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MATERIALS FOR GPA WORK SESSION 9/21 - 214 PAGES

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9/21/2017	9/21/2017	Consolidated Commission on Utilities	CCU/GWA WORK SESSION; Agenda; September 21, 2017. *Emailed	34-17-994

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OFFICE OF SPEAKER BENJAMIN J.F. CRUZ

Committee on Appropriations and Adjudication

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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
4:00 p.m.., September 21, 2017

AGENDA

1. **ISSUES FOR DECISION**
   - 1.1 **Relative to Adoption and Implementation of a Unified Zero Tolerance Drug and Alcohol Free Workplace Policy for GPA and GWA / Resolution No. 42-FY2017 (GPA Resolution No. 2017-29)**
   - 1.2 **Relative to the Creation and Addendum of Certified, Technical and Professional (CTP) List of Positions and Adoption of Market Update for Guam Power Authority and Guam Waterworks Authority's / Resolution No. 53-FY2017 (GPA Resolution No. 2017-38)**
   - 1.3 **Relative to Approving Contract Amendment No. 7 for Program Management Services / Resolution No. 54-FY2017**
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: CCU Meeting: 9/26/17**
6. **ADJOURNMENT**

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

Issues for Decision

Resolution No. 42-FY2017
Relative to Adoption and Implementation of a Unified Zero Tolerance Drug and Alcohol Free Workplace Policy for GPA and GWA

What is the project's objective and is it necessary and urgent?
The CCU has directed GPA and GWA to review its drug testing policies to ensure that the Agency maintains a drug- and alcohol-free workplace. GPA and GWA have drafted a new unified DRUG- AND ALCOHOL-FREE WORKPLACE policy that makes changes from the previous policy that allowed employees to a complete a drug treatment program, and remain employed provided they successfully completed a drug treatment program. GPA and GWA recognize that while the previous policies provided counseling and treatment to employees, it does not deter employee drug and/or alcohol use and its adverse effects on job performance in the workplace.

The new draft DRUG- AND ALCOHOL-FREE WORKPLACE POLICY provides for a zero-tolerance drug policy, such that if an employee tests positive for drugs they will be terminated as an employees of GPA and GWA. To ensure a drug-free workplace, every employee shall be tested for illicit drugs at least once a year. The management has provided notice, informational sessions, and solicited comments from GPA & GWA employees, including supervisors and managers regarding the new draft DRUG-AND ALCOHOL-FREE WORKPLACE policy.

Management of GPA and GWA request the Consolidated Commission on Utilities to adopt the draft unified DRUG- AND ALCOHOL-FREE WORKPLACE policy as follows:

1. The unified DRUG- AND ALCOHOL-FREE WORKPLACE policy for GPA and GWA is hereby adopted to include employees of GPA and GWA.
2. All Consolidated Commission on Utilities members and employees shall be subject to the DRUG- AND ALCOHOL-FREE POLICY, and accordingly, will be placed in the employee population for random testing.
3. This policy shall be effective for the Guam Power Authority and the Consolidated Commission on Utilities on October 1, 2017.
4. This policy shall be effective for the Guam Waterworks Authority upon completion of the Guam Administrative Adjudication Act process.

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

GPA RESOLUTION NO. 2017–29
GWA RESOLUTION NO. 42-FY2017

ADOPTION AND IMPLEMENTATION OF A UNIFIED ZERO TOLERANCE DRUG- AND ALCOHOL-FREE WORKPLACE POLICY FOR THE GUAM POWER AUTHORITY AND THE GUAM WATERWORKS AUTHORITY

WHEREAS, it is the policy of the Guam Power Authority and Guam Waterworks Authority to provide a safe, healthy and secure work environment for all employees. It is also the policy of GPA and GWA to ensure that all employees perform their job duties in a safe, efficient and productive manner; and

WHEREAS, the CCU has directed GPA and GWA to review its drug testing policies to ensure that the Agency maintains a drug- and alcohol-free workplace; and

WHEREAS, GPA and GWA have drafted a new unified DRUG- AND ALCOHOL-FREE WORKPLACE policy that makes changes from the previous policy that allowed employees to a complete a drug treatment program, and remain employed provided they successfully completed a drug treatment program; and

WHEREAS, GPA and GWA recognize that while the previous policies provided counseling and treatment to employees, it does not deter employee drug and/or alcohol use and its adverse effects on job performance in the workplace; and

WHEREAS, the new draft DRUG- AND ALCOHOL-FREE WORKPLACE POLICY provides for a zero-tolerance drug policy, such that if an employee tests positive for drugs they will be terminated as an employees of GPA and GWA; and

WHEREAS, to ensure a drug-free workplace, every employee shall be tested for illicit drugs at least once a year; and

WHEREAS, management has provided notice, informational sessions, and solicited comments from GPA & GWA employees, including supervisors and managers regarding the new draft DRUG- AND ALCOHOL-FREE WORKPLACE policy; and

WHEREAS, management of GPA and GWA request the Consolidated Commission on Utilities to adopt the draft unified DRUG- AND ALCOHOL-FREE WORKPLACE policy.

NOW, THEREFORE, BE IT RESOLVED, by the CONSOLIDATED COMMISSION ON UTILITIES as follows:

DRAFT

1. The unified DRUG- AND ALCOHOL-FREE WORKPLACE policy for GPA and GWA is hereby adopted to include employees of GPA and GWA.
2. All Consolidated Commission on Utilities members and employees shall be subject to the DRUG- AND ALCOHOL-FREE POLICY, and accordingly, will be placed in the employee population for random testing.
3. This policy shall be effective for the Guam Power Authority and the Consolidated Commission on Utilities on October 1, 2017.
4. This policy shall be effective for the Guam Waterworks Authority upon completion of the Guam Administrative Adjudication Act process.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARLY ADOPTED AND APPROVED THIS 26th day of SEPTEMBER, 2017.

Certified By:	**Attested By:**
_____	_____
JOSEPH T. DUENAS	**J. GEORGE BAMBA**
Chairperson	Secretary
Consolidated Commission on Utilities	Consolidated Commission on Utilities

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

The foregoing is a full, true and correct copy of a resolution duly adopted at a regular meeting of the members of 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: _____

ABSENT: _____

ABSTAIN: _____



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

GUAM POWER and GUAM WATERWORKS AUTHORITY (GPWA)
Drug and Alcohol Free Workplace Policy

Statement of Policy

It is the policy of the GPWA to provide a safe, healthy and secure work environment for all employees. It is also the policy of the GPWA to ensure that all employees perform their job duties in a safe, efficient and productive manner. In an effort to ensure that Department Head, Managers and Supervisors continue to be informed and educated on GPWA's Drug and Alcohol policies, updated training will be required every two years. All new employees and any employee who is hired or promoted into a supervisory position must receive training on this policy within sixty (60) days of hire or promotion. Finally, it is the policy of the GPWA to ensure that its equipment and facilities are maintained and utilized appropriately so as not to pose a risk of harm. The use of drugs and the misuse of alcohol are inconsistent with these policies. Accordingly, to protect the health, safety and welfare of employees, citizens, visitors and persons who interact with GPWA employees during the course and scope of their employment, GPWA has adopted this Drug and Alcohol Free Workplace Policy which shall be strictly enforced.

