 9578 Tamuning, Guam 96931  
Tel.: (671) 649-6472 • Fax.: (671) 646-3693  
E-mail: giantconst@gmail.com

Dec. 04, 2017

#### Guam Waterworks Authority

**Mr. Miguel Bordallo P.E.**

Interim General Manager  
Gloria B. Nelson Public Service Building  
688 Route 15  
Mangilao, Guam 96913

Attention : Mrs. Thomas Cruz / Chief Engineer

Project : GWA Line Replacement - Phase IV  
GWA Project No. W15-003-BND

Subject : Proposal of 12" water line in Chalan Koda, Chalan Bada, and Road S-28


Dear Sir

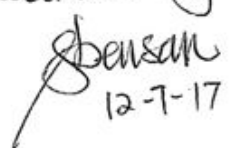
Hafa Adai! This is our proposal of as followed area and scope of work,

- |  |               |
|--|---------------|
| 1. Chalan BADA ( From Route 9 to Chalan BARETA )                                       | \$ 554,600.00 |
| a. 12" PVC water line total 3,900 LF   |               |
| b. Connection work in Route 9 ( Existing 12 PVC water line )                           |               |
| c. Fire hydrant 4 EA, service lateral connection 5 EA, and 12" gate valve 14 EA        |               |
| 2. Chalan Koda ( From BARETA to Lucky Street AG-10 )                                   | \$ 144,057.00 |
| a. Additional cost change from 6" PVC water to 12" ( Total length 2,721 LF )           |               |
| b. Additional cost change from all of 6" fittings to 12" fittings                      |               |
| c. Additional 6" stub out for future connection 1 each                                 |               |
| 3. Chalan Koda ( From Lucky Street AG-10 to Chalan Koda and Chalan Piga Intersection ) | \$ 358,280.00 |
| a. 6" PVC water line change to 12" ( Total length 7,229 LF )                           |               |
| b. Change all of 6" fittings to 12" fittings   |               |
| c. Additional 6" stub out for future connection 3 each                                 |               |

**Total Additional Work Proposed Amount**

**\$ 1,056,937.00**

  
Chung, In-Chul  
Vice-President

Received by:  
  
12-7-17



## Exhibit A (2 of 4)

GWA Line Replacement- Phase IV Project  
GWA Project No. W15-003-BND

**Chalan BADA ( From Route 9 to Chalan BARETA )**

Pay Item	Description	BASE BID			
		Qty.	Unit	Unit Cost	Sub-Total
1.0 General Requiements			LS		
1.1	Mobilization /Demolization	1	LS		\$33,000.00
1.2	Bonding Fee & Insurance	1	LS		\$27,000.00
1.3	Permit application Fee	1	LS		\$6,800.00
1.4	Right of Way Confirmation	1	LS		\$13,000.00
1.5	Construction drawings	1	LS		\$23,000.00
2.0 Pipe Replacement					
2.1	12" PVC Water line AWWA C-900, DR-18, Class 150	3,900	LF	\$70.00	\$273,000.00
2.2	Connection work in Route 9	1	LS	\$5,000.00	\$5,000.00
2.3	Service lateral connection to existing water meter	5	LS	\$1,330.00	\$6,650.00
2.4	Fire hydrant including connection fittings, isolation valve, guard post complete in place	4	EA	\$5,300.00	\$21,200.00
2.5	Permanent road restoration including flowabfill concrete, steel plate cover, 2" thick hot mix asphalt	1	LS	\$11,000.00	\$11,000.00
2.6	Disinfection of new waterline	1	LS	\$7,800.00	\$7,800.00
2.7	Well No. AG-10 12" Stub out100 LF with valves	1	EA	\$18,700.00	\$18,700.00
2.8	Abandon existing waterline in place with cap/plug	1	LS	\$6,000.00	\$6,000.00
2.9	Air relief valve assembly	3	EA	\$4,130.00	\$12,390.00
2.10	Blow off valve assembly	2	EA	\$4,130.00	\$8,260.00
2.11	12" Gate valve with valve box frame and cover	14	EA	\$3,500.00	\$49,000.00
2.12	12" DI Fittings AWWA C-153 Mj x MJ w/Thrust block	12	EA	\$700.00	\$8,400.00
2.13	12" x 6" Lateral stub out with 6" gate valve	2	EA	\$3,100.00	\$6,200.00
2.14	2" Lateral connection ( Machete, Gachai Luchan )	2	EA	\$1,600.00	\$3,200.00
2.15	Clearing work	3200	SY	\$3.50	\$11,200.00
3.0 Project Completion					
3.1	As-built drawing	1	LS	\$3,800.00	\$3,800.00
Sub-Total				\$	\$554,600.00

## Exhibit A (3 of 4)

GWA Line Replacement- Phase IV Project  
GWA Project No. W15-003-BND

**Chalan KODA ( 6" PVC water line change to 12" PVC )**  
**( Chalan Bareta to Lucky street - Entrance of Well No. AG - 10 )**

Pay Item	Description	BASE BID			
		Qty.	Unit	Unit Cost	Sub-Total
1.0 General Requiements			LS		
1.1	Mobilization /Demolization	1	LS		\$0.00
1.2	Bonding Fee & Insurance	1	LS	\$8,800.00	\$8,800.00
1.3	Permit application Fee	1	LS	\$3,200.00	\$3,200.00
1.4	Right of Way Confirmation	1	LS		\$0.00
1.5	Construction drawings	1	LS	\$800.00	\$800.00
2.0 Pipe Replacement					
2.1	Additional cost 6" PVC Water line change to 12" PVC AWWA C-900, DR-18, Class 150	2,721	LF	\$32.00	\$87,072.00
2.2	Additional cost change from 6" to 12" Service lateral Saddle	15	EA	\$52.00	\$780.00
2.3	Well No. AG-10 12" Stub out100 LF with valves	1	LS	\$18,700.00	\$18,700.00
2.4	Fire hydrant fitting change from 6"x 6" to 12" x 6" fittings	2	EA	\$320.00	\$640.00
2.5	Permanent road restoration including flowabfill concrete, steel plate cover, 2" thick hot mix asphalt	1	LS	\$3,000.00	\$3,000.00
2.6	Disinfection additional	1	LS	\$3,800.00	\$3,800.00
2.7	2" Lateral connection	1	EA	\$1,700.00	\$1,700.00
2.8	12" Gate valve additional	2	EA	\$3,500.00	\$7,000.00
2.9	Air relief valve assembly saddle and valve change	1	EA	\$280.00	\$280.00
2.10	Blow off valve assembly saddle change	1	EA	\$55.00	\$55.00
2.11	6" gate valve change to 12" gate valve additional	2	EA	\$2,050.00	\$4,100.00
2.12	6" fittings change to 12" fittings	2	EA	\$315.00	\$630.00
2.13	12" x 6" Lateral stub out with 6" gate valve	1	EA	\$3,000.00	\$3,000.00
3.0 Project Completion					
3.1	As-built drawing	1	LS	\$500.00	\$500.00
Sub-Total				\$	\$144,057.00

## Exhibit A (4 of 4)

GWA Line Replacement- Phase IV Project  
GWA Project No. W15-003-BND

**Chalan KODA ( 6" PVC water line change to 12" PVC )**  
**(Lucky street - Entrance of Well No. AG - 10 to Chalan Koda and Chalan Piga Intersection )**

Pay Item	Description	BASE BID			
		Qty.	Unit	Unit Cost	Sub-Total
1.0 General Requiements			LS		
1.1	Mobilization /Demolization	1	LS	\$22,800.00	\$0.00
1.2	Bonding Fee & Insurance	1	LS	\$19,000.00	\$19,000.00
1.3	Permit application Fee	1	LS	\$7,600.00	\$7,600.00
1.4	Right of Way Confirmation	1	LS	\$0.00	\$0.00
1.5	Construction drawings	1	LS	\$2,000.00	\$2,000.00
2.0 Pipe Replacement					
2.1	Additional cost 6" PVC Water line change to 12" PVC AWWA C-900, DR-18, Class 150	7,229	LF	\$32.00	\$231,328.00
2.2	Additional cost change from 6" to 12" Service lateral Saddle	31	EA	\$52.00	\$1,612.00
2.3	Well No. AG-10 12" Stub out100 LF with valves	1	LS	\$18,700.00	\$18,700.00
2.4	Fire hydrant fitting change from 6"x 6" to 12" x 6" fittings	8	EA	\$320.00	\$2,560.00
2.5	Permanent road restoration including flowabfill concrete, steel plate cover, 2" thick hot mix asphalt	1	LS	\$6,000.00	\$6,000.00
2.6	Disinfection additional	1	LS	\$5,200.00	\$5,200.00
2.7	2" Lateral connection	5	EA	\$1,700.00	\$8,500.00
2.8	12" Gate valve additional	8	EA	\$3,500.00	\$28,000.00
2.9	Air relief valve assembly saddle and valve change	3	EA	\$280.00	\$840.00
2.10	Blow off valve assembly saddle change	2	EA	\$55.00	\$110.00
2.11	Additional cost change from 6" gate valve to 12" gate valve	8	EA	\$2,050.00	\$16,400.00
2.12	6" fittings change to 12" fittings	2	EA	\$315.00	\$630.00
2.13	12" x 6" Lateral stub out with 6" gate valve	3	EA	\$3,000.00	\$9,000.00
3.0 Project Completion					
3.1	As-built drawing	1	LS	\$800.00	\$800.00
Sub-Total				\$	\$358,280.00

GWA Work Session - January 16, 2017 - DIVISION REPORTS

**GWA Utility Services Division**  
**Monthly Status Report**  
**Month ending December 30, 2017**

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE	NOV 2017 MONTHLY TOTAL	WEEK ENDING:	WEEK ENDING:	WEEK ENDING:	WEEK ENDING:	WEEKLY AVERAGE	DEC 2017 MONTHLY TOTAL
	NOV 2017		12/9/2017	12/16/2017	12/23/2017	12/30/2017	DEC 2017	

**Customer Service Unit**

I. Service Delivery Points:

a. GBN Public Service Building – Fadian

- i. Total Customers Assisted :
- ii. Total Abandoned Requests :
- iii. Average Wait Time:
- iv. Average Service Time:
- iv. Breakdown by request type:

234	1171	272	210	236	156	219	874
31	157	32	19	22	17	23	90
12 minutes		13 minutes	11 minutes	9 minutes	11 minutes	12 minutes	
115 minutes		13 minutes	12 minutes	13 minutes	13 minutes	115 minutes	

- 1. Apply for water
- 2. Restore water cut for non payment
- 3. Terminate Water
- 4. Copy of Bill
- 5. Billing Dispute
- 6. Billing Dispute follow up
- 7. General Questions & Other
- 8. Report a water leak
- 9. Report water theft
- 10. Payment Arrangement

56	282	64	50	52	26	48	192
5	25	9	10	7	6	8	32
16	82	13	17	12	12	14	54
37	184	38	23	30	28	30	119
57	286	75	51	71	45	61	242
5	24	3	5	5	4	4	17
35	175	28	30	39	24	30	121
2	9	4	0	0	0	1	4
0	0	0	0	0	0	0	0
25	125	39	24	22	16	25	101

b. Julale Satellite Office – Hagatna

- i. Total Customers Assisted :
- ii. Total Abandoned Requests :
- iii. Average Wait Time:
- iv. Average Service Time:
- iv. Breakdown by request type:

222	1108	269	220	251	171	228	911
8	39	13	7	11	5	9	36
7 minutes		8 minutes	8 minutes	9 minutes	7 minutes	7 minutes	
11 minutes		10 minutes	10 minutes	10 minutes	13 minutes	11 minutes	

- 1. Apply for water
- 2. Restore water cut for non payment
- 3. Terminate Water
- 4. Copy of Bill
- 5. Billing Dispute
- 6. Billing Dispute follow up
- 7. General Questions & Other
- 8. Report a water leak
- 9. Report water theft
- 10. Payment Arrangement

44	220	36	38	48	37	40	159
5	27	5	1	1	0	2	7
21	105	18	16	17	11	16	62
44	218	54	38	56	24	43	172
55	274	85	67	55	52	65	259
4	19	4	3	7	3	4	17
25	127	26	27	32	29	29	114
1	5	1	2	1	0	1	4
0	0	1	1	0	0	1	2
25	125	43	31	34	16	31	124



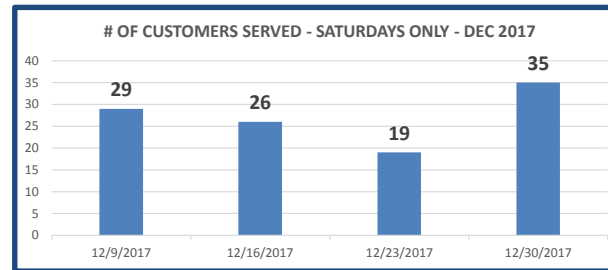
GWA Work Session - January 16, 2017 - DIVISION REPORTS

**GWA Utility Services Division**  
**Monthly Status Report**  
**Month ending December 30, 2017**

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:		WEEKLY AVERAGE NOV 2017	NOV 2017 MONTHLY TOTAL	WEEK ENDING: 12/9/2017	WEEK ENDING: 12/16/2017	WEEK ENDING: 12/23/2017	WEEK ENDING: 12/30/2017	WEEKLY AVERAGE DEC 2017	DEC 2017 MONTHLY TOTAL
c. Upper Tumon Satellite Office – Upper Tumon									
i. Total Customers Assisted :		266	1331	365	309	306	249	307	1229
ii. Total Abandoned Requests :		11	56	18	6	8	2	9	34
ii. Average Wait Time:		11 minutes		10 minutes	11 minutes	6 minutes	6 minutes	11 minutes	
iii. Average Service Time:		10 minutes		10 minutes	10 minutes	11 minutes	11 minutes	10 minutes	
iv. Breakdown by request type:									
1. Apply for water		58	288	86	71	55	50	66	262
2. Restore water cut for non payment		6	31	9	7	3	3	6	22
3. Terminate Water		24	122	36	26	25	16	26	103
4. Copy of Bill		57	286	85	73	78	53	72	289
5. Billing Dispute		64	320	88	62	86	61	74	297
6. Billing Dispute follow up		2	9	3	3	4	5	4	15
7. General Questions & Other		26	129	31	27	29	24	28	111
8. Report a water leak		3	17	3	6	3	1	3	13
9. Report water theft		0	2	0	0	1	0	0	1
10. Payment Arrangement		29	144	32	36	24	37	32	129
II. Customer Call Center									
a. Calls Recieved :		1089	5443	1317	862	1040	742	990	3961
b. Calls Immediately Answered :		652	3259	757	555	689	513	629	2514
c. Calls Abandoned		44	221	54	26	38	31	37	149
d. Calls Handled by Voice mail:		423	2117	503	281	320	209	328	1313
e. Average duration of calls answered:		6 minutes		3 minutes	4 minutes	4 minutes	5 minutes	4 minutes	
III. Customer Emails:									
a. Emails Recieved :									
i. customers@guamwaterworks.org		38	191	45	32	58	31	42	166
Breakdown by request type (email):									
1. Apply for water		2	8	5	1	1	0	2	7
2. Terminate Water		1	7	5	0	1	2	2	8
3. Copy of Bill		1	6	2	4	1	0	2	7
4. Billing Dispute & follow up		10	51	10	10	12	10	11	42
5. General Questions & Other		15	76	17	13	28	12	18	70
6. Report a water leak		3	16	2	2	5	4	3	13
7. Report water theft		0	0	0	0	0	0	0	0
8. Online services inquiry		5	27	4	2	10	3	5	19
ii. realtors@guamwaterworks.org		0	0	2	1	0	0	1	3
b. Emails Replied (both):		15	75	21	13	34	18	22	86

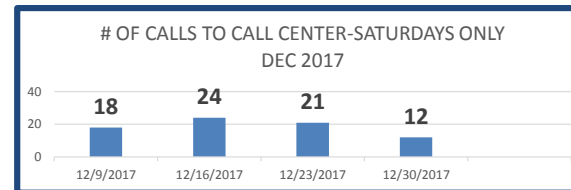
**GWA Utility Services Division**  
**Monthly Status Report**  
**Month ending December 30, 2017**

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE NOV 2017	NOV 2017 MONTHLY TOTAL	WEEK ENDING: 12/9/2017	WEEK ENDING: 12/16/2017	WEEK ENDING: 12/23/2017	WEEK ENDING: 12/30/2017	WEEKLY AVERAGE DEC 2017	DEC 2017 MONTHLY TOTAL
IV. Saturday Services: 9AM TO 1PM ONLY	24		29	26	19	35	27	
a. VISITS: Breakdown by request type:								
1. Apply for water	4		11	4	1	7	6	
2. Restore water cut for non payment	0		0	0	0	1	0	
3. Terminate Water	2		1	2	1	2	2	
4. Copy of Bill	7		9	6	6	7	7	
5. Billing Dispute	7		2	7	4	8	5	
6. Billing Dispute follow up	1		1	1	0	1	1	
7. General Questions & Other	1		2	0	0	3	1	
8. Report a water leak	0		1	1	0	0	1	
9. Report water theft	0		0	0	0	0	0	
10. Payment Arrangement	3		2	5	7	6	5	



b. CALLS TO CALL CENTER (Saturday services only):

12/9/2017	12/16/2017	12/23/2017	12/30/2017
18	24	21	12



**GWA Utility Services Division**  
**Monthly Status Report**  
**Month ending December 30, 2017**

<b>UTILITY SERVICES DIVISION UNITS &amp; ACTIVITIES:</b>	<b>WEEKLY AVERAGE NOV 2017</b>	<b>NOV 2017 MONTHLY TOTAL</b>	<b>WEEK ENDING: 12/9/2017</b>	<b>WEEK ENDING: 12/16/2017</b>	<b>WEEK ENDING: 12/23/2017</b>	<b>WEEK ENDING: 12/30/2017</b>	<b>WEEKLY AVERAGE DEC 2017</b>	<b>DEC 2017 MONTHLY TOTAL</b>
<b>Dispute Resolution &amp; Document Control</b>								
I. Dispute Resolution:								
a. Number of disputed accounts resolved:	7	35	7	9	15	13	11	44
b. Number of disputed accounts under review:	179	894	179	179	179	179	179	716
II. Document Control:								
a. Number of field activities posted :	416	2082	468	464	590	377	475	1899
b. Number of field activities pending:	1023	5113	809	756	637	505	677	2707
<b>Disconnect/Reconnect Unit</b>								
I. Number of field activities received:	259	1293	337	227	235	168	242	967
II. Number of field activities completed:	239	1193	370	236	251	183	260	1040
III. Number of field activities pending field action:	2	12	3	4	2	0	2	9
<b>Meter Reading Unit</b>								
I. Number of meters read:								
a. Electronically Read Meters:	8192	40962	10250	12146	10437	9014	10462	41847
b. Manually Read Meters:	35	173	29	43	26	55	38	153
II. Unread meters (Meters scheduled to be read but not read):	59	297	62	56	42	88	62	248
III. Number of data logs received:	30	151	40	40	37	30	37	147
IV. Number of data logs retrieved:	28	140	52	39	49	21	40	161
V. Number of data logs pending field action:	23	115	12	21	1	13	12	47
VI. Communication Errors/Reprogramming requests received (from CSU):	8	39	2	6	1	0	2	9
VII. Number of estimated readings (for the week):	34	168	48	46	34	74	51	202
a. Reasons for Estimations:								
i. Cant locate meter:	2	11	0	3	1	1	1	5
ii. Temporary Obstruction	1	5	1	2	0	5	2	8
iii. Vicious Dog	2	9	0	3	3	2	2	8
iv. Flooded meter	2	9	3	2	0	3	2	8
v. Corrective action requested (database corrections needed)	2	11	4	3	1	0	2	8
vi. Possible changed out meter:	17	86	14	10	8	14	12	46
vii. Communication/Programming error (code 92's):	3	16	2	4	1	3	3	10
viii. Other:	7	33	4	4	1	22	8	31
ix. Leaks detected on customer's private line:	947	4734	1370	1614	1178	972	1284	5134
x. Reverse Flow Detected	28	138	15	28	10	65	30	118
xi. No Usages Detected	194	968	301	325	309	362	324	1297
xii. Tamper Code	10	48	15	20	12	13	15	60
VII. Electronic Read Percentage: (for the week):	99%	99%	98%	98%	98%	98%	99%	99%

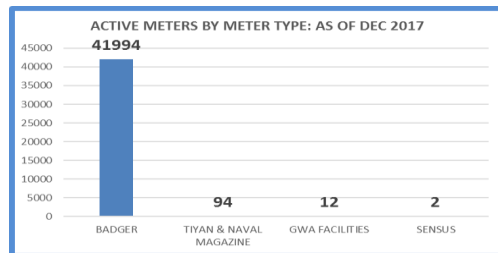
**GWA Utility Services Division**  
**Monthly Status Report**  
**Month ending December 30, 2017**

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE NOV 2017	NOV 2017 MONTHLY TOTAL	WEEK ENDING: 12/9/2017	WEEK ENDING: 12/16/2017	WEEK ENDING: 12/23/2017	WEEK ENDING: 12/30/2017	WEEKLY AVERAGE DEC 2017	DEC 2017 MONTHLY TOTAL
<b>Revenue Protection Unit</b>								
I. Number of Inactive Still Consuming Reports rec'd & investigated:	1	3	1	1	0	0	1	2
II. Number of Illegal Connection reports rec'd & investigated:	2	8	3	0	3	0	2	6

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report (as of Dec 30 2017):

METER TYPE	COUNT
SENSUS	2
METRON	
FARNIER	0
	2

a. Account & Meter Type Count :







## **Engineering Monthly Report December 2017/January 2018**

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

## Table of Contents

Section	Description	Page
A	Summary Table of 2010, 2013 and 2016 Bond	3
B	Projects Procurement	5
C	CIP Water Section	8
D	CIP Wastewater Section	12
E	CIP Engineering Support	16
F	GIS Section	17
G	Permits Section	18
H	SRF Project Status Report	19