Enforcement Date

This policy will go into effect on October 1, 2017 and will apply to all employees of GPWA regardless of status or classification. Upon the effective date, the policy will be strictly enforced and **will not** allow any employee entry into the Employee Assistance Program upon voluntary identification by himself or herself as a user of drugs or abuser of alcohol.

Prohibited Conduct

The following violations of the Drug and Alcohol Free Workplace Policy constitute gross misconduct and shall result in severe disciplinary action up to and including dismissal:

1. Unauthorized use, possession, sale, or solicitation for purchase/sale of drugs or alcohol on GPWA property or while the employee is on duty.

2. Hindering, obstructing or refusing to cooperate or participate in any investigation involving suspected violations of this policy. This includes, but is not limited to, providing false, misleading or incomplete information in response to any inquiry from a supervisor related to a suspected violation of this policy. It also includes refusing to undergo a drug or alcohol test(s).

a) Refusal by an applicant to sign a consent form will be considered a refusal to submit to a drug and/or alcohol test as a condition of employment and will be considered the equivalent of receiving a confirmed "positive" result for employment and disqualification purposes. Such applicant will have his/her name removed from the certified list of eligibles and the position eligibility listing.

b) Refusal by an employee to sign a consent form will be considered a refusal to submit to a drug and/or alcohol test as a condition of employment and will be considered the equivalent of receiving a confirmed "positive" result.

3. Hindering, delaying or obstructing a drug or alcohol test(s), including but not limited to, tampering with a sample or interfering in any way with the chain of custody.

4. Reporting to work or engaging in any work activity whatsoever on behalf of the GPWA in a condition which could pose a threat of harm to the employee or any other person, or reporting to or engaging in any work on behalf of the GPWA in a condition which could impair the ability to satisfactorily perform any essential function of the job, due to the use of drugs or misuse of alcohol. Should any detectable amount of drugs, or alcohol in a concentration of 0.04 breath alcohol content (BAC) or greater be established, the employee is in violation of the GPWA Drug & Alcohol Free Workplace Policy. No employee shall perform their job functions within four hours after using alcohol.

5. Abusing or misusing prescription drugs or over-the-counter medication when such conduct could reasonably interfere with the safe or satisfactory performance of any essential job function. This includes, but is not limited to, the use, possession, sale or solicitation for the purpose of purchase or sale any prescription medication for which the employee lacks a valid prescription.

Prohibited Substances

1. "Drugs" refers to marijuana, cocaine, amphetamines, opiates (including heroin and codeine), phencyclidine, and all other "controlled

substances" as defined in Title 9 GCA Chapter 67 Guam Uniform Controlled Substances Act.

2. "Alcohol" includes any beverage or substance containing alcohol manufactured for the primary purpose of personal consumption.

3. "Prescription drugs" means any substance, which is attainable only by lawful prescription from a physician.

4. "Over-the-counter medication" includes any substance which does not require a prescription but has the capacity to affect a person physically, mentally, or emotionally or which could otherwise affect a person's ability to safely perform his/her duties.

When Testing is Required

1. All competitive and non-competitive recruitments within GPWA will be tested after a conditional offer of employment has been extended. Drug testing will be required for but, not limited to the following:

a) **Pre-Employment (Probational/Unclassified/Exempt/Provisional/Temporary)**: Applicants for positions within GPWA will be tested after a conditional offer of employment has been extended. An applicant who refuses a drug test(s) or who tests positive, shall not be extended a final offer of employment.

b) **Promotions, Transfers, Reclassification:** Employees within GPWA will be tested upon the General Manager's approval for selection/reclassification. An employee who refuses a drug test(s) or who tests positive shall be subject to disciplinary action up to and including dismissal.

Except for emergency situations, applicants and employees will not be permitted to reschedule drug testing after they are notified that such testing is scheduled.

2. **Random Testing**: All positions at GPWA shall be subject to random testing as follows:

A) Tests will be ordered on a random, unannounced basis from the entire population of GPWA employees.

a) A scientifically valid method such as a random number table or a computer-based random number generator will be used to select

employees, thereby allowing each employee an equal chance of being tested each quarter.

b) At least 25% of the employees will be selected for drug testing, and at least 25% of employees for breath alcohol testing each quarter of the testing year.

c) An employee's name will remain in the potential testing population after being selected so that every employee will have an equal chance of being tested each time selections are made. Therefore, it is possible that any employee, who is randomly selected for testing, may be randomly selected again during every quarter.

d) Every employee selected for random testing must be tested unless that employee is excused by the General Manager for reasons such as long-term leave, disability or termination of employment.

B) GPWA reserves the right to increase or decrease the frequency of testing based on the needs of each utility, availability of resources, and experience in the program, consistent with the duty to achieve a drug free workplace.

3. **Follow-up Testing**: The GPWA General Manager reserves the right to require an employee to submit to subsequent drug testing as necessary, during the authorized treatment program, and for 12 months after the program ends. A certification of completion from the treating agency must be submitted to the Human Resources office to demonstrate a successful completion of the treatment program.

4. **Return to Duty Testing**: Employees who are absent from work without approval for more than fifteen calendar (15) days shall be tested for drugs immediately after to returning to work and before performing any job duties.

5. **Reasonable Suspicion**: All employees will be subject to testing when there is reasonable suspicion that the employee has used drugs or misused alcohol in violation of this policy. Grounds for reasonable suspicion testing shall include, but not be limited to:

a) Personal observation of the employee's job performance, appearance, behavior, speech or odor which causes reasonable suspicion that the employee (i) is impaired by drugs or alcohol, (ii) has used drugs or alcohol while on duty, (iii) or poses a threat to

personal safety or others due to the use of drugs or misuse of alcohol in violation of this policy.

b) Specific and objective facts indicating that an employee's drug or alcohol use may have caused or been a contributing factor to an on-duty motor vehicle accident. An alcohol test(s) should be completed within two (2) hours of the accident and a drug test(s) within twenty-four (24) hours of the accident. The following facts, if present, may independently or collectively, depending upon the circumstances, give rise to reasonable suspicion:

(1) the appearance, behavior, speech or odor of the employee immediately prior to or after the accident;

(2) the employee left the scene or attempted to leave the accident scene without legal authority or permission to do so;

(3) the employee acted contrary to a safety rule, established safety practice or otherwise engaged in demonstrably unsafe behavior for which there is no reasonable explanation;

(4) the employee was arrested or received a traffic citation;

(5) the employee or any person received medical attention as a result of the accident;

(6) the employee has been involved, as a contributing factor, in a pattern of repetitive on-duty motor vehicle accidents whether they involved actual or potential injury.

c) Specific and objective facts indicating that an employee's drug or alcohol use may have caused or been a contributing factor to an on the job accident. An alcohol test(s) should be completed within two (2) hours of the accident and a drug test(s) within forty-eight (48) hours of the accident. The following facts, if present, may independently or collectively, depending on the circumstances, give rise to reasonable suspicion:

(1) The appearance, behavior, speech or odor of the employee immediately prior to or after the accident;

(2) The employee left the accident scene or attempted to leave the accident scene without legal authority or authorization to do so, or failed to report the accident to the appropriate

individual or otherwise attempted to keep appropriate persons from learning about the accident or the extent of the accident;

(3) The employee acted contrary to a safety rule, established safety practices or otherwise engaged in demonstrably unsafe behavior without a reasonable explanation;

(4) The employee or any other person received medical attention because of the accident;

(5) The employee has been involved as a contributing factor in a pattern of on- duty accidents whether or not they involved actual or potential injury.

d) Drugs, drug paraphernalia, alcohol or containers indicating the presence of drugs or alcohol are observed or discovered in a location in which the employee had primary control or access, including but not limited to, desks, lockers, equipment, machines or vehicles. The employee must have accessed the location within eight (8) hours prior to the discovery of such items.

6. **Consent**: By acknowledging receipt of this Policy in writing, the employee is providing his or her consent to any and all testing required to comply with the Policy.

Who May Request a Reasonable Suspicion Drug or Alcohol Test(s)

1. Any supervisor who has received training in the signs and symptoms of drug and alcohol use and impairment may request an employee to undergo a reasonable suspicion test(s) for drugs or alcohol based upon (i) the personal observation of the employee by the trained individual, or (ii) personal observation of the employee by another employee who has fully disclosed the observations to the trained individual, or (iii) observation of the employee by a nurse or physician engaged in the treatment or evaluation of a work related injury who has disclosed such observation to the trained individual.

2. Any untrained supervisor may request a reasonable suspicion test(s) for drugs or alcohol based upon his personal observation of the employee, under the following circumstances:

a) The employee has been independently observed by a trained supervisor, or

b) A trained supervisor has reviewed the underlying facts and agrees that reasonable suspicion exists to require a test.

3. Any supervisor, personnel of managerial capacity, or personnel of the Safety and Human Resources Divisions trained in detecting drug and alcohol impairment, may request a reasonable suspicion drug or alcohol test(s) following a work-related accident based upon personal observation of the employee or upon review of the specific and objective facts underlying the accident.

Procedure

1. Whenever there is reasonable suspicion to require a drug or alcohol test(s) under this policy, the General Manager, department/division heads or designees and Human Resources shall be notified of the circumstances necessitating the test(s) as soon as possible.

2. All circumstances causing reasonable suspicion to require a drug or alcohol test(s) shall be fully documented by the supervisor(s) and/or managerial personnel all appropriate witnesses as soon as possible.

3. All GPWA-issued equipment, property and facilities, including but not limited to, desks, lockers, and vehicles (collectively "materials") are subject to inspection at any time and for any reason. No employee shall have any privacy interest whatsoever in any GPWA issued materials. No personal property may be searched unless the owner of the property has consented or a search is otherwise legally permissible.

4. Alcohol screening will be conducted using a federally approved evidential breath-testing device. An initial screening test of one (1) breath sample will be conducted first, and if an initial test detects any level of alcohol, a second confirmation test of one (1) additional breath sample will be completed.

5. Testing will be performed by a certified, licensed forensic laboratory. Drug test methods, collection, security and chain of custody procedures will conform to federal regulations. The drug test will include marijuana, cocaine, amphetamines, methamphetamines, opiates (including heroin and codeine), and phencyclidine (PCP). All specimens identified as positive for illegal drugs on the initial screening will be confirmed using the gas chromatography/mass spectrometry technique.

6. All positive test results for drugs will be interpreted by a physician approved by GPWA as a medical review officer (MRO) before the results are reported to the GPWA. Prior to notifying GPWA, the MRO will make reasonable efforts to contact the employee for the purpose of allowing the employee to offer an alternative medical explanation for the positive test result. If the MRO is able to contact the employee and determines there is a legitimate medical explanation for the positive test, the result will be communicated as negative to GPWA. The MRO's inability to contact the employee before providing test results to the GPWA will not void the test result or make the test result unusable in any subsequent disciplinary action. Because the employee is present for interpretation of an alcohol test, the procedure concerning prior notification by the MRO is not applicable.

7. Upon notification by the MRO of a verified positive result for drugs, the employee may request that the remaining portion of his split specimen undergo a second confirmation test at his expense at a laboratory of his choice. If the test conducted by the laboratory selected by the employee is negative for the presence of drugs, a third test may be made at GPWA's sole expense at a separate facility of its own choosing. The results of the third facility will be determinative. If the results from the third facility are negative, all prior positive tests will be disregarded and shall not be the basis for any disciplinary or adverse action.

8. The GPWA will make reasonable efforts to notify the employee of a positive drug test within five (5) days from the date it receives the test results. Because the results of a breath alcohol test are immediately available, this provision will not apply to alcohol tests conducted in such a manner.

9. Any employee ordered to be tested, based upon reasonable suspicion, shall be immediately removed from duty, escorted to the testing facility and taken home (unless other suitable arrangements have been made to transport the employee including calling a cab). The employee shall turn in keys to a GPWA vehicle, building or office, their identification badge or any other property belonging to the GPWA. The employee shall be placed on paid administrative leave pending the results of the test.

10. An employee who tests positive for drugs or alcohol shall immediately be relieved from duty, required to turn in keys to a GPWA vehicle, building or office, identification badge or any other property that belongs to the GPWA, placed on paid administrative leave, and sent home pending disciplinary action, if appropriate. A supervisor may take an employee home. If a

supervisor is not comfortable taking an employee home, however, a cab may be called to come and take the employee home at the employee's expense.

11. In situations in which the employee has been ordered to be tested or tests positive and the employee refuses assistance in leaving the building and walks out or insists on leaving in his/her own vehicle, document the situation and, depending upon the circumstances, call Guam Police Department's non-emergency phone number. Give the police the employee's name, vehicle description, and license plate number. However, if the employee is extremely agitated, violent or is making threats of violence, leaves the premises in a GPWA vehicle, or you believe the employee has violated the law, call the Guam Police Department at 9-1-1.

12. A refusal to consent to a drug or alcohol test is a violation of the Policy and will be considered the equivalent of receiving a confirmed "positive" result for employment and disciplinary purposes, up to, and including dismissal.