## 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	100.00%	0.00%	\$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	\$ 500,000.00	100.00%	0.00%	\$ 1,861,000.00	99.49%	0.51%	\$ 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	96.25%	3.75%	\$ 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	20.93%	79.07%
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	0.00%	100.00%
PW 05-14	New Deep Wells at Dow n Hard	\$ 638,252.85	76.11%	23.89%	\$ 810,000.00	0.00%	100.00%	\$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	\$ 900,000.00	37.87%	62.13%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 05-16	Master Meters	\$ 1,600,000.00	99.44%	0.56%	\$ 784,000.00	99.88%	0.12%	\$ 3,616,000.00	4.19%	95.81%
PW 09-01	Ugum Water Treatment Plant Intake	\$ 700,000.00	99.47%	0.53%	\$ 982,000.00	100.00%	0.00%	\$ 18,000.00	0.00%	100.00%
PW 09-02	Water Wells	\$ -	N/A	N/A	\$ 4,200,000.00	46.77%	53.23%	\$ 2,500,000.00	13.60%	86.40%
PW 09-03	Water Distribution System	\$ 3,174,748.00	100.00%	0.00%	\$ 11,151,000.00	87.97%	12.03%	\$ 49,000.00	0.00%	100.00%
PW 09-04	Pressure Zone Realignment	\$ -	N/A	N/A	\$ 431,000.00	99.95%	0.05%	\$ 1,141,000.00	58.58%	41.42%
PW 09-06	Central Water Distribution System 2005	\$ 900,000.00	91.67%	8.33%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	\$ 1,200,000.00	100.00%	0.00%	\$ 430,000.00	99.60%	0.40%	\$ 100,000.00	0.00%	100.00%
PW 09-09	Water Reservoir Internal/External	\$ 2,000,000.00	73.20%	24.53%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ 800,000.00	0.00%	100.00%
PW 09-11	Water System Reservoirs 2005 Improvements	\$ 1,050,000.00	100.00%	0.00%	\$ 13,878,000.00	99.99%	0.01%	\$ 28,350,000.00	36.77%	63.23%
PW 11-01	Distribution System Upgrades	\$ 474,159.85	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 11-02	Ugum Water Treatment Plant Reservoir	\$ -	N/A	N/A	\$ 90,000.00	0.00%	100.00%	\$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	\$ 100,000.00	78.46%	21.54%	\$ -	N/A	N/A	\$ 1,000,000.00	0.00%	100.00%
PW 12-02	Production Plan / Reduce Navy Purchases	\$ 100,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 12-03	Hydraulic Assessment of Tanks	\$ 500,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 12-04	Agana Heights & Chaot Tanks	\$ 4,700,000.00	100.00%	0.00%	\$ 3,280,000.00	40.52%	59.48%	\$ 1,220,000.00	40.98%	59.02%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	\$ 1,900,000.00	95.16%	4.84%	\$ 11,605,000.00	99.99%	0.01%	\$ 1,895,000.00	96.15%	3.85%
PW 12-06	Tank Replacement Piti & Hyundai	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ 7,409,830.00	98.52%	1.48%
PW 12-07	Assessment of Malojlo 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	Wastewater 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	Wastewater 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	84.08%	0.06%	\$ 2,404,000.00	12.21%	71.15%
WW 09-06	Wastewater Collection System Rep/ Rehabilitation	\$ 1,105,000.00	99.93%	0.07%	\$ 780,000.00	97.55%	2.45%	\$ 2,920,000.00	0.00%	92.30%
WW 09-08	Facilities Plan/Design for Baza Gardens WWTP	\$ 1,250,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 09-10	Facilities Plan/Design for Agat-Santa Rita WWTP	\$ 899,630.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 11-03	Baza Gardens STP Replacement	\$ 1,301,947.00	24.27%	11.57%	\$ 3,114,883.00	99.97%	0.03%	\$ 29,400,170.00	99.31%	0.69%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	\$ 900,000.00	100.00%	0.00%	\$ 473,000.00	100.00%	0.00%	\$ 527,000.00	47.44%	52.56%
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	48.72%	51.28%
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	99.26%	0.74%
WW 12-08	Wastewater System GIS & Mapping	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-09	Wastewater Facility Back Up Power	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-10	Wastewater System Asset Inventory	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 17-01	Wastewater Sewer 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	76.92%	23.08%
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	99.93%	0.07%	\$ 1,177,000.00	61.46%	38.54%
EE-09-09	SCADA Improvements - Phase 4	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ 6,500,000.00	0.00%	93.08%
		\$ 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	84.10%	15.90%	\$ 2,769,460.00	53.83%	37.19%
MC-15-01	Information Technology Intergration Improvements	\$ -			\$ -			\$ 500,000.00	40.70%	59.30%
		\$ 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	84 **	\$83.354	95.37%	11.91
2013	\$139.325	47 **	\$131.064	94.07%	33.46
2015	\$140.019	17	\$79.548	56.81%	56.15
* - End date November 2013 via CCU Resolution 06-FY2014					
** - Includes month of December 2017					

## **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:**

<b>(Type of Procurement)</b> (Relevant CIP NO. or Funding Source)	<b>(Project Title)</b>	
(Percentage complete for procurement)	<b>Activities/Notes:</b> (see percentage key above)	<b>Consultant</b> (listed when selected)
Project Description	Summary of project description	

<b><u>BID PACKAGE</u></b> PW 09-02	<b>New Well Construction</b>	
<50% Complete	<b>Activities/Notes:</b> GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-10. Internal GWA discussions underway for survey and appraisal services.	
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.	

<b><u>RFP</u></b> PW 09-02	<b>New Well Construction (Construction Management)</b>	
<50% Complete	<b>Activities/Notes:</b> 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.	

<b>RFP</b> PW 12-04, PW 12-06 AND PW 09-11	<b>Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management</b>	
100% Complete	<b>Activities/Notes:</b> Contract fully executed. NTP issued December 20, 2017.	
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.	

<b>BID PACKAGE</b> PW 12-04, PW 12-06 AND PW 09-11	<b>Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction</b>	
99% Complete	<b>Activities/Notes:</b> Contract with finance for fund certification.	
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.	

<b>BID PACKAGE</b> PW 14-01	<b>Fire Hydrant Replacement Phase I</b>	
<50% Complete	<b>Activities/Notes:</b> 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.	

<b>RFP</b> WW 09-01	<b>Yigo SPS Flood Protection and Rehabilitation Design</b>	
90% Complete	<b>Activities/Notes:</b> RFP Proposals received and evaluated. AECOM selected and scoping and fee negotiations on going.	
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.	

<b>RFP</b> PW 09-11	<b>Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management</b>	
95% Complete	<b>Activities/Notes:</b> Resolution to CCU to be presented in January meeting for contact approval.	
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.	

<b>BID PACKAGE</b> PW 09-03, PW 09-04 AND PW 09-11	<b>Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction</b>	
<50% Complete	<b>Activities/Notes:</b> Designs for all tanks complete. 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 three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

<b>BID PACKAGE</b> EE 09-08, EE 09-09	<b>SCADA Phase A1 Construction</b>	
<50% Complete	<b>Activities/Notes:</b> Designs complete, bid package being prepared for bid.	
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 the island.	

<b>RFP</b> EE 09-08, EE 09-09	<b>SCADA Phase A1 Construction Management</b>	
<50% Complete	<b>Activities/Notes:</b> SCADA scope of work being finalized.	
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 throughout 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.	

**BOX KEY FOR PROJECT:**

<b>(Type of Project)</b> (Relevant CIP NO.)	<b>(Project Title)</b> <b>(Contractor or consultant)</b>	<b>Start Date:</b> (month and year)
(Percentage complete for project)	<b>Activities/Notes:</b> (brief description of activity)	<b>Completion Date:</b> (month and year)
(Court Order Paragraph No.)	(Project type)	
Project Description	Project Description Narrative	

**C. CIP Water Section**

<b>INSPECTION</b> CIP PW 05-02	<b>Inspection &amp; Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)</b>	<b>Start Date:</b> April 2010
80% Complete	<b>Activities/Notes:</b> Still waiting for Quotes for tank bypass/take down for Umatac #1 and Pigua. Supplier for Agat/Umatac tank by-pass ordered and installed wrong controller, sill requires contractor to rectify. Testing occurred for Malojloj tank take down, Ops to shut valve, another by-pass is needed. Working on plan for Kaiser, Windward and Agat #1 take down.	<b>Completion Date:</b> 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.	

<b>DESIGN</b> CIP PW 05-12	<b>Brigade II BPS Upgrade (EM Chen)</b>	<b>Start Date:</b> April 2012
100% complete (Basis of Design) 0% (Design)	<b>Activities/Notes:</b> Preliminary design on-going. Expect to receive 30% design in February 2018.	<b>Completion Date:</b> 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 meet system head requirements.	

<b>DESIGN / BUILD</b> CIP PW 12-04	<b>Reservoirs 2005 Improvements, Chaot &amp; Agana Heights Reservoirs (GSI Construction)</b>	<b>Start Date:</b> April 2013
99% Complete	<b>Activities/Notes:</b> Warranty work complete at both reservoirs. Remaining work is deep well flow meter replacement.	<b>Completion Date:</b> Due to delays from contractor new anticipate completion is



		November 2017
CO 38B	Design/Construction services	
Project Description:	The project is to replace the existing 1.0MG steel reservoirs with 0.5MG concrete tanks at the Chaot and Agana Heights reservoir locations. The contractor shall also link certain A-series wells to the reservoir via SCADA.	

<b>DESIGN</b> CIP PW 12-05	<b>Yigo and Astumbo 2MG Tank Design Project (Lyons)</b>	<b>Start Date:</b> September 2013
99% complete	<b>Activities/Notes:</b> Design firm to provide RFI support during the construction.	<b>Completion Date:</b> 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.	

<b>DESIGN</b> PW 09-11	<b>Northern and Southern Guam Reservoir Design (TG Engineers)</b>	<b>Start Date:</b> May 2015
60% Complete	<b>Activities/Notes:</b> Santa Rosa – 100% design in hand. Santa Rita – 100% design in hand. Inarajan – Land procurement second site related to new BPS's still on-going. Sinifa – 100% design in hand. Ugum – GWA still in discussion with re-evaluation and discussion with property owner of alternative property on-going.	<b>Completion Date:</b> 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.	

<b>DESIGN</b> PW 12-04	<b>Central Guam Reservoirs Design (GHD Inc.)</b>	<b>Start Date:</b> May 2015
65% Complete	<b>Activities/Notes:</b> Chaot #2 – Chaot off-site work part of base bid. Contract with finance for fund cert. Chaot Tank work expected to be Change Order in once funding available. Tumon #2 – Tumon tank part of base bid. Contract with finance for fund cert. Hyundai – Hyundai tank part of base bid. Contract with Finance for fund cert. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon – Geotech work complete. 60% design near complete. Tumon #1 – GWA working on land issues.	<b>Completion Date:</b> 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.	

<b>CONSTRUCTION</b> PW 09-03	<b>Line Replacement Phase IV (Giant Construction)</b>	<b>Start Date:</b> 02/14/16
60% Complete	<b>Activities/Notes:</b> Contractor working in Santa Rita (Santa Rosa Subd.) and still working on ROW/easement issue along Famha Rd. Making reconnections/finalizing in Agafa Gumas, Chalan Agoan and Perez Gardens, Machanao.	<b>Completion Date:</b> 02/06/18
	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.	

<b>DESIGN</b> PW 05-15	<b>Asan Spring Rehabilitation Design (HDR)</b>	<b>Start Date:</b> August 24, 2016
10% Complete	<b>Activities/Notes:</b> GWA receive approval from Parks Service start design field investigation work. Design Investigation is proceeding.	<b>Completion Date:</b> 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:	<ul style="list-style-type: none"> <li>- 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.</li> <li>- Review and validate the current property boundary information to confirm the available space for the project development.</li> <li>- Perform an environmental impact study and prepare all required permits as needed.</li> <li>- Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed.</li> <li>- 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.</li> <li>- 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.</li> <li>- Identify the existing and projected service area, period of design.</li> <li>- Identify and recommend conceptual water treatment system.</li> <li>- 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.</li> </ul>	

<b>CONSTRUCTION</b> PW 09-11, PW 12-05	<b>Yigo/Astumbo Tank Construction (Pernix)</b>	<b>Start Date:</b> 12/1/16
40% Complete	<b>Activities/Notes:</b> Yigo #1 core wall #1 through #6 complete. Yigo #2 preparing main foundation. Astumbo #1 preparing main foundation.	<b>Completion Date:</b> 02/06/18
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

<b>CONSTRUCTION MANAGEMENT</b> PW 09-11, PW 12-05	<b>Yigo/Astumbo Tank Construction Management (GHD)</b>	<b>Start Date:</b> December 2016
35% complete	<b>Activities/Notes:</b> Processing submittals and on-site inspection	<b>Completion Date:</b> February 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.
--	--

## **D. CIP Wastewater Section**

<b>DESIGN</b> WW 11-08	<b>Agat-Santa Rita WWTP Replacement (DCA)</b>	<b>Start Date:</b> October 2014
99% Complete	<b>Activities/Notes:</b> Design complete. Services during construction on-going through Nov 2017. <b>CCU resolution before the January CCU to extend design services during construction.</b>	<b>Completion Date:</b> Nov. 2015 (design); April 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	

<b>INSPECTION</b> 2010 BOND WW 12-05 2010 BOND WW 05-04 2013 BOND WW 05-04	<b>SSES Central Sewer System (HDR)</b>	<b>Start Date:</b> November 2014
<b>99% Complete</b>	<b>Activities/Notes:</b> <b>GWA still awaiting final report from HDR.</b>	<b>Completion Date:</b> <b>January 2018</b>
CO 8 (c)	Engineering Inspection Services	
Project Description:	Work specifically required includes data analysis, development of hydraulic modeling, and development of an SSES fieldwork plan, manhole inspections, smoke testing, CCTV inspection and preparation of a Project Report.	

<b>CONSTRUCTION MANAGEMENT</b> WW 11-08	<b>Agat Santa Rita WWTP CM (GHD)</b>	<b>Start Date:</b> November 2014
100% (PH 1) 100% Complete (PH 2, Part 1) 80% Complete (PH 2, Part B)	<b>Activities/Notes:</b> Typical CM inspections on-going. Change order required to continue services through April 2018.	<b>Completion Date:</b> 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.	

<b>CONSTRUCTION</b> WW 11-08	<b>Agat Santa Rita WWTP Phase II (Sumitomo Construction)</b>	<b>Start Date:</b> January 2016
Part 1 of Phase II- 100% Complete <b>Part 2 of Phase II- 80% complete</b>	<b>Activities/Notes:</b> Contractor still working on second ditch, second clarifier, headworks, aerobic digester, equalization basin, admin and maintenance buildings.	<b>Completion Date:</b> Phase A: 03/15/17 Phase B: 12/31/17 will not be met, April 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.	

<b>DESIGN</b> WW 09-08, WW11-03	<b>Baza Gardens Cross Island Sewer Design (DCA)</b>	<b>Start Date:</b> 02/05/16
<b>99% Complete</b>	<b>Activities/Notes:</b> <b>DCA providing engineering services during construction.</b>	<b>Completion Date:</b> 04/30/18( <b>this completion date will have to be extended.</b> )
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.	

<b>DESIGN</b> WW 09-06	<b>Bayside SPS Improvements Design (EMPSCO)</b>	<b>Start Date:</b> July 29, 2016
99% Complete	<b>Activities/Notes:</b> Design consultant continuing to work on Army Corp of Engineers permit. GWA received 100% design and under review.	<b>Completion Date:</b> 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.	

<b>CONSTRUCTION</b> WW 09-08, WW 11-03	<b>Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)</b>	<b>Start Date:</b> October 2016
--	--	---------------------------------

60% Complete	<b>Activities/Notes:</b> New SPS, force main and gravity line installation along Route 17 on-going.	<b>Completion Date:</b> Phase I: 03/01/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

<b>CONSTRUCTION MANAGEMENT</b> WW 09-08 WW 11-03	<b>Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)</b>	<b>Start Date:</b> December 5, 2016
55% Complete	<b>Activities/Notes:</b> Field inspection, project coordination and invoice review on-gong.	<b>Completion Date:</b> April 2018 (this completion date will have to be extended.)
	Construction Management services	
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

<b>CONSTRUCTION</b> WW 09-08, WW 11-03	<b>Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)</b>	<b>Start Date:</b> March 2017
40% Complete	<b>Activities/Notes:</b> New SPS, force main and gravity line installation along Route 17 on-going.	<b>Completion Date:</b> Phase II: 03/16/18 (this completion date will have to be extended.)
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	

<b>CONSTRUCTION</b> WW 09-08, WW 11-03	<b>Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)</b>	<b>Start Date:</b> June 2017
15% Complete	<b>Activities/Notes:</b> Pipeline construction on Route 17 on going.	<b>Completion Date:</b> Phase III: 03/16/18 (this completion date will have to be extended.)
	Construction services	

Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.
----------------------	--

<b>CONSTRUCTION</b> WW 11-04	<b>Umatac Merizo WWTP Design Build Improvements Project (CoreTech)</b>	<b>Start Date:</b> June 2017
5% Complete	<b>Activities/Notes:</b> Initial design work on-going. Coordination with operation for field survey on-going.	<b>Completion Date:</b> 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.	

<b>CONSTRUCTION MANAGEMENT</b> WW 11-04	<b>Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)</b>	<b>Start Date:</b> September 7, 2017
5%	<b>Activities/Notes:</b> Establishing communication links with project management team and contractor.	<b>Completion Date:</b> 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.	

<b>DESIGN</b> OEA GRANT	<b>Design Services for the Upgrade of the Northern District WWTP (DCA)</b>	<b>Start Date:</b> August 8, 2017
5% Complete	<b>Activities/Notes:</b> Wastewater treatment process workshops completed.	<b>Completion Date:</b> December 2018.
	Engineering design services	
Project Description:	The work performed under this project procurement shall consist of engineering design services for the conversion of the existing WWTP to secondary treatment. The design will require the existing plant to stay operational and the designer will use the new 17 acres GWA acquired to place new headworks, oxidation ditches and UV disinfection systems.	

**E. CIP Engineering Support**

<b>DESIGN</b> EE 09-08	<b>SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)</b>	<b>Start Date:</b> June 2015
100% complete	<b>Activities/Notes:</b> Final design in hand. GWA to work towards bidding out construction.	<b>Completion Date:</b> 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.	

<b>DESIGN</b> MC 05-01	<b>New GWA Lab Design Project (Laguana Architects)</b>	<b>Start Date:</b> June 2015
100% complete	<b>Activities/Notes:</b> Design complete however services continue into construction phase.	<b>Completion Date:</b> February 2016
N/A	Engineering design services	
Project Description:	The design firm is required to review all laboratory activities GWA's lab staff conduct for water and wastewater analysis after which they are to develop design drawing and specification to be bid out for construction. The design firm shall also take into account power and water needs to ensure the facility is self-sufficient.	

<b>CONSTRUCTION</b> MC 05-01	<b>New GWA Lab Construction (Mega United Construction)</b>	<b>Start Date:</b> NTP issued August 18, 2016
99% Complete	<b>Activities/Notes:</b> Punch list items and communication installation remaining. GWA to issue a letter to contractor relative to LD.	<b>Completion Date:</b> Early February 2018. LD to be assessed.
	Construction services	
Project Description:	The project will involve construction of a new building at the GWA Upper Tumon compound to house the laboratory section. The facility will include office, laboratory and storage space for the lab employees. The facility will also include a back-up generator.	



**F. GIS Section**

<b><u>MAPPING</u></b> MC 05-02	<b>Island Wide Survey- (Duenas, Camacho &amp; Ass.)</b>	<b>Start Date:</b> December 2007
94% complete	<b>Activities/Notes:</b> Task #12 map submitted to DLM for final approval. Task #13 awaiting GM approval for NTP. Task #14 work on-going.	<b>Completion Date:</b> New anticipated completion 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.	

<b><u>MAPPING</u></b> MC 05-02	<b>Island Wide Survey PH II - (Duenas, Camacho &amp; Ass.)</b>	<b>Start Date:</b> August 30, 2017
25% complete	<b>Activities/Notes:</b> Surveyor conducting field survey work and map preparation for 25 parcels. GWA reviewing maps submitted to date.	<b>Completion Date:</b> December 2018
	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	

**G. Permits Section**PERMITS  
MONTHLY REPORT 2017


	<b>2017</b>								<b>2018</b>
Description	Apr	May	Jun/Jul	Aug	Sept	Oct	Nov	Dec	Jan
Building Permit	17	23	27	27	27	12	7	11	
Occupancy Permit	5	25	28	28	30	13	9	3	
New Installation	15	15	33	33	25	17	3	14	
Sewer Application	3	4	3	3	7	5	18	15	
Sewer Inspection	0	1	0	0	1	1	1	0	
Private Utility Acceptance	0	0	0	0	0	0	0	0	
Relocation of Water Meter	0	0	0	0	0	0	0	0	
Tapping-Water	0	3	8	8	0	0	0	1	
Tapping-Sewer	1	3	5	5	0	0	0	0	
Clearance-Water	2	20	26	26	11	1	2	3	
Clearance-Sewer	2	20	26	26	11	0	2	3	
Highway Encroachment	6	20	12	12	25	4	19	0	
Verification of Utilities	5	1	8	8	7	0	1	4	
Fire Flow Test	0	0	3	3	1	3	0	0	
Schedule Water Outage	0	0	0	0	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.

GWA Work Session - January 16, 2017 - DIVISION REPORTS

Project	Project Description	Project Manager	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 01/16/18
1	Northern District SSES & I/I Study	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)	Brown & Caldwell	Design				The design was previously completed under bond funding.		
			Construction	1	10/30/2015	2/28/2017	\$ 1,170,583.82	Reliable Builders	· RBI proposing to do open cut to address the warranty descrpencies found on CCTV footage. GWA still waiting for work plan.
			Const. Mgmt	1	11/10/2015	3/30/2017	\$ 226,980.23	TG Engineers	· Due to CM over spending a Change Order had to be executed before contract can be closed out. CM release of claims and final invoice will then be
3	Asan-Adelup- Hagatna RT1 Sewer Line Rehabilitation and Replacement	Brown & Caldwell	Design	2	12/11/2015	3/30/2017 for Design requirements	\$ 1,780,210.00	HDR	Design complete.
			Construction		10/16/2016	6/30/2019			Procurement 75%. No bids submitted for Route 1 Phase I. PMO acquiring responses form companies that pick up bids as to why they did not bid. GWA expected to rebid asap.
			Const. Mgmt		6/30/2017	6/30/2019			Procurement 90%. CM scope and fee proposal received 6/23 (\$698K); due to canceling of bid GWA will repackaging bid therefore scope and fee will need to be refined.
4	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Brown & Caldwell	Design	3	11/17/2015	3/30/2017 for Design requirements	\$ 316,681.00	SSFM	SSFM providing services during bidding process as well as construction phase.
			Construction	6	8/31/2017	10/1/2018	\$ 4,554,451.00		Contractor still waiting on building permit. Expecting to get it this week Currently constructing manholes off site
			Const. Mgmt	8	9/19/2017	10/1/2018	\$ 584,725.00		CM reviewing and commenting on submittals.