13 If it is not reasonable under the circumstances to conduct an alcohol test, based on a breath test, GPWA reserves the right to test for the presence of alcohol by a blood test analysis. If this procedure is used, the GPWA will attempt to notify the employee of the results within five (5) days after the results are received. An MRO will not be used when a blood test for alcohol is conducted.

Employee Assistance Program

Prior to October 1, 2017, any employee who voluntarily identifies himself or herself as a user of drugs or abuser of alcohol, will not be subject to disciplinary action if the employee seeks immediate assistance and treatment through the GPWA's Employee Assistance Program (EAP) or a similarly available treatment program. Failure to comply with all requirements of a treatment program, or continued use of drugs or alcohol during or after completion of such a program, will result in termination.

Arrests for Drug or Alcohol Related Offenses

Any employee who is arrested for a drug or alcohol related offense must notify the General Manager of the arrest immediately. GPWA will decide at that time whether the arrest causes a temporary or permanent disqualification from holding that position, or constitutes grounds for disciplinary action. All convictions for alcohol or

drug related offenses must be reported immediately by an employee to the General Manager. GPWA reserves the right to take appropriate action based upon such conviction.

All employees who are required to operate a GPWA vehicle as a regular part of their job must report any drug or alcohol arrest, temporary or permanent suspension of driving privileges, and any drug/alcohol related conviction to the General Manager immediately. GPWA reserves the right to take appropriate action, including relieving the employee from duty, transferring the employee to a non-driving position, or instituting disciplinary action up to and including termination.

Confidentiality

All reports of test results for drug and alcohol, searches, or any employee referral, or participation in an EAP program or treatment program for addictive disorders, will be maintained in strict confidence. Any person authorized to have access to such confidential information, who, without authorization, discloses it to another person shall have engaged in gross misconduct and be subject to severe disciplinary action up to and including termination. The confidentiality of such information shall not apply to any use by or communication to the GPWA General Counsel, or where the information is relevant to the GPWA's defense in an administrative or civil action. Such information may also be disclosed to the extent required by any federal, state or local law, statute, ordinance or regulation.

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. 53-FY2017
Relative to the Creation and Addendum of Certified, Technical and Professional (CTP) List of Positions and Adoption of Market Update for Guam Power Authority and Guam Waterworks Authority's / Resolution No. 53-FY2017 (GPA Resolution No. 2017-38)

What is the project's objective and is it necessary and urgent?
The objectives are (1) to provide for the integration of previously non-CTP positions for which specific knowledge of utility systems and/or operations is required, into the list of CTP positions; and (2) to adopt recommendations of utility market review and update for GWA's pay scale. In order to meet these objectives, we request the Board's approval of the proposed creation of positions and the addition the previously non-CTP positions to the list of CTP positions. GWA also requests the Board to accept the recommendations of the market review update for CTP positions, including a new pay scale, the refit and reset of new grades to coincide with the 2017 market data. These actions are necessary to maintain uniformity in the application of the promotion/demotion/transfer pay policy relative to CCU Resolution No. 2012-49 for all CTP positions covered under the Strategic Pay Scale, and to apply CCU Resolution No. 2012-49 to GPA and GWA business processes.

This matters covered under this resolution are necessary and urgent to address the obsolete pay grades that were in place since 2007 and to allow for a refit and reset of the new pay grades that will coincide with the 2017 market data.

Where is the location?
Within the Guam Waterworks Authority

How much will it cost?
Costing included as *appendix A5* of the Executive Report

When will it be completed?
Upon approval by the CCU, the transition to the new pay scale is anticipated to take effect January 1, 2018.

What is the funding source?
Fiscal Year 2018 Budget has been identified as the funding source for the above project.

The RFP/BID responses:
N/A

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

GPA RESOLUTION NO. 2017–38

GWA RESOLUTION NO. 53-FY2017

RELATIVE TO THE CREATION AND ADDENDUM OF CERTIFIED, TECHNICAL, AND PROFESSIONAL (CTP) LIST OF POSITIONS AND ADOPTION OF MARKET UPDATE FOR GUAM POWER AUTHORITY AND GUAM WATERWORKS AUTHORITY

WHEREAS, the Guam Power Authority (GPA) and the Guam Waterworks Authority (GWA) are Public Corporations of the Government of Guam; and

WHEREAS, Section 8104 (c), Chapter 8, and Section 14104 (c), Chapter 14 of Title 12 of the Guam Code Annotated authorizes the Guam Power Authority and Guam Waterworks Authority to establish its internal organization and management and adopt regulations for the administration of its operations; and

WHEREAS, Public Law 28-159 added Subsection 7.03 to the GPA Personnel Rules and Regulations, and added Paragraph 29 to the Glossary of GWA's Personnel Rules, item (c) authorizing the General Manager to petition the Consolidated Commission on Utilities (CCU) to amend, to include, but not limited to deleting, adding, or modifying such positions, the approved list of each Authority's CTP positions; and

WHEREAS, Public Law 28-159 added Subsection 15.17 to GPA's Personnel Rules and Regulations, and a new Chapter 5.200 to GWA's Personnel Rules and Regulations, item 3.0.3, authorizes the CCU to approve, disapprove, or amend, the unified pay scale at any regularly scheduled meeting; and

WHEREAS, a market review update of all positions and the CTP Strategic Pay scale was conducted and completed in August 2017 by Alan Searle and Associates. (See Exhibits A & B, Appendices A). This resulted in an adjustment of the pay scale to address obsolete pay grades that were in place since 2007 and a reset and refit of new grades to coincide with 2017 Market Data. The market review determined that GPA positions are approximately at the 15th market percentile, and that GWA positions are below the 5th market percentile based on 2017 Market Data. It was also determined that implementation of an updated pay scale is necessary to maintain the utilities position in the market place aimed at being externally competitive in attracting and retaining employees. (See Exhibits A & B, Appendices B). In maintaining this position, GPA recommends implementation of incremental structural pay adjustments to the 15th market percentile on January 6, 2018, and to the 20th market percentile on January 6, 2019, respectively. GWA recommends implementation of incremental structural pay adjustments to the 10th market percentile on January 1, 2018, and to the 15th market percentile not later than FY2020, respectively. GPA and GWA are committed to maintaining the goal of being competitive and achieving a position at the 25th market percentile by the year 2021 and 2022, respectively; and

WHEREAS, GPA and GWA desire to improve business processes, optimize its assets and maximize employees' performance. GPA and GWA prefer to consolidate its pay policy and all positions under the Strategic Pay plan and add remaining positions to the list of CTP positions, providing equity. (See Exhibits A & B, Appendices C). GPA and GWA also recognize that these positions involve processes that are uncommon and unique to the utilities. Thus, GPA and GWA petition to create positions for incumbents to integrate and transition into the Strategic Pay classification methodology applicable to CTP positions (See Exhibits A & B, Appendices D); and

WHEREAS, modern companies operate on information and GPA and GWA must leverage information in modernizing its infrastructure and technology, and must create an awareness of the importance of protecting these facets critical to the utilities. GPA and GWA operations are critical to preserving its business processes and the quality of life island-wide. GPA and GWA are committed to promoting and strengthening the role and responsibility of all employees in the protection of information, infrastructure and technology through physical security and cyber security training programs, of which, will help preserve assets, and, deter the impact of an attack to the utilities; and

NOW THEREFORE BE IT RESOLVED, the Consolidated Commission on Utilities approves and authorize as follows:

1. To accept the recommendations of the market review update conducted by Alan Searle and Associates, including implementation of a new and adjusted Strategic Pay Scale for all Certified, Technical, and Professional (CTP) positions. (See Exhibits A & B, Appendices A & B).