GWA Work Session - January 16, 2017 - DIVISION REPORTS

5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	\$ 1,819,850.00	B&C	Project underway.
				Construction				The project does not involve construction.		
				Const. Mgmt						
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	Design	5	7/6/2015	01/30/2018 (revised due to financial workshop)	\$ 2,623,300.00	B&C	Brown and Caldwell working to complete draft final by end of January 2018.
				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	10/31/2017 (for design only)	\$ 1,758,247.00	AECOM	100% design review meeting was on 11/22. GEPA provided comments on 90% design, waiting for 100% design comments. AECOM visited sites with GPA to coordinate work required. Proceeding toward Final design.  A-12: Design rate of 200 gpm (45.5 ft drawdown). D-05: Design rate of 125 gpm (39 ft drawdown). A-02: Design rate of 250 gpm (34.6 ft drawdown). F-03: Design rate of 200 gpm (1.5 ft drawdown).
				Construction		3/23/2017	4/30/2018			
				Const. Mgmt		3/23/2017	4/30/2018			
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 submitted 100%, but working through some additional comments.
				Construction		3/23/2017	3/22/2018			
				Const. Mgmt		3/23/2017	3/22/2018			

GWA Work Session - January 16, 2017 - DIVISION REPORTS

9	Critical Sewer Pump Stations (7 stations)	Rehabilitation of various components of 7 pump stations that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita, Santa Ana, Southern Link, and Route 1.	CDM	Design				The design will be incorporated into the design/build package.		
			J. Davis	Design/Build	1	8/8/2016	3/30/2018	\$ 1,531,456.33	ProPacific	Upcoming change orders @ Fujita and Route 16 PS – Rehabilitate Roof Ventilation and Curb Repair is under process @ Route 16 PS – Set schedule for structural evaluation and rehabilitation of wet well on January 15, 2018. Additional time extension is needed. @ Fujita PS- Request for additional painting (Additive) and Macheche PS- Wet well coating below water surface eliminated. (Deductive)- under review.
				Const. Mgmt	2	9/9/2016	3/30/2018	\$ 299,519.00	Stanley	CM work ongoing. GWA working on Change Order proposal to extend contract to match constructions activities.
10	Sewer Pump Station High Water Alarm Systems (20 stations)	This project will design and installed telemetry equipment/SCADA type alarms that will alert when pump station failure occurs.	C. Yam	Design				The design will be incorporated into the design/build package.		
				Design	8	8/12/2016	02/30/2017	\$ 183,171.00	AECOM	Design complete
				Construction	5	4/5/2017	9/30/2017	\$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	3	02/30/2017	9/30/2017	\$ 195,269.00	EMSPCO	CM work complete
11	Sewer Pump Station Backup Power (2 stations)	Construction of the housing and installation of new generators for the Casimero pump station (Mongmong) and the Namo pump station (Yona central).	B. Cruz	Design				The design will be incorporated into the design/build package.		
				Design/Build	2	6/24/2016	9/30/2017	\$ 362,692.53	ProPacific	Issue regarding contractor not conforming to Davis Bacon Act still pending. GWA legal to preapre position statement to contract.
				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		4/23/2017	12/31/2018			Procurement 70%, GWA working to rebid with work separetd by open cut and CIPP.
				Const. Mgmt		4/23/2017	12/31/2018	\$ 647,000.00		Procurement 90%, EMPSCO submitted revised fee (\$647K). B&C recommending renegotiating given the plans to reorganize the bid package.

GWA Work Session - January 16, 2017 - DIVISION REPORTS

13	Groundwater Wells Rehabilitation (D-3, D-17, D-18, D-22, M-9)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.	Brown & Caldwell	Design				The design was previously completed under bond funding.		
				Construction	2	8/19/2016	3/30/2018	\$ 6,120,353.44	Pacific Rim	Operating Permit applications delivered to GEPA 1/3/2018 Initial checkouts started this week before connection to the distribution system. D-03: [250 gpm design] Currently achieving 75 gpm. Waiting on proposals from contractor to determine next steps for well completion. Current thought is to do checkout of existing system and except it then work on changes required via CO. D-17: [200 gpm] Initial checkout was completed 1/2/2018 with some minor issues to correct. D-18: [300 gpm] Initial Check out underway 1/3/2018. D-22: [100 gpm] Initial Checkout planned for 1/4/2018. M-09: [Rehab 150 gpm] GEPA inspection complete and well back in operation Compressor on island (11/27). Delivery scheduled to GWA for Jan 11 with training on the 11th and 12th. Working on CO#8; EA negotiating costs.
				Const. Mgmt	4	3/22/2016	3/30/2018	\$ 943,361.24	EA	• CO#3 still pending execution from GWA.
14	Southern SSES Sewer Rehabilitation (Baza Gardens-Talofofo)	Rehabilitation of segments of sewer lines in Windward Hills, Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				The design was previously completed under bond funding.		
				Construction	3	8/2/2016	7/2/2017	\$ 1,189,815.00	ProPacific	- Contractor stated that they have removed the failed liner this week. Waiting on CCTV to confirm. - Contractor notified of possible termination for default if there is no improvement in performance. - Accruing Liquidated Damages against contractor (over \$175,000 so far).
				Const. Mgmt	5	7/29/2016	5/28/2017	\$ 347,945.93	EMPSCO	- CM on notice to minimize management costs. CM will need CM CO #4 in order to pay for work after October 31. Continuing to negotiate with CM to bring down costs.
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 submitted 100%, but working through some additional comments. • Met with New Plaza Market Owners and made the request for a new easement waiting on response.
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
16	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	11/30/2017	\$ 477,999.50	EMPSCO	Designer preparing bid package for Talofofo. GWA received draft Chalan Pago 100% design which is under review.
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			

GWA Work Session - January 16, 2017 - DIVISION REPORTS

17	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	Design		8/17/2016	11/30/2017	The design will be included with the Talofofo Pump Station design project.		
				Construction		4/29/2017	4/30/2018			
				Const. Mgmt		4/29/2017	4/30/2018			
18	Water Hydraulic Model (SCADA ready instruments to update Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	Design	12	8/3/2016	3/15/2017	\$ 523,268.00	GHD	Design complete.
				Construction		2/1/2017	12/30/2019			Funding for construction project to be from FY18 grant that is still pending.
				Const. Mgmt		2/1/2017	12/30/2019			
19	Macheche Hill Sewer Rehabilitation/ Replacement	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently and is consider a high priority.	J. Davis	Design-Build	3	8/29/2016	3/30/2018	\$ 2,202,545.47	Giant Const.	All paving work complete. Final connection of existing system to new system ongoing.
				Const. Mgmt	6	9/16/2016	3/30/2018	\$ 379,994.38	Am Orient	CM coordinating connecton activites with contractor.
20	Asan-Adelup-Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Rehabilitation of sewer line in Asan that collapsed and which is current fitted with a temporary pumping system.	Brown & Caldwell	Design				Design cost covered under 3A above.		
				Construction	4	3/8/2017	12/30/2017	\$ 2,470,658.00		All work complete at Harley Davison and Asan Beach Park.
				Const. Mgmt	7	1/24/2017	12/30/2017	covered under 3A		· CO#3 (for HDR CM) submitted to GWA 10/5; HDR currently beyond time and short on budget until CO processed.



# DASHBOARD

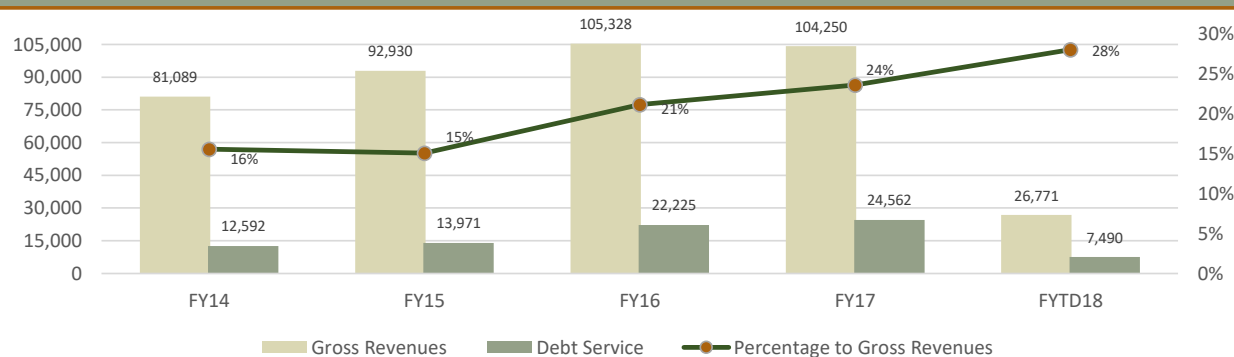
## FYTD December 2017 Budget vs Actual (\$000)

Category	Description	Budget FYTD18	Actual FYTD18	Variance
Rate Based Revenues	Water	\$17,825	\$16,903	(\$922)
	Wastewater	9,965	9,761	(205)
	Total	27,790	26,663	(1,126)
Operations & Maintenance	Salaries & Benefits	6,629	5,307	(1,322)
	Power	3,174	3,412	238
	Water Purchases	2,163	2,088	(75)
	A&G	3,217	2,000	(1,217)
	Contractual	1,120	730	(390)
	Total	\$21,131	\$18,356	(\$2,775)

## Key Financial Ratios (\$000)

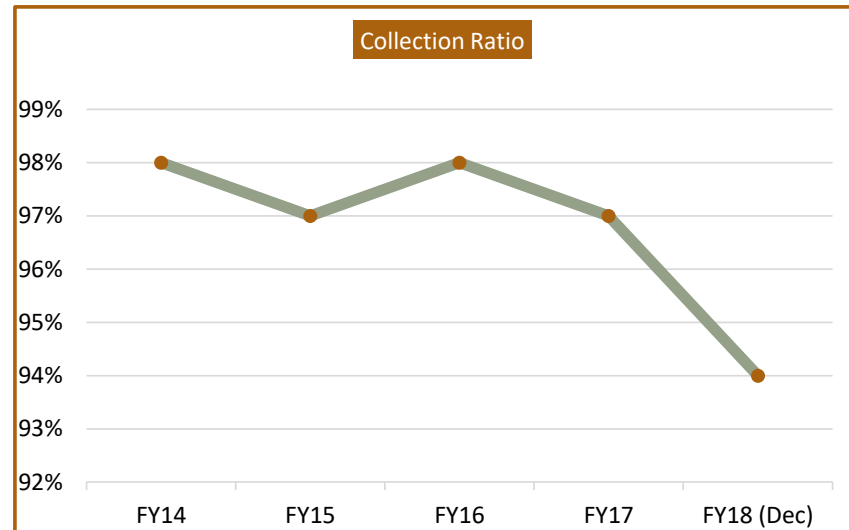
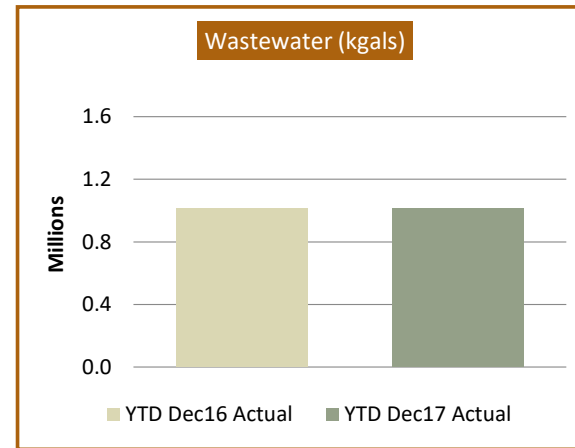
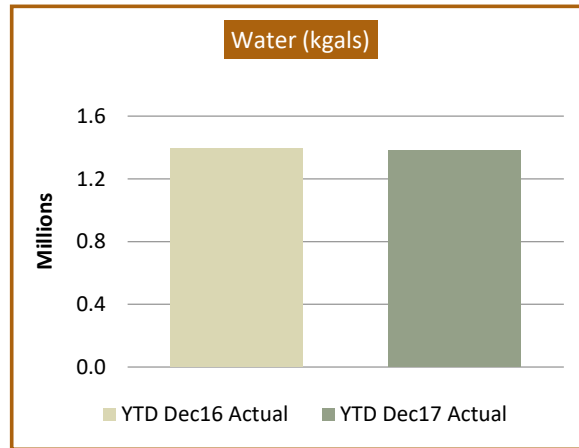
Category	FY18	FY17
Accounts Payable \$\$/Days	\$4,195 / 54 days	\$5,390 / 59 days
Accounts Receivable \$\$/Days	\$17,257 / 69 days	\$15,451 / 51 days
Days Cash On Hand	165 days	184 days
Annual Debt Service (Revenue Bonds)	\$29,961	\$24,563
Debt Service Coverage (Bond/PUC)	1.77 / 2.14	1.99 / 2.44

## Debt as a Percent to Gross Revenue

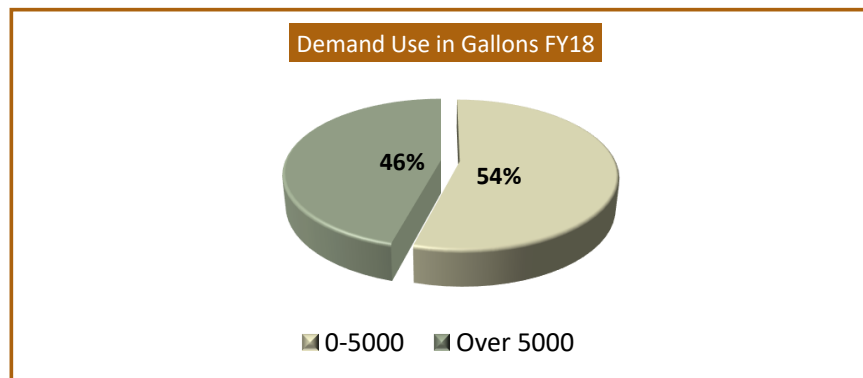
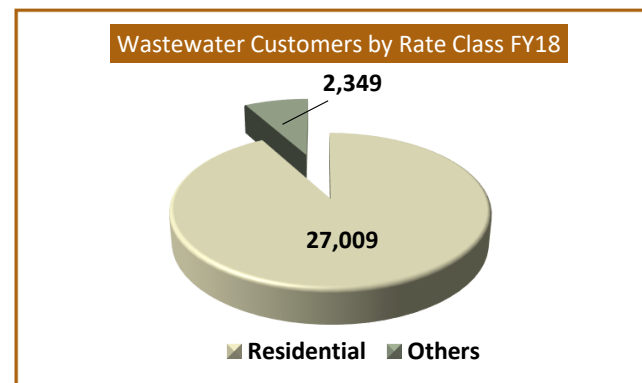
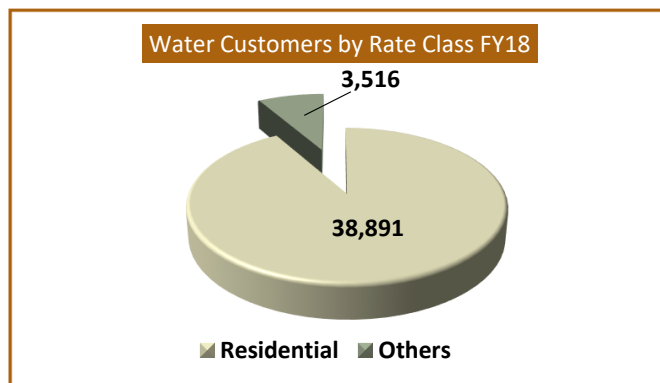
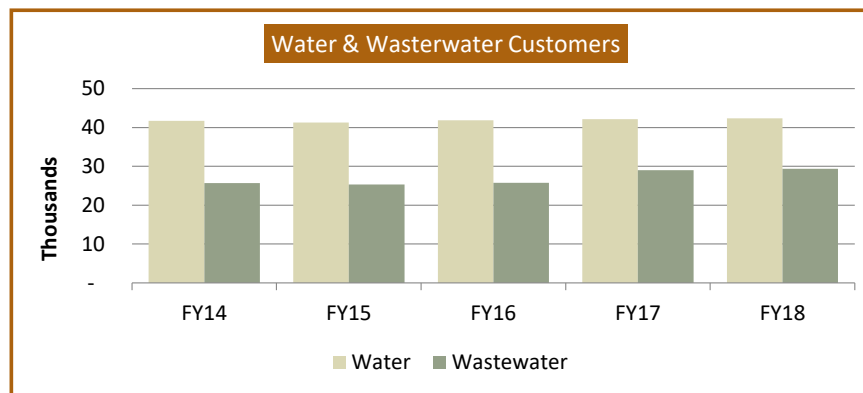


(1) Gross Revenues excludes SDC  
 (2) Debt Service Excludes Cap I

## Water & Wastewater Analytics



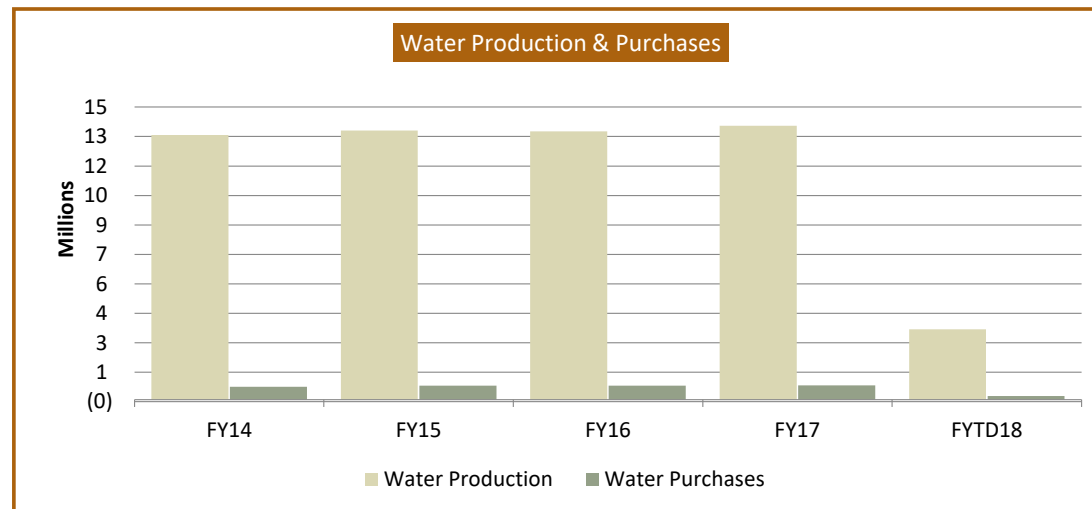
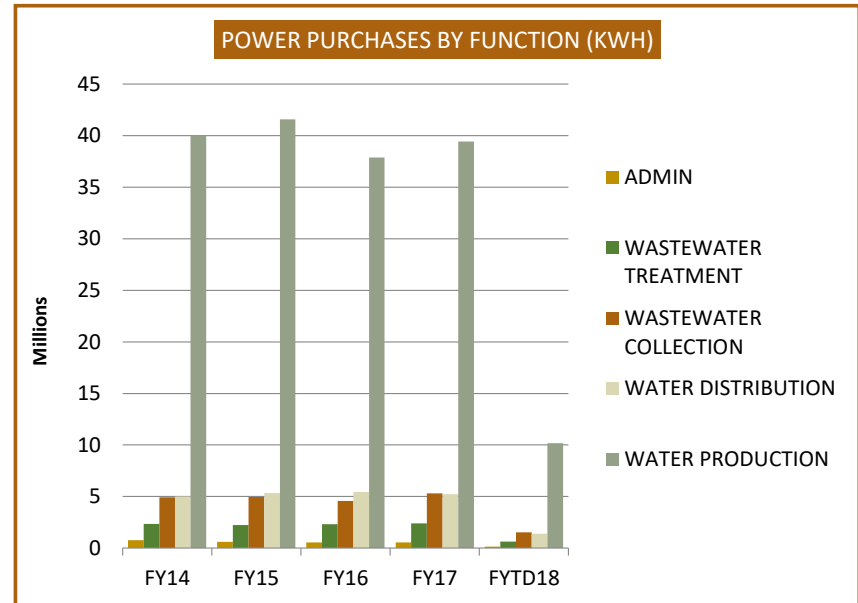
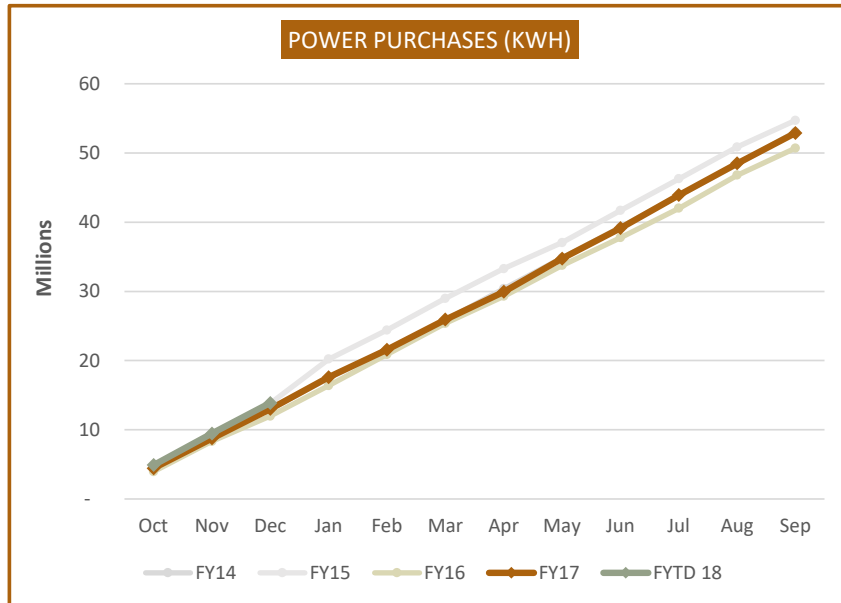
## Water & Wastewater Customers



## Top Ten Largest Water and Wastewater Customers – December 2017

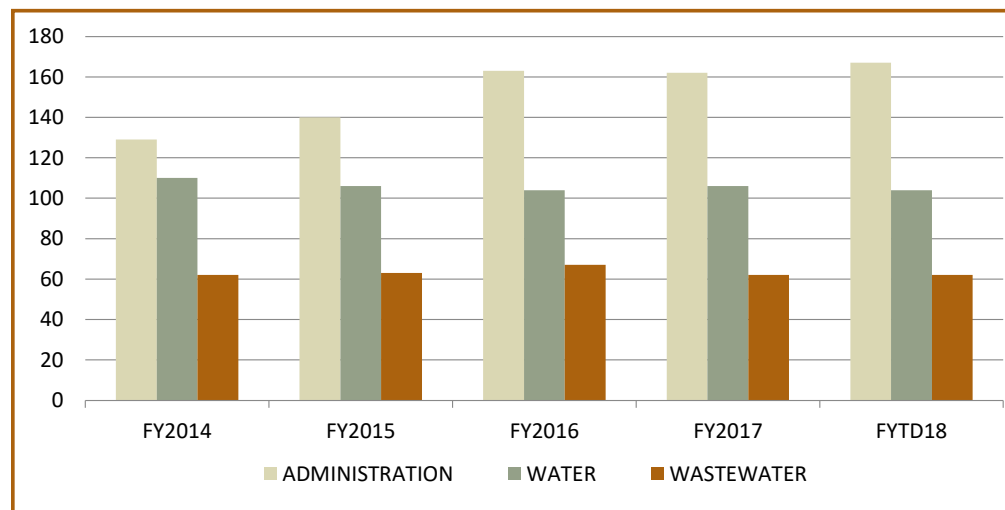
Water			Wastewater		
Customer Name	FYTD18 Revenues	% of Total	Customer Name	FYTD18 Revenues	% of Total
1) MDI GUAM CORPORATION/LEOPALACE	\$338,419	2.00%	1) AIR FORCE DOD	\$938,166	9.62%
2) PACIFIC ISLANDS CLUB	276,261	1.63%	2) NAVY DOD	494,311	5.07%
3) HOTELS OF THE MARIANAS INC	253,662	1.50%	3) HOTELS OF THE MARIANAS INC	271,284	2.78%
4) HYATT	237,019	1.40%	4) HYATT	253,784	2.60%
5) HOTEL NIKKO GUAM	219,864	1.30%	5) HOTEL NIKKO GUAM	234,980	2.41%
6) GUAM REEF HOTEL INC	217,479	1.29%	6) GUAM REEF HOTEL INC	232,794	2.39%
7) SHERATON LAGUNA GUAM RESORT	192,702	1.14%	7) SHERATON LAGUNA GUAM RESORT	206,179	2.11%
8) MDI GUAM CORPORATION/WESTIN	158,683	0.94%	8) MDI GUAM CORPORATION/WESTIN	169,637	1.74%
9) TANOTA DEVELOPMENT LLC	158,467	0.94%	9) TANOTA DEVELOPMENT LLC	170,046	1.74%
10) OUTRIGGER GUAM RESORT	150,959	0.89%	10) OUTRIGGER GUAM RESORT	161,717	1.66%
<b>Total</b>	<b>\$2,203,516</b>	<b>13.03%</b>	<b>Total</b>	<b>\$3,132,898</b>	<b>32.11%</b>

## Power, Water Purchases and Water Production

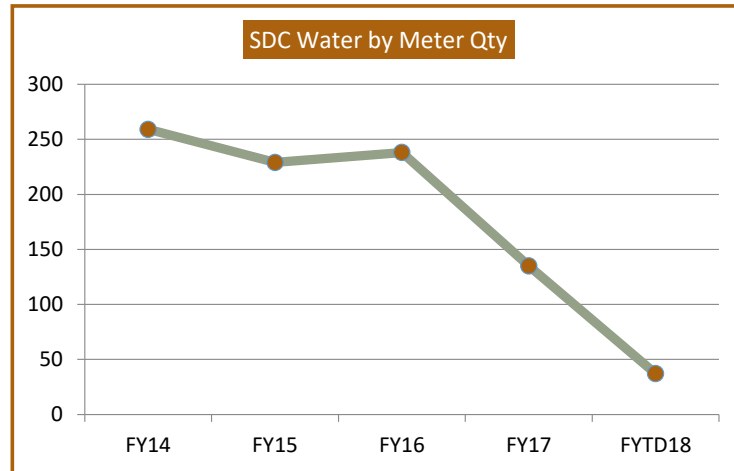


## FTE by Major Division

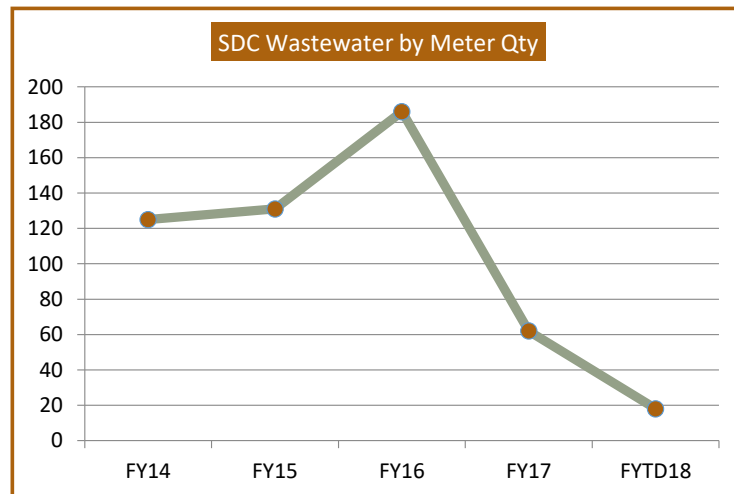
<u>DIVISION</u>	<u>FY2014</u>	<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>	<u>FYTD18</u>
ADMINISTRATION	129	140	163	162	167
WATER	110	106	104	106	104
WASTEWATER	62	63	67	62	62
TOTAL NUMBER OF STAFF	<u>301</u>	<u>309</u>	<u>334</u>	<u>330</u>	<u>333</u>
Gross Salaries & Wages (\$000)	15,532	15,805	16,442	16,963	3,990
Water Customers	41,702	41,274	41,858	42,181	42,407
Staff to Customers Ratio	0.72%	0.75%	0.80%	0.78%	0.79%



## SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	248	220	239	129	31
1	5	5	7	2	1
1 1/2	1	1	1	1	3
2	3	2	4	2	2
3	1	-	1	-	-
4	-	1	-	-	-
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
<b>Total SDC by Water</b>	<b>259</b>	<b>229</b>	<b>252</b>	<b>135</b>	<b>37</b>



Actual Meter Sizes (Inches)	FY 2014	FY 2015	FY 2016	FY 2017	FYTD18
5/8 x 3/4	115	124	179	58	12
1	4	3	2	-	1
1 1/2	1	1	1	1	3
2	3	2	3	2	2
3	1	-	1	-	-
4	-	1	-	-	-
6	-	-	-	1	-
8	1	-	-	-	-
10	-	-	-	-	-
<b>Total SDC by Wastewater</b>	<b>125</b>	<b>131</b>	<b>186</b>	<b>62</b>	<b>18</b>

**GUAM WATERWORKS AUTHORITY  
DECEMBER 31, 2017  
FINANCIAL AND RELATED REPORTS  
TABLE OF CONTENTS**

	<b>SCHEDULES</b>	<b>PAGE</b>
<b>BALANCE SHEET</b>	<b>A</b>	<b>2</b>
<b>INCOME STATEMENT MTD ACTUALS VS MTD BUDGET</b>	<b>B</b>	<b>3</b>
<b>INCOME STATEMENT MTD ACTUALS FY18 VS FY17</b>	<b>C</b>	<b>4</b>
<b>INCOME STATEMENT YTD ACTUALS VS YTD BUDGET</b>	<b>D</b>	<b>5</b>
<b>INCOME STATEMENT YTD ACTUALS FY18 VS FY17</b>	<b>E</b>	<b>6</b>
<b>BOND COMPLIANCE</b>	<b>F</b>	<b>7</b>
<b>SCHEDULE OF CASH RESTRICTED/UNRESTRICTED</b>	<b>G</b>	<b>8</b>
<b>STATEMENT OF CASH FLOWS</b>	<b>H</b>	<b>9</b>
<b>AGING REPORT - GOVERNMENT ACCOUNTS</b>	<b>I</b>	<b>10</b>
<b>SCHEDULE OF SERIES 2013 BOND STATUS</b>	<b>J</b>	<b>11</b>
<b>SCHEDULE OF SERIES 2014 REFUNDED BOND STATUS</b>	<b>K</b>	<b>12</b>
<b>SCHEDULE OF SERIES 2016 BOND STATUS</b>	<b>L</b>	<b>13</b>
<b>SCHEDULE OF SERIES 2017 REFUNDED BOND STATUS</b>	<b>M</b>	<b>14</b>
<b>SUMMARY OF BOND BANK BALANCES</b>	<b>N</b>	<b>15</b>



**GUAM WATERWORKS AUTHORITY**  
**Balance Sheet**  
**December 31, 2017**

**SCHEDULE A**

<b>ASSETS</b>	<b>Unaudited December 31, 2017</b>	<b>Unaudited September 30, 2017</b>	<b>Increase (Decrease)</b>
<u><b>Current Assets:</b></u>			
Cash:			
Unrestricted (Schedule G)	2,052,077	4,873,275	(2,821,198)
Restricted Funds (Schedule G)	67,319,464	65,124,400	2,195,064
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of \$12,733,239 at Dec 31, 2017 and \$12,619,034 at Sep 30, 2017	17,256,889	15,450,733	1,806,155
Other Receivable	4,469,691	8,433,446	(3,963,754)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of \$457,370 at Dec 31, 2017 and Sep 30, 2017	2,354,201	2,166,557	187,644
<b>Total Current Assets</b>	<b>93,452,322</b>	<b>96,048,411</b>	<b>(2,596,089)</b>
<u><b>Property, Plant and Equipment</b></u>			
Utility plant in service:			
Water system	327,493,369	327,484,191	9,177
Wastewater system	286,394,940	286,394,940	-
Non-utility property	18,938,255	18,938,255	-
<b>Total property</b>	<b>632,826,564</b>	<b>632,817,387</b>	<b>9,177</b>
Less Accumulated Depreciation	(290,628,105)	(286,043,580)	(4,584,525)
Land	1,163,298	1,110,998	52,300
Construction Work in Progress	124,649,927	111,695,887	12,954,040
<b>Property, Plant and Equipment, net</b>	<b>468,011,683</b>	<b>459,580,691</b>	<b>8,430,992</b>
<u><b>Other noncurrent assets</b></u>			
Restricted cash (Schedule G)	223,284,646	236,550,002	(13,265,356)
Investments (Schedule G)	48,266,271	41,042,038	7,224,233
Other Prepaid Expenses	2,572,233	551,128	2,021,104
<b>Total other noncurrent assets</b>	<b>274,123,150</b>	<b>278,143,169</b>	<b>(4,020,019)</b>
<b>TOTAL ASSETS</b>	<b>835,587,155</b>	<b>833,772,271</b>	<b>1,814,884</b>
 Deferred outflows of resources:			
Debt defeasance loss on refunding	11,130,199	1,695,981	9,434,218
Deferred outflows from pension	3,270,212	3,414,242	(144,030)
<b>Total Assets and Deferred Outflows of Resources</b>	<b>849,987,566</b>	<b>838,882,494</b>	<b>11,105,072</b>
 <b>LIABILITIES AND NET ASSETS</b>			
<u><b>Current Liabilities:</b></u>			
Current maturities of long-term debt			
-Series 2010 Bond	-	1,655,000	(1,655,000)
-Series 2014 Refunding	3,385,000	3,385,000	-
-Notes Payable	2,873,988	2,873,988	-
Accounts Payable -Trade	4,195,560	5,390,256	(1,194,696)
Interest Payable	13,266,149	6,656,499	6,609,649
Accrued Payroll and Employee Benefits	1,114,559	2,604,471	(1,489,913)
Accrued Annual Leave	1,729,291	1,729,291	-
Current portion of employee annual leave	567,057	567,057	-
Contractors' Payable	7,876,293	13,950,287	(6,073,994)
Customer and Other Deposits	2,458,972	2,087,207	371,764
<b>Total Current Liabilities</b>	<b>37,466,868</b>	<b>40,899,057</b>	<b>(3,432,189)</b>
<u><b>Long Term Debt, less current maturities</b></u>			
Series 2010 Revenue Bond	-	112,870,000	(112,870,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding	72,610,000	72,610,000	-
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Series 2017 Refunding Bond	107,660,000	-	107,660,000
Unamortized Discount - Bond 2010	-	(1,867,525)	1,867,525
Unamortized Discount - Bond 2013	(1,330,234)	(1,338,751)	8,517
Unamortized Premium - Bond 2014	4,760,258	4,804,694	(44,436)
Unamortized Premium - Bond 2016	17,161,726	17,262,975	(101,249)
Unamortized Premium - Bond 2017	13,854,833	-	13,854,833
Notes Payable	4,970,396	5,697,499	(727,103)
Unfunded Ret Liability (GASB 67/68)	38,195,938	38,195,938	-
Employee Annual Leave, Less Current Portion	783,992	783,992	-
<b>TOTAL LIABILITIES</b>	<b>612,073,776</b>	<b>605,857,879</b>	<b>6,215,897</b>
 <b>Net Assets</b>	<b>237,913,790</b>	<b>233,024,615</b>	<b>4,889,175</b>
 <b>Total Liabilities and Net Assets</b>	<b>849,987,566</b>	<b>838,882,494</b>	<b>11,105,072</b>

GWA Work Session - January 16, 2017 - DIVISION REPORTS

GUAM WATERWORKS AUTHORITY  
Statement of Operations and Retained Earnings (Unaudited)  
Comparative Budget vs. Actual for the period ending December 31, 2017

SCHEDULE B

	Budget December-17	Month to Date Actual (Unaudited) December-17	Variance Increase / (Decrease)
<b>OPERATING REVENUES</b>			
Water Revenues	5,743,160	5,334,955	(408,205)
Wastewater Revenues	3,228,257	3,117,461	(110,796)
Legislative Surcharge	291,896	250,233	(41,663)
Other Revenues	57,638	34,800	(22,838)
System Development Charge	46,136	138,534	92,398
<b>Total Operating Revenues</b>	<b>9,367,087</b>	<b>8,875,983</b>	<b>(491,105)</b>
<b>OPERATING AND MAINTENANCE EXPENSES</b>			
Water Purchases	721,113	633,175	(87,938)
Power Purchases	1,057,997	1,092,764	34,767
Total Utility Costs	1,779,110	1,725,939	(53,171)
Salaries and Wages	1,625,056	1,148,512	(476,544)
Pension and Benefits	584,558	367,837	(216,722)
Total Salaries and Benefits	2,209,614	1,516,348	(693,266)
Capitalized Labor and Benefits	(208,333)	(225,000)	(16,667)
Net Salaries and Benefits	2,001,281	1,291,348	(709,933)
<b>Administrative and General Expenses</b>			
Sludge removal	174,514	169,674	(4,840)
Chemicals	229,997	228,451	(1,546)
Materials & Supplies	237,400	235,767	(1,633)
Transportation	61,370	61,222	(148)
Communications	16,182	12,411	(3,771)
Claims	17,600	17,572	(28)
Insurance	97,757	75,480	(22,277)
Training & Travel	21,814	19,024	(2,791)
Advertising	13,910	2,800	(11,110)
Miscellaneous	115,515	75,055	(40,460)
Total Administrative and General Expense	986,059	897,456	(88,603)
<b>Regulatory Expense</b>	<b>29,086</b>	<b>29,049</b>	<b>(37)</b>
<b>Bad Debts Provision</b>	<b>57,103</b>	<b>57,096</b>	<b>(6)</b>
<b>Depreciation Expense</b>	<b>1,528,175</b>	<b>1,528,175</b>	<b>0</b>
<b>Contractual Expense</b>			
Audit & Computer Maint.	78,630	65,410	(13,220)
Building rental	37,955	35,852	(2,103)
Equipment rental	57,375	55,184	(2,191)
Legal	4,167	1,500	(2,667)
Laboratory	64,752	4,090	(60,662)
Other	130,363	82,321	(48,042)
Total Contractual Expense	373,241	244,357	(128,884)
Retiree Supp. Annuities and health care costs	240,008	236,940	(3,068)
Contribution to Government of Guam	49,500	49,833	333
Total Retiree Benefits	289,508	286,774	(2,735)
<b>Total Operating Expenses</b>	<b>7,043,563</b>	<b>6,060,193</b>	<b>(983,370)</b>
<b>Earnings (Loss) from Operations</b>	<b>2,323,524</b>	<b>2,815,789</b>	<b>492,265</b>
Interest Income-2010/13/14/16 Series Bond	15,727	139,245	123,518
Interest Income-Other Funds	2,935	24,681	21,747
Interest Income-SDC	2,414	18,498	16,084
Interest Expense- 2010/13/14/16 Series Bond	(2,625,587)	(2,211,025)	414,563
Interest Expense- ST BOG	(33,288)	(45,267)	(11,979)
Federal Expenditures	(51,332)	-	51,332
Loss on Asset Disposal	-	-	-
AFUDC	625,000	625,000	-
Amortization of Discount, Premium and Issuance Costs	(61,861)	61,861	123,722
Loss on Defeasance Bond05 Refunding	(15,218)	(12,444)	2,775
Deferred outflows from pension	(105,281)	(48,010)	57,271
Prior Year Adjustment	-	-	-
Total non-operating revenues (expenses)	(2,246,492)	(1,447,460)	799,032
<b>Net Income (Loss) before capital contributions</b>	<b>77,032</b>	<b>1,368,329</b>	<b>1,291,297</b>
<b>Capital Contributions</b>			
Grants from US Government	873,108	413,372	(459,736)
Grants from GovGuam & Others	-	-	-
Other Contributions	-	-	-
Total Capital Contributions	873,108	413,372	(459,736)
<b>Change in Net Assets</b>	<b>950,140</b>	<b>1,781,701</b>	<b>831,561</b>
<b>Debt Service Calculation</b>			
Earnings From Operations	2,323,524	2,815,789	
System Development Charge	(46,136)	(138,534)	
Retiree COLA	49,500	49,833	
Interest/Investment Income	2,935	24,681	
Depreciation	1,528,175	1,528,175	
<b>Balance Available for Debt Service per Section 6.12</b>	<b>3,857,998</b>	<b>4,279,945</b>	
Working Capital Reserve Available for Debt Service	935,321	935,321	
Transfer to Working Capital- Debt Service Reserve	(150,000)	-	
Transfer to Working Capital- O&M Reserve	(266,667)	-	
<b>Balance Available for Debt Service inclusive of reserves</b>	<b>4,376,652</b>	<b>5,215,266</b>	
<b>Debt Service</b>			
Principal	433,333	433,333	
Interest	2,063,402	2,063,402	
<b>Total</b>	<b>2,496,736</b>	<b>2,496,736</b>	
<b>Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)</b>	<b>1.55</b>	<b>1.71</b>	
<b>Debt Service Coverage (1.75X) inclusive of reserves (PUC)</b>	<b>1.75</b>	<b>2.09</b>	

GWA Work Session - January 16, 2017 - DIVISION REPORTS

GUAM WATERWORKS AUTHORITY  
Statement of Operations and Retained Earnings (Unaudited)  
Comparative for the period ending December 31, 2017 and 2016

SCHEDULE C

	Month to Date		Variance
	Actual (Unaudited)	Actual (Unaudited)	Increase /
	December-17	December-16	(Decrease)
<b>OPERATING REVENUES</b>			
Water Revenues	5,334,955	5,331,404	3,551
Wastewater Revenues	3,117,461	3,099,528	17,934
Legislative Surcharge	250,233	267,269	(17,036)
Other Revenues	34,800	36,293	(1,493)
System Development Charge	138,534	72,662	65,872
<b>Total Operating Revenues</b>	<b>8,875,983</b>	<b>8,807,155</b>	<b>68,827</b>
<b>OPERATING AND MAINTENANCE EXPENSES</b>			
Water Purchases	633,175	609,094	24,081
Power Purchases	1,092,764	1,006,355	86,408
Total Utility Costs	1,725,939	1,615,449	110,490
Salaries and Wages	1,148,512	1,413,608	(265,097)
Pension and Benefits	367,837	477,546	(109,709)
Total Salaries and Benefits	1,516,348	1,891,154	(374,806)
Capitalized Labor and Benefits	(225,000)	(262,516)	37,516
Net Salaries and Benefits	1,291,348	1,628,638	(337,290)
<b>Administrative and General Expenses</b>			
Sludge removal	169,674	140,487	29,187
Chemicals	228,451	174,001	54,450
Materials & Supplies	235,767	128,788	106,979
Transportation	61,222	53,744	7,478
Communications	12,411	10,884	1,527
Claims	17,572	22,151	(4,579)
Insurance	75,480	90,603	(15,123)
Training & Travel	19,024	23,055	(4,031)
Advertising	2,800	8,988	(6,188)
Miscellaneous	75,055	71,997	3,059
Total Administrative and General Expense	897,456	724,696	172,759
<b>Regulatory Expense</b>	<b>29,049</b>	<b>24,134</b>	<b>4,915</b>
<b>Bad Debts Provision</b>	<b>57,096</b>	<b>109,700</b>	<b>(52,604)</b>
<b>Depreciation Expense</b>	<b>1,528,175</b>	<b>1,402,038</b>	<b>126,137</b>
<b>Contractual Expense</b>			
Audit & Computer Maint.	65,410	76,901	(11,491)
Building rental	35,852	36,557	(704)
Equipment rental	55,184	59,374	(4,190)
Legal	1,500	414	1,086
Laboratory	4,090	10,627	(6,537)
Other	82,321	156,747	(74,426)
Total Contractual Expense	244,357	340,619	(96,262)
Retiree Supp. Annuities and health care costs	236,940	231,895	5,045
Contribution to Government of Guam	49,833	49,500	333
Total Retiree Benefits	286,774	281,395	5,378
<b>Total Operating Expenses</b>	<b>6,060,193</b>	<b>6,126,670</b>	<b>(66,477)</b>
<b>Earnings (Loss) from Operations</b>	<b>2,815,789</b>	<b>2,680,485</b>	<b>135,304</b>
Interest Income-2010/13/14/16 Series Bond	139,245	65,354	73,891
Interest Income-Other Funds	24,681	10,032	14,650
Interest Income-SDC	18,498	1,060	17,439
Interest Expense- 2010/13/14/16 Series Bond	(2,211,025)	(2,220,744)	9,719
Interest Expense- ST BOG	(45,267)	(43,736)	(1,531)
Federal Expenditures	-	(42,501)	42,501
Loss on Asset Disposal	-	(81,105)	81,105
AFUDC	625,000	1,172,241	(547,241)
Amortization of Discount, Premium and Issuance Costs	61,861	61,861	-
Loss on Defeasance Bond05 Refunding	(12,444)	(15,218)	2,775
Deferred outflows from pension	(48,010)	(104,481)	56,471
Prior Year Adjustment	-	(26,756)	26,756
Total non-operating revenues (expenses)	(1,447,460)	(1,223,993)	(223,467)
<b>Net Income (Loss) before capital contributions</b>	<b>1,368,329</b>	<b>1,456,492</b>	<b>(88,163)</b>
<b>Capital Contributions</b>			
Grants from US Government	413,372	1,815,921	(1,402,549)
Grants from GovGuam & Others	-	1,664	(1,664)
Other Contributions	-	-	-
Total Capital Contributions	413,372	1,817,586	(1,404,214)
<b>Change in Net Assets</b>	<b>1,781,701</b>	<b>3,274,078</b>	<b>(1,492,376)</b>
<b>Debt Service Calculation</b>			
Earnings From Operations	2,815,789	2,680,485	
System Development Charge	(138,534)	(72,662)	
Retiree COLA	49,833	49,500	
Interest/Investment Income	24,681	10,032	
Depreciation	1,528,175	1,402,038	
<b>Balance Available for Debt Service per Section 6.12</b>	<b>4,279,945</b>	<b>4,069,392</b>	
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	-	-	
<b>Balance Available for Debt Service inclusive of reserves</b>	<b>5,215,266</b>	<b>5,001,527</b>	
<b>Debt Service</b>			
Principal	433,333	420,000	
Interest	2,063,402	1,626,858	
<b>Total</b>	<b>2,496,736</b>	<b>2,046,858</b>	
<b>Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)</b>	<b>1.71</b>	<b>1.99</b>	
<b>Debt Service Coverage (1.75X) inclusive of reserves (PUC)</b>	<b>2.09</b>	<b>2.44</b>	