2. The General Manager at GPA to implement structural pay adjustments, incrementally, to the 15th market percentile on January 6, 2018, and to the 20th market percentile on January 6, 2019 based on the 2017 Market Data. The General Manager may determine the breadth and application of sub-steps to determine the implementation range for positions based on affordability. Thereafter, the management may implement a structural pay adjustment to the 25th market percentile based on an updated market review, as necessary. Structural pay adjustments are subject to the availability of funds.

3. The General Manager at GWA to implement structural pay adjustments, incrementally, to the 10th market percentile on January 1, 2018, and to the 15th market percentile no later than FY2020 based on the 2017 Market Data. The General Manager may determine the breadth and application of sub-steps to determine the implementation range for positions based on affordability. Thereafter, the management may implement a structural pay adjustment to the 25th market percentile based on an updated market review, as necessary. Structural pay adjustments are subject to the availability of funds.

4. The creation of positions delineated in Exhibits A & B, Appendices D, and the addition of these positions into the GPA and GWA list of CTP positions delineated in Exhibits A & B, Appendices C. The incumbents of these positions must complete a Physical Security training course prior to a reclassification of position. Thereafter, the incumbents must complete a Cyber Security training course and other courses deemed necessary by the management to ensure preservation of utility assets and deterrence of the impact of an attack to the utilities.

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5. To maintain uniformity in the application of the promotion/demotion/transfer pay policy relative to CCU Resolution No. 2012-49, and in the spirit of equity for all positions covered under the Strategic Pay Scale for CTP positions, CCU Resolution No. 2012-49 delineated in Exhibits A & B, Appendices E, is applicable to GPA and GWA business processes.

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

DULY AND REGULARLY ADOPTED AND APPROVED this **26th day of September, 2017.**

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	J. GEORGE BAMBA
Chairperson	Secretary
Consolidated Commission on Utilities	Consolidated Commission on Utilities

I, J. GEORGE BAMBA, Secretary for the Consolidated Commission on Utilities do hereby certify that the foregoing is a full, true, and correct copy of a resolution duly adopted at a regular meeting by the members of 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:

At said meeting said resolution was adopted by the following vote:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

GUAM WATERWORKS AUTHORITY

COMPENSATION & BENEFITS STUDY

Market Review

Executive Summary

September 2017

ALAN SEARLE & ASSOCIATES

Management Consultants, Russell, New Zealand

Appendix A

A. Background

With the passing of public laws PL 28-113 and PL 28-159 GWA was given the mandate to implement a new market based compensation model that would aid the attraction and retention of "Certified Technical and Professional" or CTP personnel. The law was a result of concerns that the Authority was losing highly skilled personnel due to the fact that current salaries and compensation were not sufficient to attract and retain such personnel.

Through the RFP process, GWA in 2005 engaged the consulting services of Alan Searle & Associates to undertake the above compensation study. This was an extensive project involving three stages as follows :

The first stage of the study focused on job evaluation which involved applying a structured methodology of twelve (12) individual factors to assess all CTP positions. Each factor derived a point value with their sum representing the "total point" value of the position. The process was important as it re-established the internal equity of all positions based on job size. An exponential regression analysis was then undertaken to determine GWA's base salary pay line. This step was also important in that the resulting base salary pay line could eventually be compared to the market percentiles identified in Stage Two.

The second stage involved gathering external pay data on all CTP positions. The target market was the U.S. water industry and extensive data was gathered from a number of sources including the AWWA (American Water Works Association), U.S. Bureau of Labor Statistics (BLS), U.S. Department of Labor (DOL), U.S. Federal Government / Civil Service, U.S. Military, Web Based Compensation Companies, U.S. Utility Recruitment Companies and U.S. Utility Company Websites. The resulting data was analyzed and presented as market percentiles (5^{th} through to the 95^{th}) with the 50^{th} market percentile being the market average. A second exponential regression analysis was then undertaken to compare GWA's base salary pay line against the market percentiles as gathered in 2008.

The results validated GWA's market vulnerability as their base salary pay line (for a large number of CTP positions) was clearly below the 5^{th} market percentile. This was an exceptionally low position and validated the ongoing difficulties GWA had been experiencing in being able to attract and retain CTP employees. The situation at the time was further exacerbated by Gov. Guam policy (Hay methodology) that stipulated that employees on Step 10 and above receive a 3.5% increment (based on satisfactory performance) once every two (2) years. On an annualized basis this was clearly below the CPI (Consumer Price Index).

With the passing of resolution 01-FY2008 the CCU approved a transition period (beginning in fiscal year 2008) to migrate all CTP positions to a more competitive position in the market. The CCU resolution approved a five-year phase-in using the 5^{th}, 15^{th}, 25^{th}, 35^{th} and 50^{th} market percentiles as targets for 2008 and subsequent years.

Appendix A1

The third stage of the review focused on implementation and the transition of all CTP employees into the new compensation model. The new salary schedule has twenty-six (26) alphabetical grades each with twenty (20) numeric steps. An additional feature was the introduction of four (4) sub-steps per step which amounts to eighty sub-steps in total. Each sub-step increases base salary by 1% and was introduced to allow a performance range for GWA to ultimately pay for performance.

The outcome of the above was the identification of a specific implementation range for each CTP position. With each implementation range encompassing sixteen (16) sub-steps the final phase was to migrate all CTP employees into the new compensation model. In completing this exercise the following three implementation criteria was applied : education, experience and performance. The end result was a score (for each employee) that could be transposed to their specific implementation range and a new grade, step and sub-step identified.

B. Current Review (2017)

The current review replicates the second stage above in order to provide updated market data as at 2017. Once again the target market was the U.S. water industry and extensive data was gathered from a number of sources including the AWWA (American Water Works Association), U.S. Bureau of Labor Statistics (BLS), U.S. Department of Labor (DOL), U.S. Federal Government / Civil Service, U.S. Military, Web Based Compensation Companies, U.S. Utility Recruitment Companies and U.S. Utility Company Websites.