GWA Work Session - January 16, 2017 - DIVISION REPORTS

GUAM WATERWORKS AUTHORITY  
Statement of Operations and Retained Earnings (Unaudited)  
Comparative Budget vs. Actual for the period ending December 31, 2017

SCHEDULE D

	Budget December-17	Encumbered December-17	Year to Date Actual (Unaudited) December-17	Variance Increase / (Decrease)
<b>OPERATING REVENUES</b>				
Water Revenues	17,229,480		16,345,904	(883,576)
Wastewater Revenues	9,684,772		9,500,820	(183,952)
Legislative Surcharge	875,688		816,723	(58,965)
Other Revenues	172,914		107,386	(65,528)
System Development Charge	138,407		334,581	196,174
<b>Total Operating Revenues</b>	<b>28,101,262</b>		<b>27,105,414</b>	<b>(995,848)</b>
<b>OPERATING AND MAINTENANCE EXPENSES</b>				
Water Purchases	2,163,339		2,087,849	(75,490)
Power Purchases	3,173,991		3,411,972	237,982
Total Utility Costs	5,337,330		5,499,822	162,492
Salaries and Wages	4,875,168		3,990,061	(885,107)
Pension and Benefits	1,753,675		1,317,268	(436,407)
Total Salaries and Benefits	6,628,843		5,307,329	(1,321,514)
Capitalized Labor and Benefits	(625,000)		(625,000)	-
Net Salaries and Benefits	6,003,843		4,682,329	(1,321,514)
<b>Administrative and General Expenses</b>				
Sludge removal	523,542		286,054	(237,488)
Chemicals	614,990	75,000	471,739	(68,252)
Materials & Supplies	833,699	250,000	307,882	(275,817)
Transportation	157,111	35,000	118,493	(3,619)
Communications	48,546		48,056	(490)
Claims	33,300		10,378	(22,922)
Insurance	314,270		226,440	(87,830)
Training & Travel	65,443		47,791	(17,652)
Advertising	41,730		20,345	(21,385)
Miscellaneous	346,546	85,000	237,580	(23,967)
Total Administrative and General Expense	2,979,177	445,000	1,774,757	(759,420)
<b>Regulatory Expense</b>	<b>66,259</b>		<b>53,959</b>	<b>(12,300)</b>
<b>Bad Debts Provision</b>	<b>171,308</b>		<b>171,294</b>	<b>(14)</b>
<b>Depreciation Expense</b>	<b>4,584,524</b>		<b>4,584,525</b>	<b>1</b>
<b>Contractual Expense</b>				
Audit & Computer Maint.	250,891		250,333	(558)
Building rental	113,865		108,847	(5,018)
Equipment rental	172,124		168,836	(3,287)
Legal	12,500		1,800	(10,700)
Laboratory	179,255		160,985	(18,270)
Other	391,089	250,000	39,094	(101,995)
Total Contractual Expense	1,119,724	250,000	729,895	(139,829)
Retiree Supp. Annuities and health care costs	720,025		709,850	(10,175)
Contribution to Government of Guam	148,500		149,500	1,000
Total Retiree Benefits	868,525	-	859,350	(9,175)
<b>Total Operating Expenses</b>	<b>21,130,690</b>	<b>695,000</b>	<b>18,355,931</b>	<b>(2,079,759)</b>
<b>Earnings (Loss) from Operations</b>	<b>6,970,572</b>	<b>(695,000)</b>	<b>8,749,483</b>	<b>1,083,911</b>
Interest Income-2010/13/14/16 Series Bond	47,180		444,222	397,042
Interest Income-Other Funds	8,804		71,991	63,187
Interest Income-SDC	7,243		29,886	22,643
Interest Expense- 2010/13/14/16 Series Bond	(7,876,762)		(6,633,074)	1,243,688
Interest Expense- ST BOG	(99,865)		(104,472)	(4,607)
Federal Expenditures	(153,997)		(76,977)	77,020
Loss on Asset Disposal	-		-	-
AFUDC	1,875,000		1,875,000	-
Amortization of Discount, Premium and Issuance Costs	(185,582)		185,582	371,165
Loss on Defeasance Bond05 Refunding	(45,655)		(37,331)	8,324
Deferred outflows from pension	(315,842)		(144,030)	171,812
Prior Year Adjustment	-		38,546	38,546
Total non-operating revenues (expenses)	(6,739,476)	-	(4,350,657)	2,388,819
<b>Net Income (Loss) before capital contributions</b>	<b>231,096</b>	<b>(695,000)</b>	<b>4,398,826</b>	<b>3,472,730</b>
<b>Capital Contributions</b>				
Grants from US Government	2,619,325		490,349	(2,128,975)
Grants from GovGuam & Others	-		-	-
Other Contributions	-		-	-
Total Capital Contributions	2,619,325	-	490,349	(2,128,975)
<b>Change in Net Assets</b>	<b>2,850,421</b>	<b>(695,000)</b>	<b>4,889,175</b>	<b>1,343,754</b>
<b>Debt Service Calculation</b>				
Earnings From Operations	6,970,572		8,749,483	
System Development Charge	(138,407)		(334,581)	
Retiree COLA	148,500		149,500	
Interest/Investment Income	8,804		71,991	
Depreciation	4,584,524		4,584,525	
<b>Balance Available for Debt Service per Section 6.12</b>	<b>11,573,993</b>		<b>13,220,918</b>	
Working Capital Reserve Available for Debt Service	2,805,963		2,796,403	
Transfer to Working Capital- Debt Service Reserve	(450,000)		-	
Transfer to Working Capital- O&M Reserve	(800,000)		-	
<b>Balance Available for Debt Service inclusive of reserves</b>	<b>13,129,956</b>		<b>16,017,321</b>	
<b>Debt Service</b>				
Principal	1,300,000		1,300,000	
Interest	6,190,207		6,190,207	
<b>Total</b>	<b>7,490,207</b>		<b>7,490,207</b>	
<b>Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)</b>	<b>1.55</b>		<b>1.77</b>	
<b>Debt Service Coverage (1.75X) inclusive of reserves (PUC)</b>	<b>1.75</b>		<b>2.14</b>	

GWA Work Session - January 16, 2017 - DIVISION REPORTS

GUAM WATERWORKS AUTHORITY  
Statement of Operations and Retained Earnings (Unaudited)  
Comparative for the period ending December 31, 2017 and 2016

SCHEDULE E

	Year to Date		Variance
	ACTUAL (Unaudited)	ACTUAL (Unaudited)	Increase /
	December-17	December-16	(Decrease)
<b>OPERATING REVENUES</b>			
Water Revenues	16,345,904	15,994,211	351,694
Wastewater Revenues	9,500,820	9,298,583	202,237
Legislative Surcharge	816,723	801,807	14,917
Other Revenues	107,386	108,879	(1,493)
System Development Charge	334,581	217,986	116,595
<b>Total Operating Revenues</b>	<b>27,105,414</b>	<b>26,421,465</b>	<b>683,949</b>
<b>OPERATING AND MAINTENANCE EXPENSES</b>			
Water Purchases	2,087,849	1,827,281	260,568
Power Purchases	3,411,972	3,019,066	392,907
Total Utility Costs	5,499,822	4,846,347	653,475
Salaries and Wages	3,990,061	4,240,825	(250,765)
Pension and Benefits	1,317,268	1,432,637	(115,369)
Total Salaries and Benefits	5,307,329	5,673,463	(366,134)
Capitalized Labor and Benefits	(625,000)	(787,547)	162,547
Net Salaries and Benefits	4,682,329	4,885,915	(203,586)
<b>Administrative and General Expenses</b>			
Sludge removal	286,054	421,460	(135,407)
Chemicals	471,739	522,003	(50,264)
Materials & Supplies	307,882	386,363	(78,481)
Transportation	118,493	161,233	(42,740)
Communications	48,056	32,651	15,405
Claims	10,378	66,453	(56,075)
Insurance	226,440	271,808	(45,368)
Training & Travel	47,791	69,164	(21,373)
Advertising	20,345	26,963	(6,618)
Miscellaneous	237,580	215,990	21,590
Total Administrative and General Expense	1,774,757	2,174,089	(399,332)
<b>Regulatory Expense</b>	<b>53,959</b>	<b>72,403</b>	<b>(18,444)</b>
<b>Bad Debts Provision</b>	<b>171,294</b>	<b>329,099</b>	<b>(157,805)</b>
<b>Depreciation Expense</b>	<b>4,584,525</b>	<b>4,206,114</b>	<b>378,411</b>
<b>Contractual Expense</b>			
Audit & Computer Maint.	250,333	230,703	19,630
Building rental	108,847	109,670	(823)
Equipment rental	168,836	178,122	(9,285)
Legal	1,800	1,242	558
Laboratory	160,985	31,880	129,106
Other	39,094	470,241	(431,148)
Total Contractual Expense	729,895	1,021,857	(291,962)
Retiree Supp. Annuities and health care costs	709,850	695,686	14,164
Contribution to Government of Guam	149,500	148,500	1,000
Total Retiree Benefits	859,350	844,186	15,164
<b>Total Operating Expenses</b>	<b>18,355,931</b>	<b>18,380,011</b>	<b>(24,080)</b>
<b>Earnings (Loss) from Operations</b>	<b>8,749,483</b>	<b>8,041,455</b>	<b>708,028</b>
Interest Income-2010/13/14/16 Series Bond	444,222	196,063	248,159
Interest Income-Other Funds	71,991	30,095	41,896
Interest Income-SDC	29,886	3,179	26,706
Interest Expense- 2010/13/14/16 Series Bond	(6,633,074)	(6,662,231)	29,157
Interest Expense- ST BOG	(104,472)	(131,209)	26,737
Federal Expenditures	(76,977)	(127,504)	50,527
Loss on Asset Disposal	-	(243,314)	243,314
AFUDC	1,875,000	3,516,723	(1,641,723)
Amortization of Discount, Premium and Issuance Costs	185,582	185,582	-
Loss on Defeasance Bond05 Refunding	(37,331)	(45,655)	8,324
Deferred outflows from pension	(144,030)	(313,442)	169,412
Prior Year Adjustment	38,546	(80,267)	118,813
Total non-operating revenues (expenses)	(4,350,657)	(3,671,979)	(678,677)
<b>Net Income (Loss) before capital contributions</b>	<b>4,398,826</b>	<b>4,369,475</b>	<b>29,351</b>
<b>Capital Contributions</b>			
Grants from US Government	490,349	5,447,764	(4,957,415)
Grants from GovGuam & Others	-	4,993	(4,993)
Other Contributions	-	-	-
Total Capital Contributions	490,349	5,452,758	(4,962,408)
<b>Change in Net Assets</b>	<b>4,889,175</b>	<b>9,822,233</b>	<b>(4,933,057)</b>
<b>Debt Service Calculation</b>			
Earnings From Operations	8,749,483	8,041,455	
System Development Charge	(334,581)	(217,986)	
Retiree COLA	149,500	148,500	
Interest/Investment Income	71,991	30,095	
Depreciation	4,584,525	4,206,114	
<b>Balance Available for Debt Service per Section 6.12</b>	<b>13,220,918</b>	<b>12,208,177</b>	
Working Capital Reserve Available for Debt Service	2,796,403	2,796,403	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
<b>Balance Available for Debt Service inclusive of reserves</b>	<b>16,017,321</b>	<b>15,004,580</b>	
<b>Debt Service</b>			
Principal	1,300,000	1,260,000	
Interest	6,190,207	4,880,575	
<b>Total</b>	<b>7,490,207</b>	<b>6,140,575</b>	
<b>Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)</b>	<b>1.77</b>	<b>1.99</b>	
<b>Debt Service Coverage (1.75X) inclusive of reserves (PUC)</b>	<b>2.14</b>	<b>2.44</b>	

## SCHEDULE F

**Bond Compliance**

(\$\$\$)  
Per Indenture  
 As of 12/31/17  
 (\$\$\$)  
 Bond  
 2013/2014/2016/2017

•	Operation and Maintenance Fund-BOG	<i>Equivalent to 55 days of the annual O&amp;M budget less depreciation</i>	\$10.5M	\$10.5M
•	Bond Reserve Fund - US Bank	<i>Fully funded- Principal and Interest (Bond Series 2010, 2013, 2014 Refunding and 2016)</i>	\$34.9M	\$34.9M
•	Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	<i>Equivalent to 1/4 of the annual O&amp;M budget &amp; CIP budget to be funded in 5 years (\$2M/year)</i>	\$17.4M	\$17.4M
•	Capital Improvement Fund & BOG Reserves	<i>Balance remaining in the Revenue Fund after the foregoing deposits</i>	\$3.9K	\$4.5K
•	Capitalized Interest Fund			\$1.9K

**GUAM WATERWORKS AUTHORITY**  
**Restricted and Unrestricted Cash Summary**  
**FY 2018**

**SCHEDULE G**

<b>Description</b>	<b>Unaudited December 31, 2017</b>	<b>Unaudited September 30, 2017</b>	<b>Increase (Decrease)</b>
<b>UNRESTRICTED</b>			
Change Fund	2,000	2,000	0
Petty Cash	5,000	5,000	0
BOG - General Fund	2,015,038	4,836,236	(2,821,198)
BOG - PRN Payroll	30,039	30,039	0
<b>Sub-total Unrestricted</b>	<b>2,052,077</b>	<b>4,873,275</b>	<b>(2,821,198)</b>
<b>RESTRICTED</b>			
Bank of Hawaii	176,053	133,931	42,121
ANZ Bank	97	(0)	97
First Hawaiian Bank	42,205	10,261	31,944
Bank Pacific	10,548	15,825	(5,277)
Community First FCU	2,063	3,448	(1,386)
BOG - Customer Refunds	1,843,368	1,831,426	11,942
Bank Pacific - Surcharge	889,718	278,142	611,576
Bank Pacific - Escrow Deposit	666,122	666,140	(18)
BOG Emergency Reserve Fund	6,124	6,122	2
BOG - Revenue Trust	1,242,847	201,614	1,041,233
BOG Revenue Trust Fund	7,169,864	7,782,227	(612,363)
BOG Capital Improvement Fund-Bond	4,500	5,598	(1,098)
BOG Capital Improvement Revenue Fund	882,305	-	882,305
BOG-O & M Reserve	13,531,526	13,516,540	14,986
BOG-Debt Service Reserve	11,230,272	11,217,733	12,539
BOG-CAPEX Reserve	15,478,485	15,462,869	15,616
BOG Sewer Hookup Revolving Fund	64,328	63,590	738
BOG Subord. Sec. Fund	782,361	859,233	(76,872)
BOG Operation and Maintenance Fund	3,083,482	3,083,482	0
	<b>57,106,266</b>	<b>55,138,182</b>	<b>1,968,084</b>
BOG - SDC Deposit	1,713,198	1,486,219	226,980
BOG - SDC CDs	8,500,000	8,500,000	0
<b>Total Restricted</b>	<b>67,319,464</b>	<b>65,124,400</b>	<b>2,195,064</b>
<b>Reserve Funds</b>			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	0
BOG Series 13 Construction Fund	67,985,926	74,461,765	(6,475,839)
BOG Series 14 Refunding Construction Fund	761,698	771,281	(9,583)
BOG Series 16 Construction Fund	128,113,664	132,811,449	(4,697,785)
BOG Series 16 Cap Int Fund	1,907	1,782,982	(1,781,075)
BOG Series 17 Refunding Construction Fund	8,941,663	9,299,311	(357,648)
BOG Series 17 Refunding COI Fund	56,575	-	56,575
<b>Total Restricted - Held by Trustee</b>	<b>223,284,646</b>	<b>236,550,002</b>	<b>(13,265,356)</b>
USB Series 2013 Debt Service Fund	4,671,759	2,336,754	2,335,006
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	0
USB Series 2014 Refunding Debt Service Fund	3,590,622	1,796,559	1,794,064
USB Series 2014 Refunding Debt Service Reserve Fund	7,729,117	7,707,602	21,515
USB Series 2016 Debt Service Fund	3,582,140	130	3,582,010
USB Series 2016 Debt Service Reserve Fund	7,588,700	7,582,725	5,975
USB Series 2017 Refunding Debt Service Fund	1,505,785	2,020,121	(514,336)
USB Series 2017 Refunding Debt Service Reserve Fund	7,566,460	7,566,460	0
<b>Total Investments</b>	<b>48,266,271</b>	<b>41,042,038</b>	<b>7,224,233</b>
<b>Total Restricted and Unrestricted Cash</b>	<b>340,922,458</b>	<b>347,589,716</b>	<b>(6,667,258)</b>

**SCHEDULE H**

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

**YTD**  
**Dec-17**

**Increase (decrease) in cash****Cash flows from operating activities:**

Cash received from trade and others	24,379,776
Cash payments to suppliers/contractors for goods and services	(10,065,839)
Cash payments to employees for services	(6,895,690)

**Net cash provided by operating activities**


---

7,418,247

**Cash flows from capital and related financing activities:**

Contributed capital received (grants)	4,258,777
Acquisition of utility plant	(17,094,511)
Repayment of Long Term Debt	(123,721)
Interest expense	(812,233)

**Net cash provided by (used in) capital and related financing activities**


---

(13,771,687)

**Cash flows from investing activities:**

Transfers from (to) restricted fund	2,986,143
Interest income received	546,099

**Net cash provided by investing activities**


---

3,532,242

**Net increase (decrease) in cash**

(2,821,198)

**Unrestricted cash at beginning of the period**

4,873,275

**Unrestricted cash at end of period**


---

2,052,077

Reconciliation of operating loss to net cash provided by  
operating activities:

**Operating Income (loss)**

7,575,982

Adjustments to reconcile to net cash provided by operating activities:

Depreciation expense	4,584,525
Other Expense/income	315,324
(Increase) decrease in assets:	
Accounts receivable	(2,762,821)
Materials and supplies inventory	(187,644)
Other Assets	(93,736)

Increase (decrease) in liabilities:

Accounts payable, Contractors, Retention & Escrow Deposit	(887,106)
Accrued payroll	(1,498,041)
Customer deposits	371,764

**Net cash provided by operating activities**


---

7,418,247



Guam Waterworks Authority  
Accounts Receivable - Government  
As of December 31, 2017

## SCHEDULE I

Customer Name	No of Accounts	A G I N G					Outstanding Bal.
		Current Balance	31-60 days	61-90 days	91-120 days	Over 120 days	
GUAM INT'L AIRPORT AUTHORITY	10	39,092	40,979	31,619	43,792	178,730	334,213
GUAM POWER AUTHORITY	25	16,990	44,278	30,776	1,000	159,569	252,613
PORT AUTHORITY OF GUAM	1	50,405	43,962	-	-	-	94,367
GUAM MEMORIAL HOSPITAL AUTHORITY	3	34,912	37,847	-	-	-	72,759
GUAM COMMUNITY COLLEGE	3	9,307	5,159	-	-	-	14,465
UNIVERSITY OF GUAM	4	8,014	-	-	-	-	8,014
GUAM HOUSING & URBAN RENEWAL AUTHORITY	7	2,033	-	-	-	92	2,125
GUAM HOUSING CORPORATION	1	31	-	-	-	-	31
<b>AUTONOMOUS AGENCIES</b>	<b>54</b>	<b>160,781</b>	<b>172,225</b>	<b>62,395</b>	<b>44,793</b>	<b>338,392</b>	<b>778,586</b>
DEPT OF EDUCATION	50	228,680	199,692	33,997	50,336	79,697	592,401
DEPT OF PARKS & RECREATION	21	28,062	27,869	195,408	49,703	157,403	458,445
DEPT OF CORRECTIONS	8	132,921	53	-	-	-	132,975
DEPT OF PUBLIC HEALTH & SOCIAL SERVICES	4	1,258	1,117	639	426	103,629	107,069
DEPT OF CHAMORRO AFFAIRS	7	6,209	6,762	9,021	5,000	-	26,992
MAYORS' COUNCIL OF GUAM	41	11,622	118	6	-	-	11,746
GUAM FIRE DEPARTMENT	11	9,196	-	-	-	-	9,196
DEPT OF YOUTH AFFAIRS	4	1,285	25	154	3,872	-	5,336
DEPT OF PUBLIC WORKS	9	5,099	-	-	-	-	5,099
SANCTUARY INC	1	4,449	-	-	-	-	4,449
DEPT OF MILITARY AFFAIRS/GUARNG	1	4,083	-	-	-	-	4,083
OFFICE OF THE GOVERNOR	2	3,209	-	-	-	-	3,209
DEPT OF MENTAL HEALTH AND SUBSTANCE	3	2,263	-	-	-	-	2,263
DEPT OF AGRICULTURE	2	1,700	-	-	-	-	1,700
DEPT OF ADMINISTRATION	2	583	146	137	134	628	1,628
NEW GUAM MENTAL HEALTH	1	904	-	-	-	-	904
GHURA-AGAFU GUMAS PARK	1	26	38	28	47	755	895
GUAM POLICE DEPARTMENT	2	855	-	-	-	-	855
DIVISION OF SENIOR CITIZENS, DPH&SS	2	316	151	140	60	-	667
GUAM PUBLIC LIBRARY	3	134	-	-	-	-	134
GUAM VETERANS AFFAIRS OFFICE	1	103	-	-	-	-	103
THE OFFICE OF THE DEDEDO MAYOR	1	43	-	-	-	-	43
MERIZO MAYOR	1	25	-	-	-	-	25
GUAM SOLID WASTE AUTHORITY	1	24	-	-	-	-	24
<b>LINE AGENCIES</b>	<b>179</b>	<b>443,047</b>	<b>235,972</b>	<b>239,531</b>	<b>109,578</b>	<b>342,112</b>	<b>1,370,240</b>
<b>TOTAL December 31, 2017</b>	<b>233</b>	<b>603,829</b>	<b>408,197</b>	<b>301,926</b>	<b>154,370</b>	<b>680,504</b>	<b>2,148,826</b>
<b>TOTAL September 30, 2017</b>	<b>253</b>	<b>715,578</b>	<b>442,522</b>	<b>169,120</b>	<b>72,476</b>	<b>396,347</b>	<b>1,796,043</b>
<b>% INCREASE/ (DECREASE)</b>	<b>-8%</b>	<b>-16%</b>	<b>-8%</b>	<b>79%</b>	<b>113%</b>	<b>72%</b>	<b>20%</b>