In summary, external pay data was gathered on 230 positions (both CTP and Non-CTP) with results once again being analyzed and presented as market percentiles (5^{th} through to the 95^{th}). Please note that as with the earlier study the 50^{th} market percentile represents the market average (U.S. mainland). An exponential regression analysis was then undertaken (see Appendix A) to compare GWA's base salary pay line against the 2017 market percentiles as gathered.

C. Observations / Recommendations

In terms of recommendations the focus must be on ensuring that GWA's compensation model (cost permitting) is in the most competitive position it can be with regards the external market place. Whilst any increase in market position obviously comes at a cost this must be weighed against the Authority's ability to attract and retain competent employees.

With reference to Appendix A, GWA's market position in 2008 was extremely vulnerable with a large number of employees well below the 5^{th} market percentile. Whilst some adjustments were made to correct the situation the market has unfortunately continued to move through to 2017. Given those early initiatives taken by the CCU we would now place GWA (with reference to Appendix A) at just below the 5th market percentile based on the 2017 market data that has been obtained.

Appendix A2

Having determined GWA's current market position (relative to the 2017 market data) we then completed a number of cost options aimed at migrating GWA to a more competitive market position. These included migrating to the 5th (essentially a status quo option), 10th, 15th 20th and 25th market percentiles. The costing process also included both a 5 sub-step and 7 sub-step implementation range for employee "slotting' purposes. The results are shown in Appendix B.

In undertaking the above cost analysis it also became apparent that an updated pay schedule was also required. With the current pay schedule now 10 years old, grades A, B & C have become redundant and are no longer being used. The need for an update is also reflected in the fact that some employees are approaching or have exceeded Step 20, Sub-step D.

In terms of a course of action our recommendations are as follows :

1. Consolidate GWA's compensation model to include all employees i.e. both CTP and Non-CTP employees.

   Note : the need to distinguish between CTP and Non-CTP positions has become largely irrelevant as all positions are now deemed critical in providing the Authority's services. This perspective is clearly evident with both PAG and GIAA (excluding ARFF and Airport Police) now incorporating all positions in their respective compensation models.

2. Make an initial structural adjustment (cost permitting) to the 5th market percentile based on the 2017 market data. If this can be done we would recommend using the 5 sub-step implementation range cost option as "employee slotting" is closer than using the 7 sub-step cost option. As outlined earlier, this is essentially a status quo adjustment as despite being at just below the 5th market percentile this adjustment targets (in particular) those employees who are below the 5th market percentile regression line.

3. Agree on a transition plan (cost permitting) aimed at migrating GWA to a higher market percentile e.g. the 10th, 15th, 20th or 25th market percentile based on the 2017 market data. With the eventual target being the 50th market percentile (or market average within the U.S. mainland based on the prevailing market) this transition plan will continue the momentum to ensure GWA's compensation model is externally competitive.

4. Given current controls in a) annually determining the implementation range on offer re : pay for performance, and b) determining the percentage of employees who can receive the "top scores" continue to allow (for employees below the 50th market percentile of market average within the U.S. mainland) the employees eventual pay for performance adjustment to be added to their base salary. This makes computation of any future regression analysis a lot more accurate when comparing results against the prevailing market.

Appendix A3

STRATEGIC PAY SCALE (2017)

			1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
		Step 1				Step 2				Step 3				Step 4				Step 5				Step 6				Step 7			
		A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Grade	A	20,500	20,705	20,912	21,121	21,332	21,546	21,761	21,979	22,199	22,421	22,645	22,871	23,100	23,331	23,564	23,800	24,038	24,278	24,521	24,766	25,014	25,264	25,517	25,772	26,030	26,290	26,553	26,818
9.0%	B	22,345	22,568	22,794	23,022	23,252	23,485	23,720	23,957	24,196	24,438	24,683	24,930	25,179	25,431	25,685	25,942	26,201	26,463	26,728	26,995	27,265	27,538	27,813	28,091	28,372	28,656	28,943	29,232
9.0%	C	24,356	24,600	24,846	25,094	25,345	25,598	25,854	26,113	26,374	26,638	26,904	27,173	27,445	27,719	27,997	28,277	28,559	28,845	29,133	29,425	29,719	30,016	30,316	30,620	30,926	31,235	31,547	31,863
7.0%	D	26,061	26,322	26,585	26,851	27,119	27,390	27,664	27,941	28,220	28,503	28,788	29,075	29,366	29,660	29,956	30,256	30,559	30,864	31,173	31,484	31,799	32,117	32,439	32,763	33,091	33,421	33,756	34,093
3.0%	E	26,843	27,111	27,382	27,656	27,933	28,212	28,494	28,779	29,067	29,358	29,651	29,948	30,247	30,550	30,855	31,164	31,475	31,790	32,108	32,429	32,753	33,081	33,412	33,746	34,083	34,424	34,768	35,116
6.0%	F	28,453	28,738	29,025	29,316	29,609	29,905	30,204	30,506	30,811	31,119	31,430	31,745	32,062	32,383	32,706	33,033	33,364	33,697	34,034	34,375	34,719	35,066	35,416	35,771	36,128	36,490	36,854	37,223
6.0%	G	30,161	30,462	30,767	31,074	31,385	31,699	32,016	32,336	32,660	32,986	33,316	33,649	33,986	34,326	34,669	35,015	35,366	35,719	36,076	36,437	36,802	37,170	37,541	37,917	38,296	38,679	39,066	39,456
9.0%	H	32,875	33,204	33,536	33,871	34,210	34,552	34,898	35,246	35,599	35,955	36,314	36,678	37,044	37,415	37,789	38,167	38,549	38,934	39,323	39,717	40,114	40,515	40,920	41,329	41,743	42,160	42,582	43,007
12.0%	I	36,820	37,188	37,560	37,936	38,315	38,698	39,085	39,476	39,871	40,270	40,672	41,079	41,490	41,905	42,324	42,747	43,174	43,606	44,042	44,483	44,927	45,377	45,830	46,289	46,752	47,219	47,691	48,168
12.0%	J	41,238	41,651	42,067	42,488	42,913	43,342	43,775	44,213	44,655	45,102	45,553	46,008	46,468	46,933	47,403	47,877	48,355	48,839	49,327	49,821	50,319	50,822	51,330	51,843	52,362	52,885	53,414	53,948
21.0%	K	49,899	50,397	50,901	51,410	51,925	52,444	52,968	53,498	54,033	54,573	55,119	55,670	56,227	56,789	57,357	57,931	58,510	59,095	59,686	60,283	60,886	61,495	62,109	62,731	63,358	63,991	64,631	65,278
17.0%	L	58,381	58,965	59,555	60,150	60,752	61,359	61,973	62,593	63,219	63,851	64,489	65,134	65,785	66,443	67,108	67,779	68,457	69,141	69,833	70,531	71,236	71,949	72,668	73,395	74,129	74,870	75,619	76,375
17.0%	M	68,306	68,989	69,679	70,376	71,080	71,790	72,508	73,233	73,966	74,705	75,452	76,207	76,969	77,739	78,516	79,301	80,094	80,895	81,704	82,521	83,346	84,180	85,022	85,872	86,731	87,598	88,474	89,359
8.0%	N	73,771	74,508	75,253	76,006	76,766	77,534	78,309	79,092	79,883	80,682	81,489	82,303	83,126	83,958	84,797	85,645	86,502	87,367	88,240	89,123	90,014	90,914	91,823	92,742	93,669	94,606	95,552	96,507
13.0%	O	83,361	84,194	85,036	85,887	86,745	87,613	88,489	89,374	90,268	91,170	92,082	93,003	93,933	94,872	95,821	96,779	97,747	98,724	99,712	100,709	101,716	102,733	103,760	104,798	105,846	106,904	107,973	109,053
16.0%	P	96,698	97,665	98,642	99,628	100,625	101,631	102,647	103,674	104,711	105,758	106,815	107,883	108,962	110,052	111,152	112,264	113,387	114,520	115,666	116,822	117,990	119,170	120,362	121,566	122,781	124,009	125,249	126,502
12.0%	Q	108,302	109,385	110,479	111,584	112,700	113,827	114,965	116,115	117,276	118,449	119,633	120,829	122,038	123,258	124,491	125,736	126,993	128,263	129,545	130,841	132,149	133,471	134,806	136,154	137,515	138,890	140,279	141,682
14.0%	R	123,465	124,699	125,946	127,206	128,478	129,762	131,060	132,371	133,694	135,031	136,382	137,745	139,123	140,514	141,919	143,339	144,772	146,220	147,682	149,159	150,650	152,157	153,678	155,215	156,767	158,335	159,918	161,517
13.0%	S	139,515	140,910	142,319	143,742	145,180	146,632	148,098	149,579	151,075	152,585	154,111	155,652	157,209	158,781	160,369	161,973	163,592	165,228	166,880	168,549	170,235	171,937	173,656	175,393	177,147	178,918	180,708	182,515
11.0%	T	154,862	156,410	157,974	159,554	161,150	162,761	164,389	166,033	167,693	169,370	171,064	172,774	174,502	176,247	178,009	179,789	181,587	183,403	185,237	187,090	188,961	190,850	192,759	194,686	196,633	198,599	200,585	202,591
11.0%	U	171,896	173,615	175,351	177,105	178,876	180,665	182,471	184,296	186,139	188,001	189,881	191,779	193,697	195,634	197,590	199,566	201,562	203,578	205,613	207,670	209,746	211,844	213,962	216,102	218,263	220,445	222,650	224,876
11.0%	V	190,805	192,713	194,640	196,587	198,552	200,538	202,543	204,569	206,614	208,681	210,767	212,875	215,004	217,154	219,325	221,519	223,734	225,971	228,231	230,513	232,818	235,146	237,498	239,873	242,272	244,694	247,141	249,613
11.0%	W	211,794	213,911	216,051	218,211	220,393	222,597	224,823	227,071	229,342	231,635	233,952	236,291	238,654	241,041	243,451	245,886	248,345	250,828	253,336	255,870	258,428	261,013	263,623	266,259	268,922	271,611	274,327	277,070
11.0%	X	235,091	237,442	239,816	242,214	244,636	247,083	249,554	252,049	254,570	257,115	259,686	262,283	264,906	267,555	270,231	272,933	275,662	278,419	281,203	284,015	286,855	289,724	292,621	295,547	298,503	301,488	304,503	307,548
11.0%	Y	260,951	263,560	266,196	268,858	271,546	274,262	277,005	279,775	282,572	285,398	288,252	291,135	294,046	296,986	299,956	302,956	305,985	309,045	312,136	315,257	318,410	321,594	324,810	328,058	331,338	334,652	337,998	341,378
11.0%	Z	289,655	292,552	295,477	298,432	301,417	304,431	307,475	310,550	313,655	316,792	319,960	323,159	326,391	329,655	332,951	336,281	339,644	343,040	346,471	349,935	353,435	356,969	360,539	364,144	367,785	371,463	375,178	378,930

APPENDIX B1

STRATEGIC PAY SCALE (2017)