GWA Work Session - January 16, 2017 - DIVISION REPORTS

**GUAM WATERWORKS AUTHORITY**  
**2013 Series Bond Project Status**  
**As of Dec. 31, 2017**

**SCHEDULE J**

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 12/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 12/31/17
Santa Rita Springs Booster Pump Rehab Phase II	\$ 100,000	\$ 100,000	61,482	38,518	\$ 100,000	\$ -	\$ 38,518
"A" Series Well Transmission Line	\$ 400,000	\$ 400,000	314,479	55,367	\$ 369,846	\$ 30,154	\$ 85,521
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
Barriqada 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	598,825	25,175	\$ 624,000	\$ -	\$ 25,175
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
Uqum 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	4,602,272	4,444,588	\$ 9,046,860	\$ 2,104,140	\$ 6,548,728
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	10,597,654	3,152,159	\$ 13,749,814	\$ 128,187	\$ 3,280,346
Uqum Water Treatment Plant Reservoir	\$ 7,000,000	\$ 90,000			\$ -	\$ 90,000	\$ 90,000
Aqana Heights & Chaot Tanks	\$ 4,500,000	\$ 3,280,000	233,265	847,022	\$ 1,080,287	\$ 2,199,713	\$ 3,046,735
Tank Major Repair Yiqo#1 Manqilao#2 Aqat#2	\$ 13,500,000	\$ 11,605,000	1,167,648	10,437,352	\$ 11,605,000	\$ 0	\$ 10,437,353
Tank Major Repair Yiqo#1 Manqilao#2 Aqat#2	\$ 8,000,000	\$ -			\$ -	\$ -	\$ -
Assessment of maloloi Elevetad & Yiqo Elevated	\$ 500,000	\$ 485,117	461,813	23,304	\$ 485,117	\$ -	\$ 23,304
Fire Hydrant Replacement Program	\$ -	\$ -			\$ -	\$ -	\$ -
Wastewater System Planning	\$ 800,000	\$ 651,000	550,480	100,520	\$ 651,000	\$ (0)	\$ 100,520
Lift Station Upgrades	\$ 5,000,000	\$ 946,000	562,108	363	\$ 562,471	\$ 383,529	\$ 383,892
Wastewater Collection System Repl/Rehab	\$ 6,500,000	\$ 780,000	476,682	168,631	\$ 645,314	\$ 134,687	\$ 303,318
Baza Gardens STP Replacement		\$ 3,114,883	936,401	2,178,467	\$ 3,114,869	\$ 15	\$ 2,178,482
Facilities Plan/Design for Umatac-Merizo WWTP		\$ 473,000	335,000	36,699	\$ 371,699	\$ 101,301	\$ 138,000
Agat/Santa Rita STP Replacement	\$ 19,000,000	\$ 67,200,000	33,195,183	34,004,817	\$ 67,200,000	\$ 0	\$ 34,004,817
Agana WWTP Interim Measures		\$ 673,000	548,597	124,403	\$ 673,000	\$ (0)	\$ 124,403
Umatac Merizo Replacement	\$ 2,000,000	\$ -			\$ -	\$ -	\$ -
Wastewater Pump Station Electrical Upgrade	\$ 620,000	\$ 620,000	91,348	8,513	\$ 99,861	\$ 520,139	\$ 528,652
Electrical Upgrade - Water Wells	\$ 1,500,000	\$ 1,500,000	1,480,769	19,230	\$ 1,500,000	\$ 0	\$ 19,231
Electrical Upgrade - Water Booster	\$ 325,000	\$ 2,000			\$ -	\$ 2,000	\$ 2,000
Electrical Upgrade -Water Booster	\$ 350,000	\$ 200,000	977	-	\$ 977	\$ 199,023	\$ 199,023
Electrical Upgrade - Other Water	\$ 250,000	\$ 150,000	60,700	-	\$ 60,700	\$ 89,300	\$ 89,300
SCADA Improvements - Phase 3	\$ 1,850,000	\$ 923,000	427,949	294,410	\$ 722,359	\$ 200,641	\$ 495,051
SCADA Improvements - Phase 4	\$ 500,000	\$ -			\$ -	\$ -	\$ -
Laboratory Modernization	\$ 1,500,000	\$ 1,173,000	1,155,875	15,590	\$ 1,171,465	\$ 1,535	\$ 17,125
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						\$	\$ 355,516
<b>Total Construction Fund</b>	<b>\$ 139,325,000</b>	<b>\$ 139,325,000</b>	<b>\$ 71,969,595</b>	<b>\$ 58,554,042</b>	<b>\$ 130,523,637</b>	<b>\$ 8,801,363</b>	<b>\$ 67,985,926</b>

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

GWA Work Session - January 16, 2017 - DIVISION REPORTS

GUAM WATERWORKS AUTHORITY  
2014 Series Refunded Bond Project Status  
As of Dec. 31, 2017

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT	ADJUSTED PROJECT COST	EXPENDITURES AS OF 12/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 12/31/17	Construction fund balance AS OF 12/31/17
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 Reducti	\$ 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	3,790,888	\$ 42,287	\$ 3,833,175	\$ (0)	\$ 482,600	\$ 42,287
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 WTP Plant 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
<b>Total Construction Fund</b>	\$ 82,930,086	\$ 89,711,698	88,891,990	\$ 758,873.38	\$ 89,711,543	\$ 1	\$ 13,990,813	\$ 758,263
Interest Earned	\$ 6,781,612	\$ (0)				\$ (0)		\$ 3,435
<b>Total Project Cost Funding</b>	\$ 89,711,698	\$ 89,711,698	88,891,990	\$ 758,873.38	\$ 89,711,543	\$ 1	\$ 13,990,813	\$ 761,698

**GUAM WATERWORKS AUTHORITY**  
**2016 Series Bond Project Status**  
**As of Dec. 31, 2017**

**SCHEDULE L**

PROJECT NAME	ORIGINAL	Adjusted Project Cost	EXPENDITURES AS OF 12/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES		UNOBLIGATED PROJECT COST	Construction fund balance	
	APPROVED PROJECT COST							AS OF 12/31/17	AS OF 12/31/17
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		150,000.00	\$ 150,000	\$ -	\$ 4,351,000	\$ -	\$ 4,501,000
Barriqada 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	159,105	261,339.91	\$ 420,445	\$ -	\$ 1,855,555	\$ -	\$ 2,116,895
Deep Well Rehabilitation	\$ 250,000	\$ 250,000		-	\$ -	\$ -	\$ 250,000	\$ -	\$ 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		39,339.84	\$ 39,340	\$ -	\$ 3,576,660	\$ -	\$ 3,616,000
Uqum 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			\$ -	\$ -	\$ 1,141,000	\$ -	\$ 1,141,000
Mechanical/Electrical Equipment	\$ 100,000	\$ 100,000			\$ -	\$ -	\$ 100,000	\$ -	\$ 100,000
Water Reservoir Internal/External	\$ 800,000	\$ 800,000			\$ -	\$ -	\$ 800,000	\$ -	\$ 800,000
Water System Reservoirs 2005 Improvements	\$ 42,350,000	\$ 28,350,000	880,346	2,341,592.76	\$ 3,221,939	\$ -	\$ 25,128,062	\$ -	\$ 27,469,654
Uqum Water Treatment Plant Reservoir	\$ 6,410,000	\$ -			\$ -	\$ -	\$ -	\$ -	\$ -
Water Audit Program & Water Loss Control Plan	\$ 1,000,000	\$ 1,000,000			\$ -	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000
Aqana Heights & Chaot Tanks	\$ 1,220,000	\$ 1,220,000			\$ -	\$ -	\$ 1,220,000	\$ -	\$ 1,220,000
Tank Major Repair Yiqo#1 Manqilao#2 Aqat#2	\$ 1,895,000	\$ 1,895,000			\$ -	\$ -	\$ 1,895,000	\$ -	\$ 1,895,000
Tank Major Repair Yiqo#1 Manqilao#2 Aqat#2	\$ 10,500,000	\$ 7,409,830		1,822,132.80	\$ 1,822,133	\$ -	\$ 5,587,697	\$ -	\$ 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	30,708	263,222.72	\$ 293,931	\$ -	\$ 55,069	\$ -	\$ 318,292
Lift Station Upgrades	\$ 2,404,000	\$ 2,404,000	64,755	166,039.41	\$ 230,794	\$ -	\$ 2,173,206	\$ -	\$ 2,339,245
Wastewater Collection System Repl/Rehab	\$ 2,920,000	\$ 2,920,000			\$ -	\$ -	\$ 2,920,000	\$ -	\$ 2,920,000
Baza Gardens STP Replacement	\$ 16,700,000	\$ 29,400,170	6,683,340	22,098,709.16	\$ 28,782,050	\$ -	\$ 618,120	\$ -	\$ 22,716,830
Facilities Plan/Design for Umatac-Merizo WWTP	\$ 527,000	\$ 527,000	190,947	59,839.09	\$ 250,786	\$ -	\$ 276,214	\$ -	\$ 336,053
Aqat/Santa Rita STP Replacement	\$ 3,000,000	\$ 3,000,000	485,024	199,334.53	\$ 684,358	\$ -	\$ 2,315,642	\$ -	\$ 2,514,976
Aqana WWTP Interim Measures	\$ 827,000	\$ 827,000			\$ -	\$ -	\$ 827,000	\$ -	\$ 827,000
Umatac Merizo Replacement	\$ 8,000,000	\$ 20,800,000	2,301,795	18,465,113.96	\$ 20,766,909	\$ -	\$ 33,091	\$ -	\$ 18,498,205
						\$ -	\$ -		
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	505,421.60	\$ 523,422	\$ -	\$ 653,578	\$ -	\$ 1,159,000
SCADA Improvements - Phase 4	\$ 6,500,000	\$ 6,500,000			\$ -	\$ -	\$ 6,500,000	\$ -	\$ 6,500,000
						\$ -	\$ -		
Laboratory Modernization	\$ 1,127,000	\$ 1,127,000	1,127,000	-	\$ 1,127,000	\$ -	\$ -	\$ -	\$ -
Land Survey	\$ 1,998,000	\$ 1,998,000	14,147	1,246,376.39	\$ 1,260,524	\$ -	\$ 737,476	\$ -	\$ 1,983,853
General Plant Improvements / Water	\$ 2,769,463	\$ 2,769,463	230,230	1,139,202.60	\$ 1,369,432	\$ -	\$ 1,400,031	\$ -	\$ 2,539,233
Information Technology Integration Improvements	\$ 500,000	\$ 500,000	244,068	-	\$ -	\$ -	\$ 500,000	\$ -	\$ 255,932
Interest Earned		\$ -						\$ -	\$ 523,666
		\$ -							
<b>Total Construction Fund</b>	<b>\$ 140,019,463</b>	<b>\$ 140,019,463</b>	<b>\$ 12,429,466</b>	<b>\$ 48,757,665</b>	<b>\$ 60,943,062</b>	<b>\$ 79,076,401</b>	<b>\$ 128,113,664</b>		

GWA Work Session - January 16, 2017 - DIVISION REPORTS

**GUAM WATERWORKS AUTHORITY**  
**2017 Series Refunded Bond Project Status**  
**As of Dec. 31, 2017**

**SCHEDULE M**

PROJECT NAME	ORIGINAL		Adjusted Project Cost	EXPENDITURES AS OF 12/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND UNOBLIGATED		Construction fund balance AS OF 12/31/17
	APPROVED PROJECT COST					ENCUMBRANCES	PROJECT COST	
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	\$ 10,254,220	\$ 19,409	\$ 10,273,628	\$ 26,372	\$ 45,780	
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	\$ 179,638	\$ 20,362	\$ 200,000	\$ -	\$ 20,362	
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	\$ 135,695	\$ 202,199	\$ 337,895	\$ 1,362,105	\$ 1,564,305	
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	\$ 692,926	\$ 82,076	\$ 775,002	\$ 124,998	\$ 207,074	
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	\$ 970,439	\$ 538,944	\$ 1,509,384	\$ 490,616	\$ 1,029,561	
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	\$ 451,462	\$ 22,698	\$ 474,160	\$ 0	\$ 22,698	
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 Assessment of Tank		\$ 500,000	\$ 497,004	\$ 2,996	\$ 500,000	\$ -	\$ 2,996	
Agana Heights & Chaot Tanks		\$ 4,700,000	\$ 4,327,370	\$ 372,630	\$ 4,700,000	\$ -	\$ 372,630	
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 maloljoi Elevetad & Yigo Elevated		\$ 200,000	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ -	
Public Water System Asser Inventory/Condition Assessment		\$ 100,000	\$ 96,554	\$ 3,446	\$ 100,000	\$ -	\$ 3,446	
Public Water System GIS & Mapping		\$ 50,000	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ -	
Wastewater System Planning	\$ 1,500,000	\$ 1,500,000	\$ 1,465,858	\$ 8,142	\$ 1,474,000	\$ 26,000	\$ 34,142	
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	\$ 718,036	\$ 283,287	\$ 1,001,323	\$ 103,677	\$ 386,964	
Facilities Plan/Design for Baza Gardens WWTP	\$ 1,250,000	\$ 1,250,000	\$ 1,239,250	\$ 10,750	\$ 1,250,000	\$ -	\$ 10,750	
Facilities Plan/Design for Agat-Santa Rita WWTP	\$ 900,000	\$ 899,630	\$ 881,749	\$ 17,881	\$ 899,630	\$ -	\$ 17,881	
Priority 1 Sewer Upgrades – Baza Gardens WWTP	\$ 650,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Baza Gardens STP Replacement	\$ 3,567,000	\$ 1,301,947	\$ 316,686	\$ 314	\$ 317,000	\$ 984,947	\$ 985,261	
Facilities Plan/Design for Umatat Merizo WWTP		\$ 900,000	\$ 693,161	\$ 160,696	\$ 853,858	\$ 46,142	\$ 206,839	
Agat/Santa Rita STP Replacement	\$ 2,968,000	\$ 2,218,000	\$ 2,215,591	\$ 2,109	\$ 2,217,701	\$ 300	\$ 2,409	
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	\$ 11,242,386	\$ 57,614	\$ 11,300,000	\$ 200,000	\$ 257,614	
I&I SSES Southern		\$ 800,000	\$ 733,872	\$ 66,129	\$ 800,000	\$ (0)	\$ 66,128	
I&I SSES Central		\$ 850,000	\$ 794,325	\$ 55,675	\$ 850,000	\$ -	\$ 55,675	
I&I SSES Northern		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Umatat Merizo Replacement		\$ 250,000	\$ 247,431	\$ 2,569	\$ 250,000	\$ -	\$ 2,569	
Northern District WWTP Secondary Treatment Upgrades		\$ 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	\$ 335,378	\$ 18,849	\$ 354,227	\$ 0	\$ 18,849	
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	\$ 193,989	\$ 56,011	\$ 250,000	\$ -	\$ 56,011	
SCADA Improvements – Phase 2	\$ 1,100,000	\$ 1,056,986	\$ 1,027,424	\$ 29,562	\$ 1,056,986	\$ -	\$ 29,562	
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	\$ 470,590	\$ 29,097	\$ 499,687	\$ 313	\$ 29,410	
General Plant Improvements / Water	\$ 14,370,000	\$ 7,241,000	\$ 7,241,000	\$ 0	\$ 7,241,000	\$ 0	\$ 0	
Interest Earned							\$ 69,423	
Total Construction Fund	\$ 87,402,000	\$ 87,402,000	\$ 78,529,760	\$ 3,562,606	\$ 82,092,366	\$ 4,309,634	\$ 8,941,663	

- 1.) PUC's Docket 11-01 \$29,000,000.00 dated 09/19/11 authorized GWA for reallocation  
2) PUC's Docket 11-01 Reallocation of \$23,246,000.00 dated 07/30/12  
3) PUC's Docket Reallocation dated February 2013

**GUAM WATERWORKS AUTHORITY****Schedule of Series 2013, 2014 Refunding, 2016 and 2017 Refunding Bond Bank Accounts****As of December 31, 2017****SCHEDULE N****12/31/2017****BANK OF GUAM**

BOG - Revenue Account	7,169,864
BOG - Operations and Maintenance Reserve	3,083,482
BOG - Operations, Maintenance, Renewal and Replacement Reserve Fund	17,423,213
BOG - Capital Improvement Fund	886,805
BOG - O & M Reserve	13,531,526
BOG - Debt Service Reserve	11,230,272
BOG - CAPEX Reserve	15,478,485
<b>Total BOG Bank Account Balance</b>	<b>68,803,646</b>

**Series 2013 Bond:**

BOG - Construction Fund	67,985,926
USB - Debt Service Fund	4,671,759
USB - Debt Service Reserve Fund	12,031,688
<b>Total Series 2013 Bond Bank Balance</b>	<b>84,689,373</b>

**Series 2014 Refunding Bond:**

BOG - Construction Fund	761,698
USB - Debt Service Fund	3,590,622
USB - Debt Service Reserve Fund	7,729,117
<b>Total Series 2014 Refunding Bond Bank Balance</b>	<b>12,081,437</b>

**Series 2016 Bond:**

BOG - Construction Account	128,113,664
BOG - Capitalized Interest Fund	1,907
USB - Debt Service Fund	3,582,140
USB - Debt Service Reserve Fund	7,588,700
<b>Total Series 2016 Bond Bank Balance</b>	<b>139,286,411</b>

**Series 2017 Refunding Bond:**

BOG - Construction Account	8,941,663
BOG - Cost of Issuance Fund	56,575
USB - Debt Service Fund	1,505,785
USB - Debt Service Reserve Fund	7,566,460
<b>Total Series 2017 Refunding Bond Bank Balance</b>	<b>18,070,483</b>



## Guam Waterworks Authority

## VEHICLE FLEET STATUS

1/10/2018

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	2	0	1
Bobcat	1	1	0	100%	1	0	0	0	0	0	0
Boom Truck	2	0	2	0%	0	0	1	0	1	0	0
Crane	2	0	2	0%	0	0	0	0	0	1	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	4	3	57%	4	0	0	0	2	0	1
Fuel Tanker	1	1	0	100%	1	0	0	0	0	0	0
Heavy Duty	3	0	3	0%	0	0	0	0	0	2	1
Light	150	103	47	69%	101	2	2	9	4	7	25
Mini Backhoe	4	2	2	50%	2	0	0	0	2	0	0
Pumper Truck	1	0	1	0%	0	0	0	0	0	1	0
Sludge Truck	4	3	1	75%	3	0	0	0	1	0	0
Tow	1	0	1	0%	0	0	0	0	0	0	1
Tractor	2	1	1	50%	1	0	0	0	0	1	0
Trailer	12	7	5	58%	7	0	0	0	1	2	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	3	2	60%	3	0	0	0	1	0	1
Total	211	134	77		132	2	3	9	16	15	34

GWA Work Session - January 16, 2017 - DIVISION REPORTS

Guam Waterworks Authority		Date: 1/10/2018	 <p>WATER DISTRIBUTION FACILITIES REPORT</p>
		Time:	
REVIEWS			
TOTAL PUMPS INSTALLED	51	OVERALL AVERAGE	94%
TOTAL PUMPS OPERATIONAL	48	% OF OPERATING PUMPS	94%
TOTAL BOOSTER PUMP STATIONS	25		

Northern District													
NO.	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO.	VALVES, ELECTRICAL, STRUCTURAL REMARKS	WORK ORDER NO.	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	2	100%	OP	A						
3	Santa Rosa	15	2	2	100%	OP	A						
4	Hyundai	40	2	1	50%	OP	A	Pump # 1 requires pump and motor. Station to undergo renovation during reservoir project.					
5	Access	60	2	2	100%	OP	A						
6	Chin, Palauan	5	2	2	100%	N/A							
7	Nimitz Hill	7.5	2	2	100%	N/A							
8	Adanwag	1.5	2	2	100%	N/A							
9	Pale Kiren	1	1	1	100%	N/A							
10	Uloa/Untalan	1	2	2	100%	OP	A						
11	Late Heights	15	2	2	100%	OP	A						
	TOTAL = 11		21	20	95%								
pump availability = no of operational pumps/no of pumps*100%													

Central District													
NO.	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO.	VALVES, ELECTRICAL, STRUCTURAL REMARKS	WORK ORDER NO.	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	2	67%	OP	A	Pump 2 leaking at seal, pump operational, work ongoing.					
2	Brigade	60	3	3	100%	OP	A						
3	Windward Hills	200 / 75	3	3	100%	OP	A						
4	Santa Rita Springs	40	2	2	100%	OP	A						
5	Santa Ana (Lower)	25	2	1	50%	N/A							
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%													

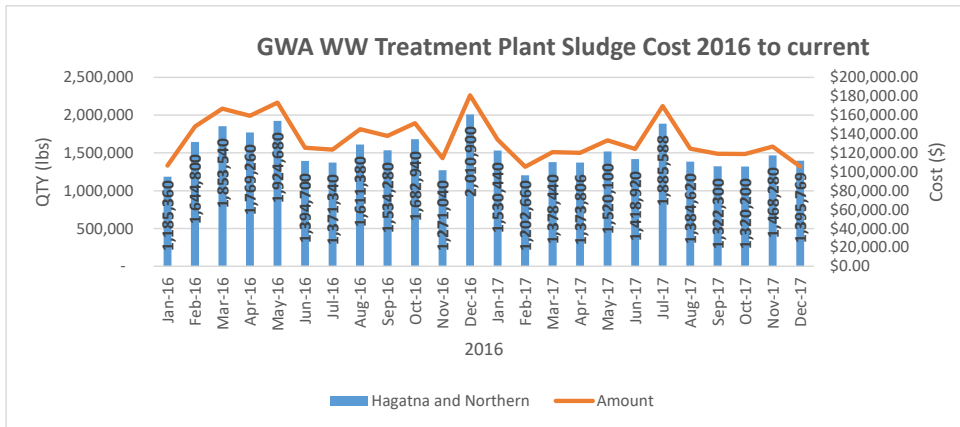
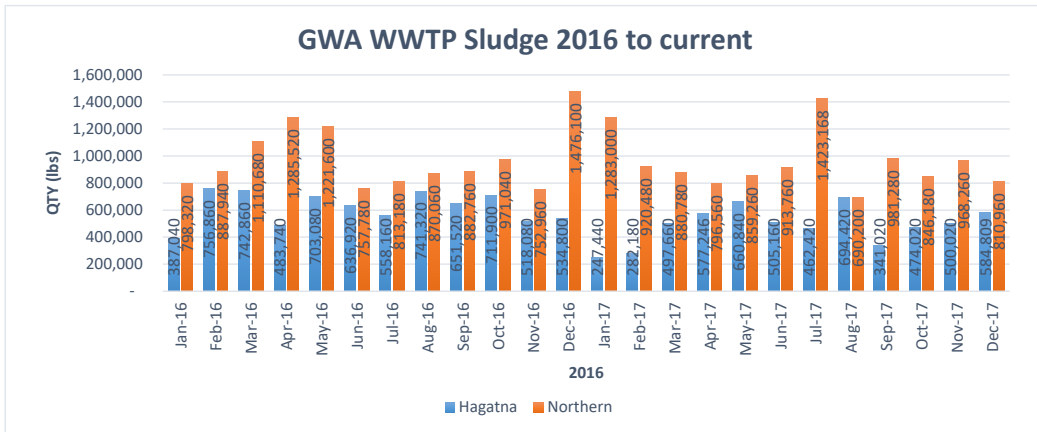
Southern District													
NO.	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO.	VALVES, ELECTRICAL, STRUCTURAL REMARKS	WORK ORDER NO.	ESTIMATED REPAIR DATE	UPDATES
1	Maloljo Line	125 / 50	3	3	100%	OP	A						
2	Geus	25	2	2	100%	OP	A						
3	Pigua	7.5	2	2	100%	N/A							
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	Maloljo Elevated	15	2	2	100%	OP	A						
	Total=7		15	15	100%								
pump availability = no of operational pumps/no of pumps*100%													



GWA Work Session - January 16, 2017 - DIVISION REPORTS

2016 Month- Yr	Hagatna		Northern		Hagatna and Northern	
	Qty	Amount	Qty	Amount	Qty	Amount
	lbs	\$	lbs	\$	lbs	\$
Jan-16	387,040	\$34,833.60	798,320	\$71,848.80	1,185,360	\$106,682.40
Feb-16	756,860	\$68,117.40	887,940	\$79,914.60	1,644,800	\$148,032.00
Mar-16	742,860	\$66,857.40	1,110,680	\$99,961.20	1,853,540	\$166,818.60
Apr-16	483,740	\$43,536.60	1,285,520	\$115,696.80	1,769,260	\$159,233.40
May-16	703,080	\$63,277.20	1,221,600	\$109,944.00	1,924,680	\$173,221.20
Jun-16	636,920	\$57,322.80	757,780	\$68,200.20	1,394,700	\$125,523.00
Jul-16	558,160	\$50,234.40	813,180	\$73,186.20	1,371,340	\$123,420.60
Aug-16	741,320	\$66,718.80	870,060	\$78,305.40	1,611,380	\$145,024.20
Sep-16	651,520	\$58,636.80	882,760	\$79,448.40	1,534,280	\$138,085.20
Oct-16	711,900	\$64,071.00	971,040	\$87,393.60	1,682,940	\$151,464.60
Nov-16	518,080	\$46,627.20	752,960	\$67,766.40	1,271,040	\$114,393.60
Dec-16	534,800	\$48,132.00	1,476,100	\$132,849.00	2,010,900	\$180,981.00
Grand Total	\$7,426,280	\$ 668,365	\$ 11,827,940	\$ 1,064,515	\$ 19,254,220	\$ 1,732,880

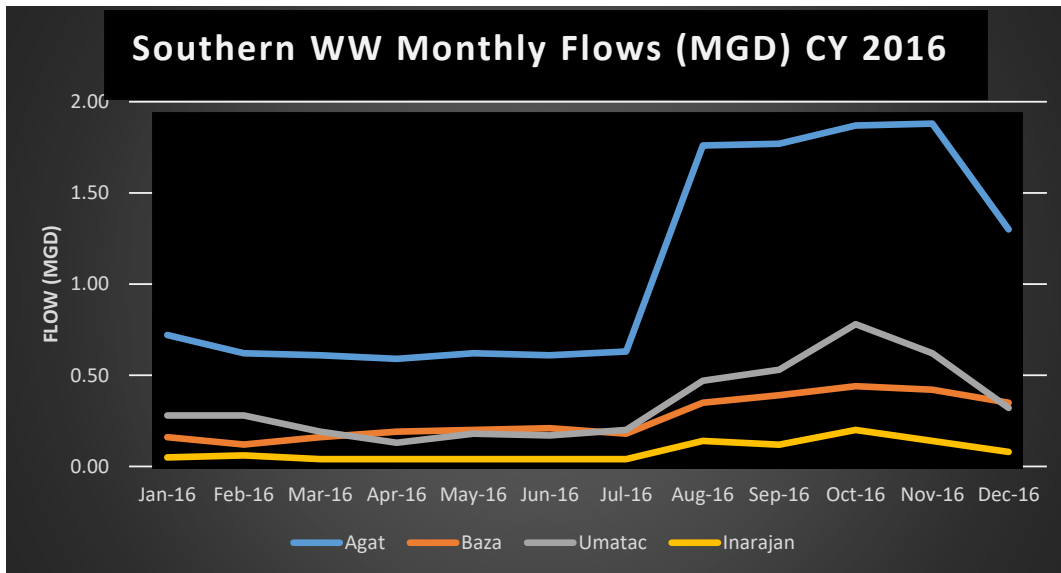
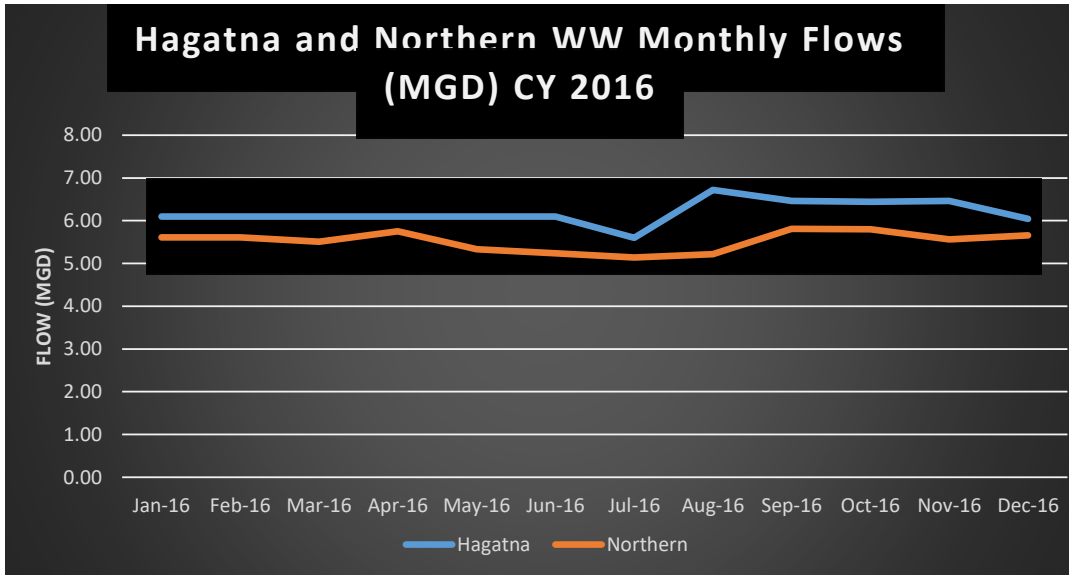
2017 Month- Yr	Hagatna		Northern		Hagatna and Northern	
	Qty	Amount	Qty	Amount	Qty	Amount
	lbs	\$	lbs	\$	lbs	\$
Jan-17	247,440	\$21,669.94	1,283,000	\$112,371.53	1,530,440	\$134,041.47
Feb-17	282,180	\$24,709.93	920,480	\$80,620.27	1,202,660	\$105,330.20
Mar-17	497,660	\$43,587.57	880,780	\$77,143.14	1,378,440	\$120,730.71
Apr-17	577,246	\$50,226.47	796,560	\$69,736.83	1,373,806	\$119,963.30
May-17	660,840	\$58,154.00	859,260	\$75,261.61	1,520,100	\$133,415.61
Jun-17	505,160	\$44,239.74	913,760	\$80,031.65	1,418,920	\$124,271.39
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	\$41,843.68	968,260	\$84,805.04	1,468,280	\$126,648.72
Dec-17	584,809	\$34,523.89	810,960	\$70,999.90	1,395,769	\$105,523.79
Grand Total	5827235	\$496,424.42	11373888	\$1,005,644.50	17201123	\$1,502,068.91

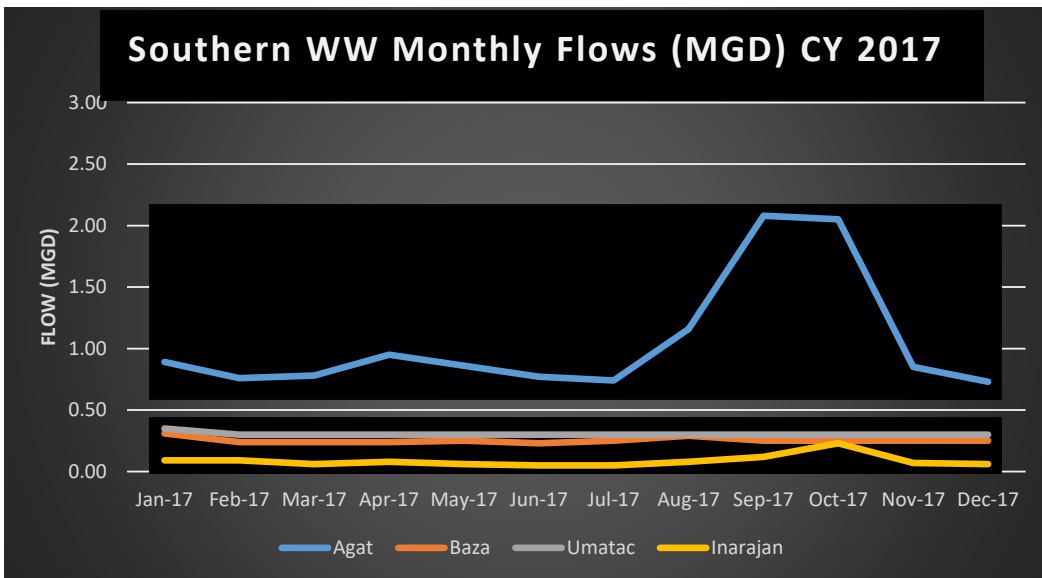
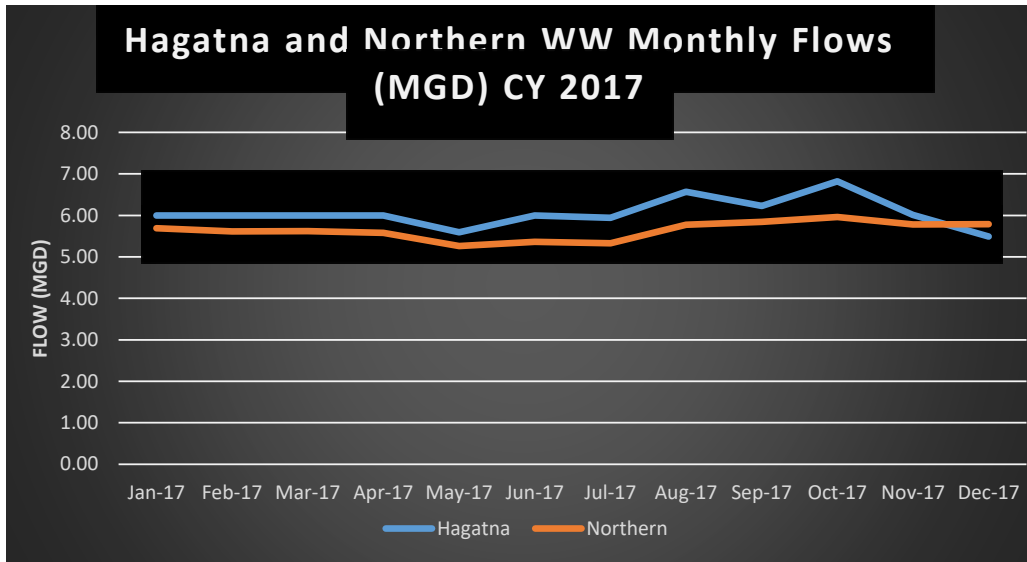


**Wastewater Treatment Plant Average Monthly Flows Million Gallons Per Day**

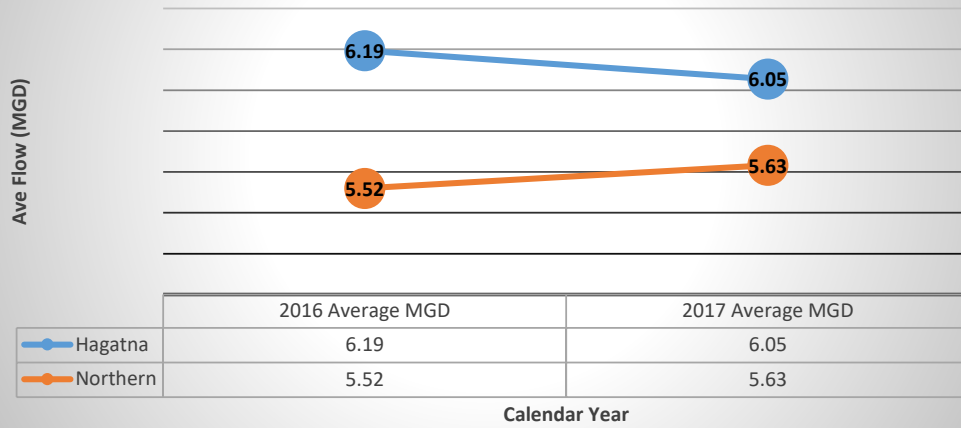
2016	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-16	6.10	5.61	0.72	0.16	0.28	0.05
Feb-16	6.10	5.61	0.62	0.12	0.28	0.06
Mar-16	6.10	5.51	0.61	0.16	0.19	0.04
Apr-16	6.10	5.75	0.59	0.19	0.13	0.04
May-16	6.10	5.33	0.62	0.20	0.18	0.04
Jun-16	6.10	5.24	0.61	0.21	0.17	0.04
Jul-16	5.60	5.14	0.63	0.18	0.20	0.04
Aug-16	6.72	5.22	1.76	0.35	0.47	0.14
Sep-16	6.46	5.81	1.77	0.39	0.53	0.12
Oct-16	6.44	5.80	1.87	0.44	0.78	0.20
Nov-16	6.46	5.56	1.88	0.42	0.62	0.14
Dec-16	6.04	5.66	1.30	0.35	0.32	0.08
<b>2016 Average MGD</b>	<b>6.19</b>	<b>5.52</b>	<b>1.08</b>	<b>0.26</b>	<b>0.35</b>	<b>0.08</b>
<b>2016 Total MGY</b>	<b>2,261</b>	<b>2,015</b>	<b>395</b>	<b>96</b>	<b>126</b>	<b>30</b>

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
<b>2017 Average MGD</b>	<b>6.05</b>	<b>5.63</b>	<b>1.05</b>	<b>0.25</b>	<b>0.30</b>	<b>0.09</b>
<b>2017 Total MGY</b>	<b>2,210</b>	<b>2,056</b>	<b>384</b>	<b>93</b>	<b>111</b>	<b>32</b>

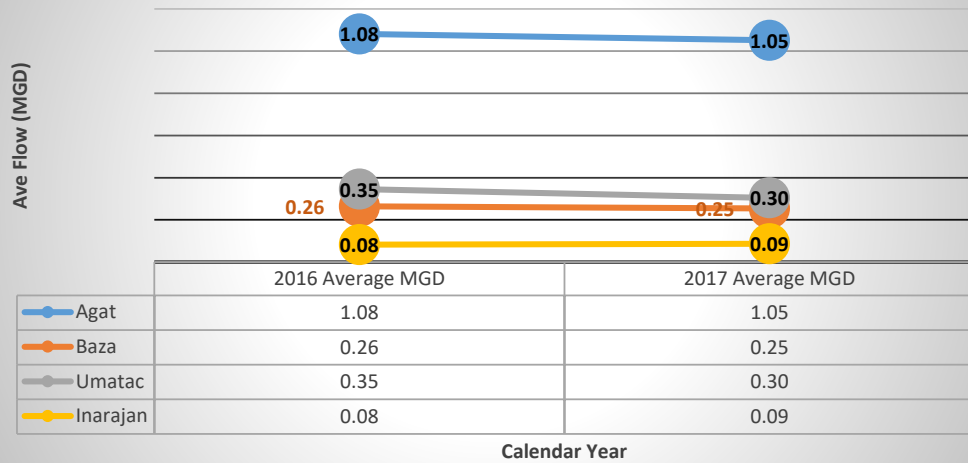




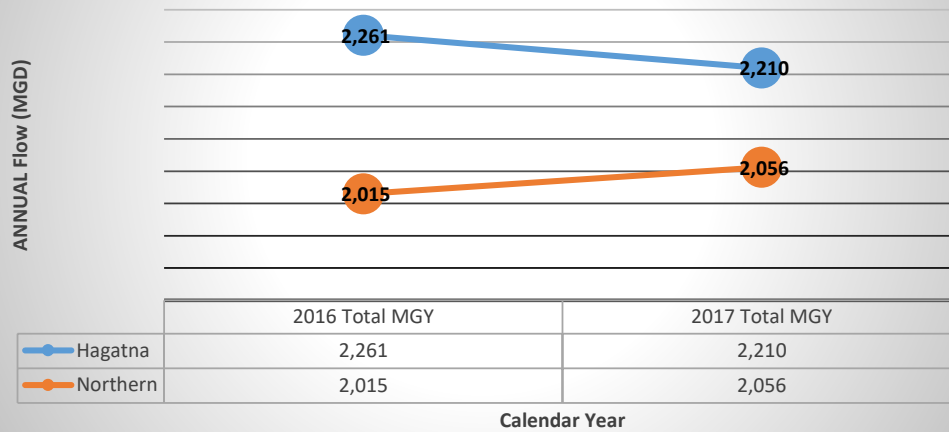
### Hagatna and Northern WW Ave Monthly Flows (MGD)



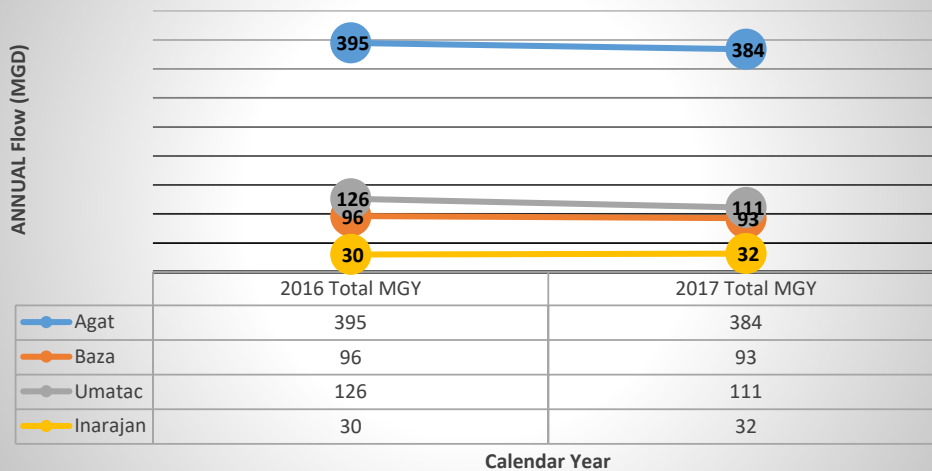
### Southern WW Ave Monthly Flows (MGD)



### Hagatna and Northern WW Annual Flows (MGD)



### Southern WW Annual Flows (MGD)



**Wastewater Treatment Plant Average Monthly Flows Million Gallons Per Day**

	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
<b>DESIGN FLOWS (MGD)</b>	12.0	12.0	0.75	0.60	0.39	0.19

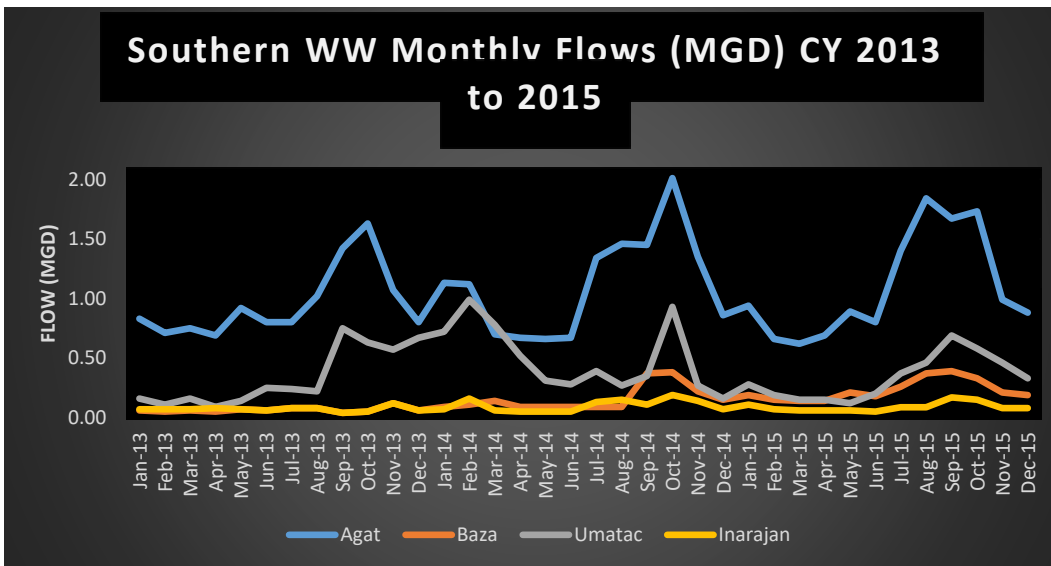
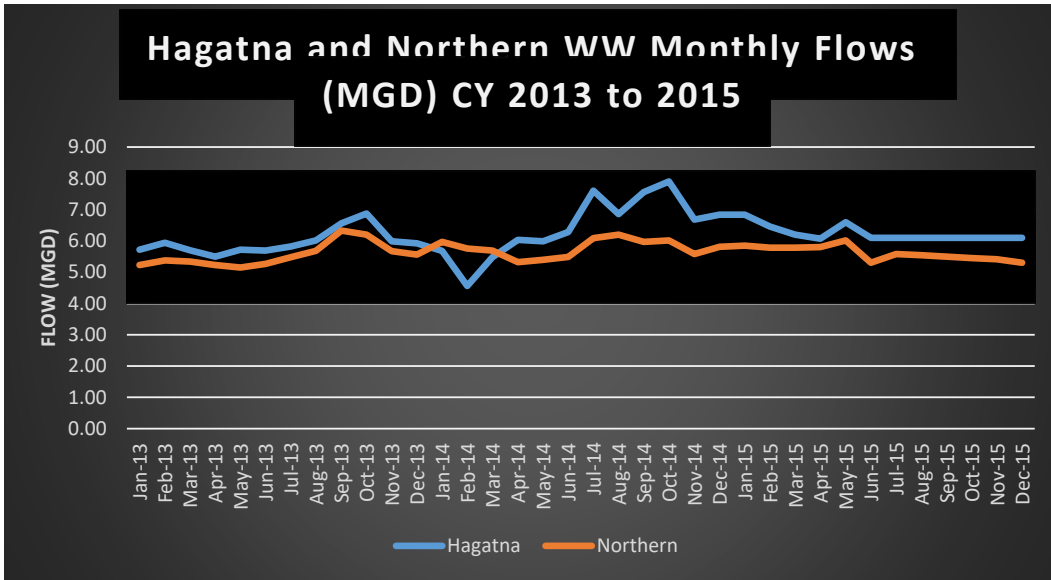
2013	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-13	5.72	5.23	0.83	0.06	0.16	0.07
Feb-13	5.94	5.38	0.71	0.05	0.11	0.07
Mar-13	5.70	5.34	0.75	0.06	0.16	0.07
Apr-13	5.50	5.23	0.69	0.05	0.09	0.08
May-13	5.72	5.15	0.92	0.07	0.14	0.07
Jun-13	5.69	5.27	0.80	0.06	0.25	0.06
Jul-13	5.82	5.48	0.80	0.08	0.24	0.08
Aug-13	6.02	5.68	1.02	0.08	0.22	0.08
Sep-13	6.56	6.33	1.42	0.04	0.75	0.04
Oct-13	6.88	6.20	1.63	0.05	0.63	0.05
Nov-13	5.99	5.67	1.07	0.12	0.57	0.12
Dec-13	5.92	5.56	0.80	0.06	0.67	0.06
<b>2013 Ave MGD</b>	<b>5.96</b>	<b>5.54</b>	<b>0.95</b>	<b>0.07</b>	<b>0.33</b>	<b>0.07</b>
<b>2013 Total MGY</b>	<b>2,174</b>	<b>2,023</b>	<b>348</b>	<b>24</b>	<b>121</b>	<b>26</b>

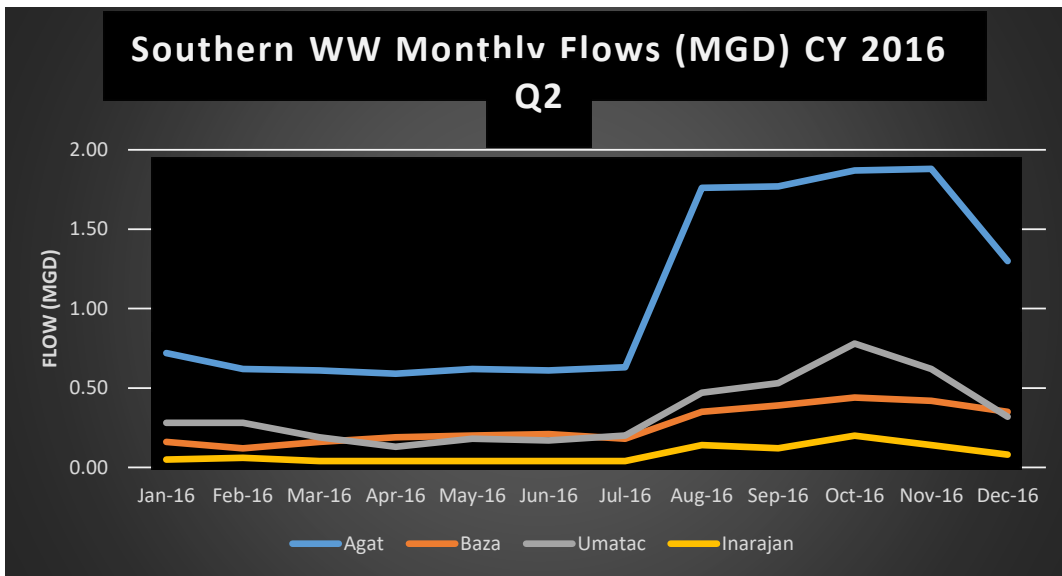
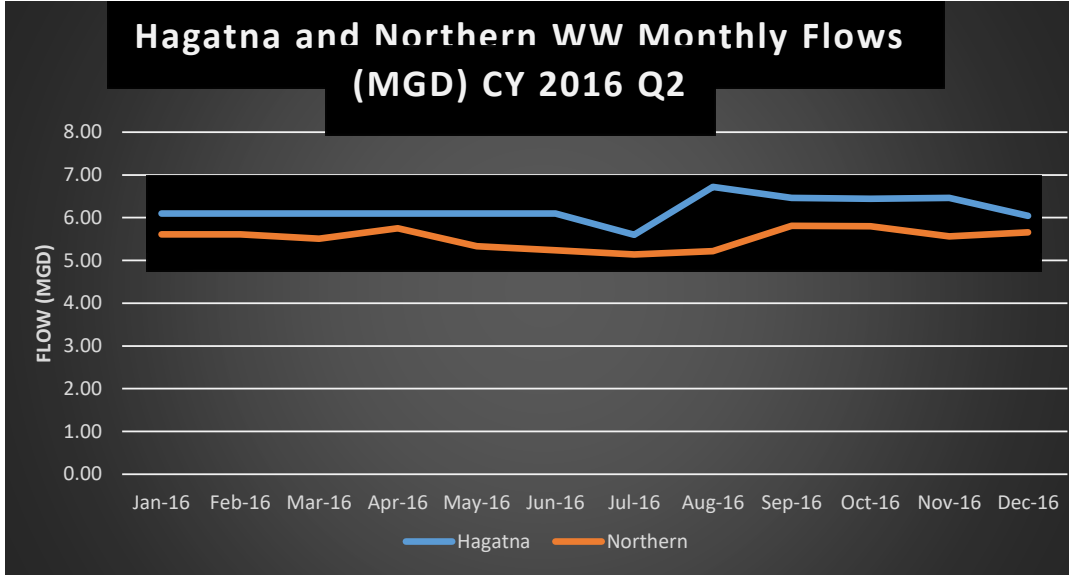
2014	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-14	5.68	5.97	1.13	0.09	0.72	0.07
Feb-14	4.56	5.76	1.12	0.11	0.99	0.16
Mar-14	5.48	5.69	0.7	0.14	0.78	0.06
Apr-14	6.03	5.32	0.67	0.09	0.52	0.05
May-14	5.99	5.4	0.66	0.09	0.31	0.05
Jun-14	6.28	5.49	0.67	0.09	0.28	0.05
Jul-14	7.61	6.09	1.34	0.09	0.39	0.13
Aug-14	6.86	6.2	1.46	0.09	0.27	0.15
Sep-14	7.56	5.97	1.45	0.37	0.35	0.11
Oct-14	7.9	6.02	2.01	0.38	0.93	0.19
Nov-14	6.68	5.58	1.35	0.22	0.27	0.14
Dec-14	6.84	5.81	0.86	0.15	0.16	0.07
<b>2014 Ave MGD</b>	<b>6.46</b>	<b>5.78</b>	<b>1.12</b>	<b>0.16</b>	<b>0.50</b>	<b>0.10</b>
<b>2014 Total MGY</b>	<b>2,356</b>	<b>2,108</b>	<b>408</b>	<b>58</b>	<b>182</b>	<b>37</b>

2015	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-15	6.84	5.85	0.94	0.19	0.28	0.11
Feb-15	6.46	5.78	0.66	0.15	0.19	0.07
Mar-15	6.20	5.78	0.62	0.14	0.15	0.06
Apr-15	6.07	5.80	0.69	0.14	0.15	0.06
May-15	6.60	6.02	0.89	0.21	0.12	0.06
Jun-15	6.10	5.30	0.80	0.18	0.20	0.05
Jul-15	6.10	5.58	1.40	0.26	0.37	0.09
Aug-15	6.10	5.54	1.84	0.37	0.46	0.09
Sep-15	6.10	5.50	1.67	0.39	0.69	0.17
Oct-15	6.10	5.45	1.73	0.33	0.58	0.15
Nov-15	6.10	5.41	0.99	0.21	0.46	0.08
Dec-15	6.10	5.30	0.88	0.19	0.33	0.08
<b>2015 Ave MGD</b>	<b>6.24</b>	<b>5.61</b>	<b>1.09</b>	<b>0.23</b>	<b>0.33</b>	<b>0.09</b>
<b>2015 Total MGY</b>	<b>2,277</b>	<b>2,047</b>	<b>399</b>	<b>84</b>	<b>121</b>	<b>32</b>

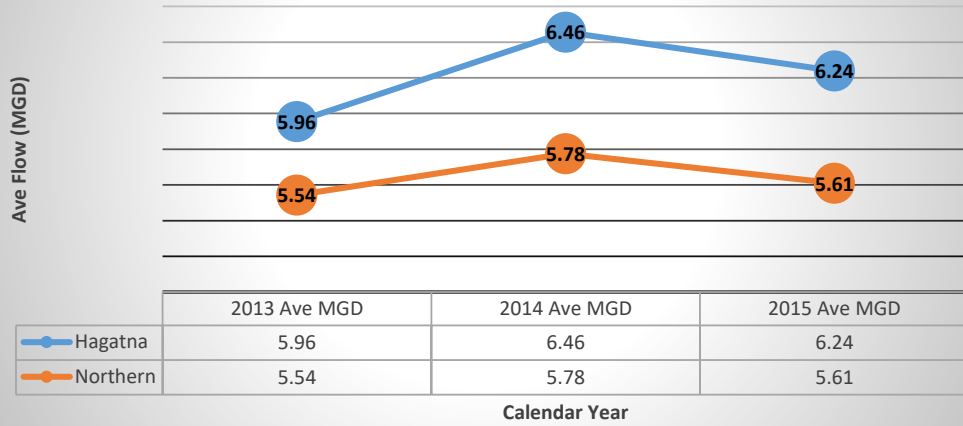


2016	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-16	6.10	5.61	0.72	0.16	0.28	0.05
Feb-16	6.10	5.61	0.62	0.12	0.28	0.06
Mar-16	6.10	5.51	0.61	0.16	0.19	0.04
Apr-16	6.10	5.75	0.59	0.19	0.13	0.04
May-16	6.10	5.33	0.62	0.20	0.18	0.04
Jun-16	6.10	5.24	0.61	0.21	0.17	0.04
Jul-16	5.60	5.14	0.63	0.18	0.20	0.04
Aug-16	6.72	5.22	1.76	0.35	0.47	0.14
Sep-16	6.46	5.81	1.77	0.39	0.53	0.12
Oct-16	6.44	5.80	1.87	0.44	0.78	0.20
Nov-16	6.46	5.56	1.88	0.42	0.62	0.14
Dec-16	6.04	5.66	1.30	0.35	0.32	0.08
<b>Average MGD</b>	<b>6.19</b>	<b>5.52</b>	<b>1.08</b>	<b>0.26</b>	<b>0.35</b>	<b>0.08</b>
<b>2016 Total MGY</b>	<b>2,261</b>	<b>2,015</b>	<b>395</b>	<b>96</b>	<b>126</b>	<b>30</b>

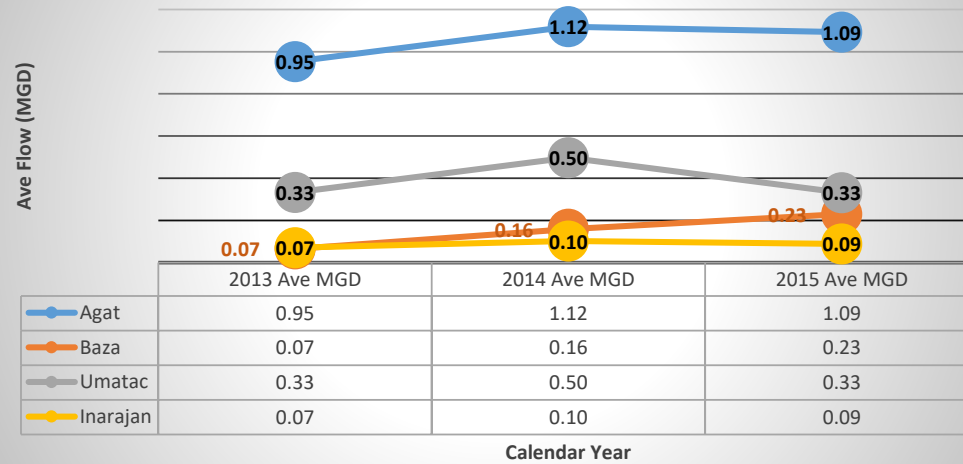




### Hagatna and Northern WW Ave Monthly Flows (MGD)

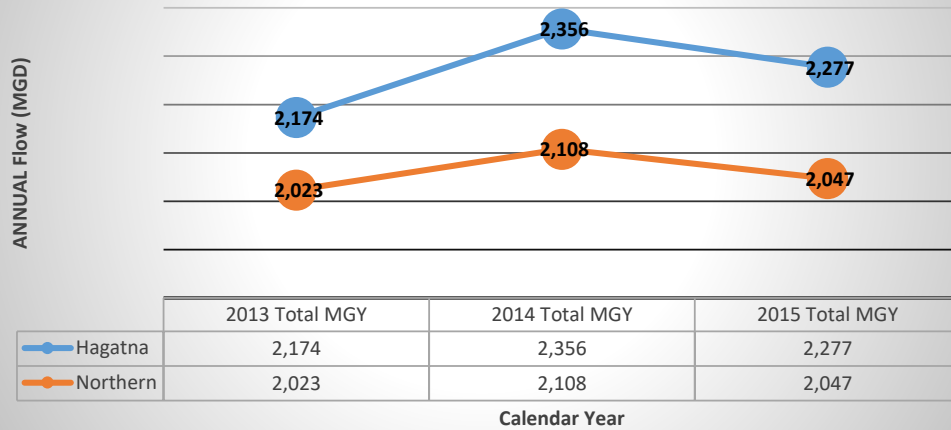


### Southern WW Ave Monthly Flows (MGD)

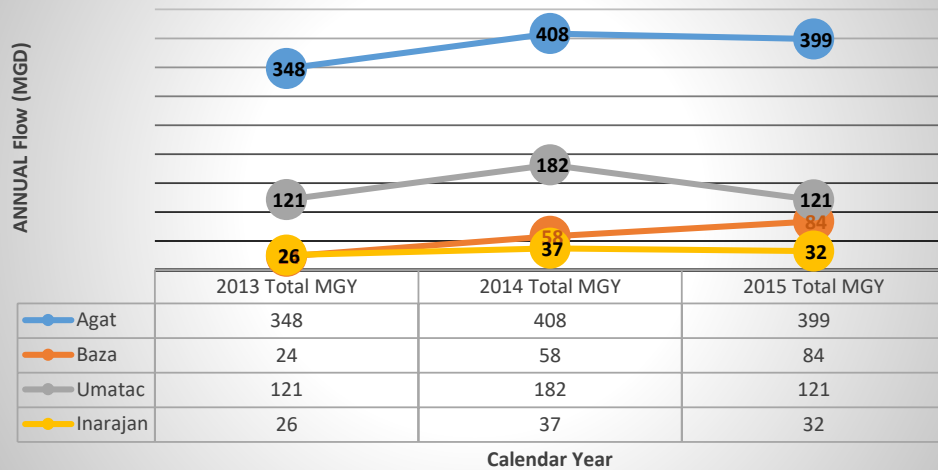




## Hagatna and Northern WW Annual Flows (MGD)



## Southern WW Annual Flows (MGD)





WASTEWATER COLLECTION REPORT  
MONTHLY REPORT  
DECEMBER 2017



**CCTV INSPECTIONS AND SEWER CLEANING**

Dec. 01 - 07	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3267	0	6534
Feet Completed	3019.4	0	0	3019.4
	92%	0%	0%	46%

Dec. 08 - 14	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3,267	0	6,534
Feet Completed	5,429.3	0	0	5429.3
	166%	0%	0%	83%

Dec. 15 - 21	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3,267	0	6,534
Feet Completed	22,724	0	0	22,724
	695%	0%	0%	348%

Dec. 22 - 28	Team #1	Team #2	Vendor	Total
Feet Scheduled	3,267	3,267	0	6,534
Feet Completed	0	0	0	0
	0%	0%	0%	0%

Dec. 29- 30	Team #1	Team #2	Vendor	Total
Feet Scheduled	0	0	0	0
Feet Completed	0	0	0	0
	0%	0%	0%	0%

TOTAL FEET SCHEDULED: 26,136

TOTAL FEET COMPLETED: 31,173

TOTAL MILES SCHEDULED FOR THE MONTH: 5.0

TOTAL MILES COMPLETD FOR THE MONTH: 5.9

\*On the week of December 15-21, the crews pulled 16 hour shifts for that week in order to complete the yearly required miles. The whole Barrigada Heights area was CCTV knowing that there were no known prior issues. The crews were set back in the months of October and November due to sewer line breaks in Asan and in Adelup. They broke off their planned areas and proceeded to Barrigada heights area in order to ensure the completion of required miles to avoid any violations.



**PUMPING STATION TROUBLE CALLS**

Dec. 01 - 07	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	3	3	0
SOUTHERN	2	2	0
TOTAL	7	7	0

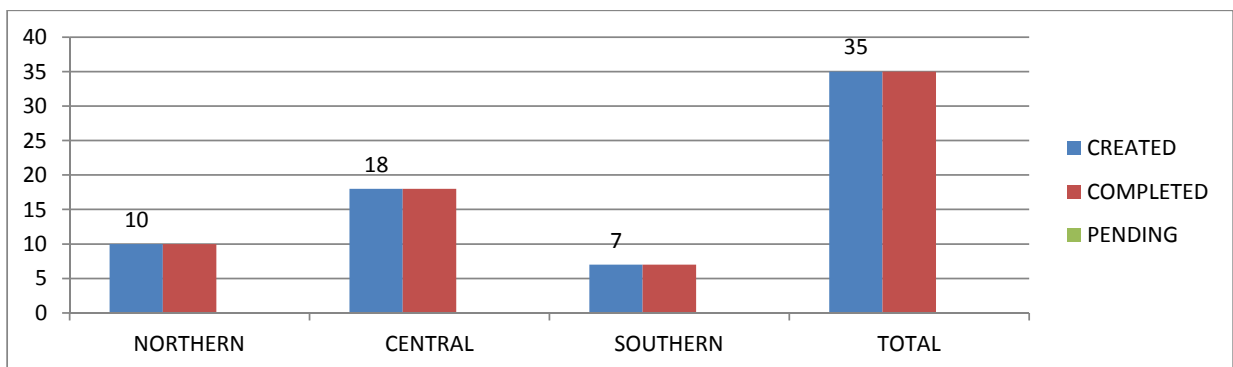
Dec. 08 - 14	CREATED	COMPLETED	PENDING
NORTHERN	4	4	0
CENTRAL	2	2	0
SOUTHERN	0	0	0
TOTAL	6	6	0

Dec. 15 - 21	CREATED	COMPLETED	PENDING
NORTHERN	1	1	0
CENTRAL	9	9	0
SOUTHERN	1	1	0
TOTAL	11	11	0

Dec. 22 - 28	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	2	2	0
SOUTHERN	2	2	0
TOTAL	6	6	0

Dec. 29 - 30	CREATED	COMPLETED	PENDING
NORTHERN	0	0	0
CENTRAL	2	2	0
SOUTHERN	2	2	0
TOTAL	4	4	0

	CREATED	COMPLETED	PENDING
NORTHERN	10	10	0
CENTRAL	18	18	0
SOUTHERN	7	7	0
TOTAL	35	35	0



**MAINTENANCE PREVENTIVE AND CORRECTIVE CALL OUTS**

Dec. 01 - 07	PREVENTIVE	CORRECTIVE
NORTHERN	0	4
CENTRAL	0	1
SOUTHERN	0	3
TOTAL	0	8

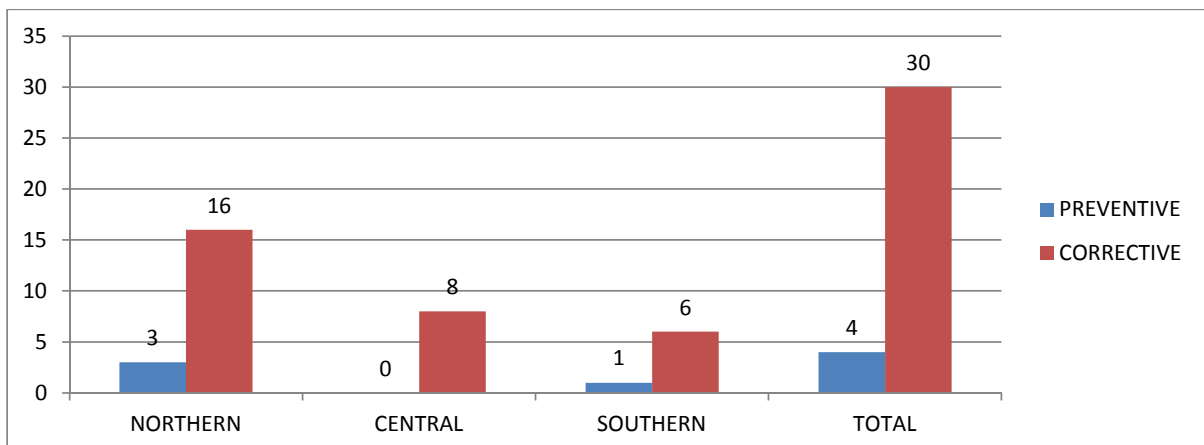
Dec. 08 - 14	PREVENTIVE	CORRECTIVE
NORTHERN	0	3
CENTRAL	0	2
SOUTHERN	0	0
TOTAL	0	5

Dec. 15 - 21	PREVENTIVE	CORRECTIVE
NORTHERN	1	2
CENTRAL	0	2
SOUTHERN	0	0
TOTAL	1	4

Dec. 22 - 28	PREVENTIVE	CORRECTIVE
NORTHERN	1	3
CENTRAL	0	3
SOUTHERN	0	1
TOTAL	1	7

Dec. 29 - 31	PREVENTIVE	CORRECTIVE
NORTHERN	1	4
CENTRAL	0	0
SOUTHERN	1	2
TOTAL	2	6

	PREVENTIVE	CORRECTIVE
NORTHERN	3	16
CENTRAL	0	8
SOUTHERN	1	6
TOTAL	4	30



**BASE PAY VS OVERTIME**

	BASE PAY	OVERTIME	OVERTIME %
PUMPING STATION	\$46,097.60	\$10,082.47	21%
MAINTENANCE	\$30,070.40	\$682.63	2%
COURT ORDER UNIT	\$22,748.80	\$7,431.64	32%
TOTALS			