	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
	Step 8				Step 9				Step 10				Step 11				Step 12				Step 13				Step 14			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
A	27,086	27,357	27,631	27,907	28,186	28,468	28,753	29,040	29,331	29,624	29,920	30,220	30,522	30,827	31,135	31,447	31,761	32,079	32,399	32,723	33,051	33,381	33,715	34,052	34,393	34,737	35,084	35,435
B	29,524	29,819	30,118	30,419	30,723	31,030	31,341	31,654	31,971	32,290	32,613	32,939	33,269	33,601	33,937	34,277	34,620	34,966	35,315	35,669	36,025	36,385	36,749	37,117	37,488	37,863	38,241	38,624
C	32,181	32,503	32,828	33,157	33,488	33,823	34,161	34,503	34,848	35,196	35,548	35,904	36,263	36,625	36,992	37,362	37,735	38,113	38,494	38,879	39,267	39,660	40,057	40,457	40,862	41,270	41,683	42,100
D	34,434	34,778	35,126	35,478	35,832	36,191	36,553	36,918	37,287	37,660	38,037	38,417	38,801	39,189	39,581	39,977	40,377	40,780	41,188	41,600	42,016	42,436	42,861	43,289	43,722	44,159	44,601	45,047
E	35,467	35,822	36,180	36,542	36,907	37,276	37,649	38,026	38,406	38,790	39,178	39,570	39,965	40,365	40,769	41,176	41,588	42,004	42,424	42,848	43,277	43,709	44,147	44,588	45,034	45,484	45,939	46,398
F	37,595	37,971	38,351	38,734	39,122	39,513	39,908	40,307	40,710	41,117	41,528	41,944	42,363	42,787	43,215	43,647	44,083	44,524	44,969	45,419	45,873	46,332	46,795	47,263	47,736	48,213	48,695	49,182
G	39,851	40,249	40,652	41,058	41,469	41,884	42,303	42,726	43,153	43,584	44,020	44,460	44,905	45,354	45,808	46,266	46,728	47,196	47,668	48,144	48,626	49,112	49,603	50,099	50,600	51,106	51,617	52,133
H	43,437	43,872	44,311	44,754	45,201	45,653	46,110	46,571	47,037	47,507	47,982	48,462	48,946	49,436	49,930	50,430	50,934	51,443	51,958	52,477	53,002	53,532	54,067	54,608	55,154	55,706	56,263	56,825
I	48,650	49,136	49,628	50,124	50,625	51,132	51,643	52,159	52,681	53,208	53,740	54,277	54,820	55,368	55,922	56,481	57,046	57,616	58,193	58,774	59,362	59,956	60,555	61,161	61,773	62,390	63,014	63,644
J	54,488	55,033	55,583	56,139	56,700	57,267	57,840	58,418	59,003	59,593	60,189	60,790	61,398	62,012	62,633	63,259	63,891	64,530	65,176	65,827	66,486	67,151	67,822	68,500	69,185	69,877	70,576	71,282
K	65,930	66,590	67,256	67,928	68,607	69,294	69,986	70,686	71,393	72,107	72,828	73,557	74,292	75,035	75,785	76,543	77,309	78,082	78,863	79,651	80,448	81,252	82,065	82,885	83,714	84,551	85,397	86,251
L	77,139	77,910	78,689	79,476	80,271	81,073	81,884	82,703	83,530	84,365	85,209	86,061	86,922	87,791	88,669	89,556	90,451	91,356	92,269	93,192	94,124	95,065	96,016	96,976	97,946	98,925	99,914	100,913
M	90,252	91,155	92,066	92,987	93,917	94,856	95,805	96,763	97,730	98,707	99,695	100,691	101,698	102,715	103,743	104,780	105,828	106,886	107,955	109,034	110,125	111,226	112,338	113,462	114,596	115,742	116,900	118,069
N	97,472	98,447	99,432	100,426	101,430	102,444	103,469	104,504	105,549	106,604	107,670	108,747	109,834	110,933	112,042	113,162	114,294	115,437	116,591	117,757	118,935	120,124	121,325	122,539	123,764	125,002	126,252	127,514
O	110,144	111,245	112,358	113,481	114,616	115,762	116,920	118,089	119,270	120,463	121,667	122,884	124,113	125,354	126,607	127,873	129,152	130,444	131,748	133,066	134,396	135,740	137,098	138,469	139,853	141,252	142,664	144,091
P	127,767	129,044	130,335	131,638	132,955	134,284	135,627	136,983	138,353	139,737	141,134	142,545	143,971	145,410	146,865	148,333	149,817	151,315	152,828	154,356	155,900	157,459	159,033	160,624	162,230	163,852	165,491	167,146
Q	143,099	144,530	145,975	147,435	148,909	150,398	151,902	153,421	154,955	156,505	158,070	159,651	161,247	162,860	164,488	166,133	167,795	169,473	171,167	172,879	174,608	176,354	178,117	179,898	181,697	183,514	185,350	187,203
R	163,133	164,764	166,412	168,076	169,756	171,454	173,169	174,900	176,649	178,416	180,200	182,002	183,822	185,660	187,517	189,392	191,286	193,199	195,131	197,082	199,053	201,043	203,054	205,084	207,135	209,206	211,299	213,412
S	184,340	186,183	188,045	189,926	191,825	193,743	195,680	197,637	199,614	201,610	203,626	205,662	207,719	209,796	211,894	214,013	216,153	218,314	220,498	222,703	224,930	227,179	229,451	231,745	234,063	236,403	238,767	241,155
T	204,617	206,663	208,730	210,817	212,925	215,055	217,205	219,377	221,571	223,787	226,025	228,285	230,568	232,873	235,202	237,554	239,930	242,329	244,752	247,200	249,672	252,169	254,690	257,237	259,810	262,408	265,032	267,682
U	227,125	229,396	231,690	234,007	236,347	238,711	241,098	243,509	245,944	248,403	250,887	253,396	255,930	258,490	261,074	263,685	266,322	268,985	271,675	274,392	277,136	279,907	282,706	285,533	288,389	291,273	294,185	297,127
V	252,109	254,630	257,176	259,748	262,346	264,969	267,619	270,295	272,998	275,728	278,485	281,270	284,083	286,923	289,793	292,691	295,617	298,574	301,559	304,575	307,621	310,697	313,804	316,942	320,111	323,312	326,546	329,811
W	279,841	282,639	285,466	288,320	291,204	294,116	297,057	300,027	303,028	306,058	309,118	312,210	315,332	318,485	321,670	324,887	328,135	331,417	334,731	338,078	341,459	344,874	348,322	351,806	355,324	358,877	362,466	366,090
X	310,623	313,730	316,867	320,036	323,236	326,468	329,733	333,030	336,361	339,724	343,121	346,553	350,018	353,518	357,054	360,624	364,230	367,873	371,551	375,267	379,020	382,810	386,638	390,504	394,409	398,353	402,337	406,360
Y	344,792	348,240	351,722	355,239	358,792	362,380	366,004	369,664	373,360	377,094	380,865	384,673	388,520	392,405	396,329	400,293	404,296	408,339	412,422	416,546	420,712	424,919	429,168	433,460	437,794	442,172	446,594	451,060
Z	382,719	386,546	390,412	394,316	398,259	402,242	406,264	410,327	414,430	418,574	422,760	426,988	431,257	435,570	439,926	444,325	448,768	453,256	457,788	462,366	466,990	471,660	476,376	481,140	485,952	490,811	495,719	500,676

APPENDIX B2

STRATEGIC PAY SCALE (2017)

	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
	Step 15				Step 16				Step 17				Step 18				Step 19				Step 20			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
A	35,789	36,147	36,508	36,874	37,242	37,615	37,991	38,371	38,754	39,142	39,533	39,929	40,328	40,731	41,139	41,550	41,966	42,385	42,809	43,237	43,670	44,106	44,547	44,993
B	39,010	39,400	39,794	40,192	40,594	41,000	41,410	41,824	42,242	42,665	43,091	43,522	43,958	44,397	44,841	45,290	45,742	46,200	46,662	47,128	47,600	48,076	48,557	49,042
C	42,521	42,946	43,376	43,809	44,248	44,690	45,137	45,588	46,044	46,505	46,970	47,439	47,914	48,393	48,877	49,366	49,859	50,358	50,861	51,370	51,884	52,403	52,927	53,456
D	45,498	45,952	46,412	46,876	47,345	47,818	48,297	48,779	49,267	49,760	50,258	50,760	51,268	51,780	52,298	52,821	53,349	53,883	54,422	54,966	55,516	56,071	56,631	57,198
E	46,862	47,331	47,804	48,282	48,765	49,253	49,745	50,243	50,745	51,253	51,765	52,283	52,806	53,334	53,867	54,406	54,950	55,499	56,054	56,615	57,181	57,753	58,330	58,914
F	49,674	50,171	50,673	51,179	51,691	52,208	52,730	53,257	53,790	54,328	54,871	55,420	55,974	56,534	57,099	57,670	58,247	58,829	59,418	60,012	60,612	61,218	61,830	62,449
G	52,655	53,181	53,713	54,250	54,793	55,341	55,894	56,453	57,017	57,588	58,163	58,745	59,333	59,926	60,525	61,130	61,742	62,359	62,983	63,613	64,249	64,891	65,540	66,195
H	57,394	57,967	58,547	59,133	59,724	60,321	60,924	61,534	62,149	62,770	63,398	64,032	64,672	65,319	65,972	66,632	67,298	67,971	68,651	69,338	70,031	70,731	71,439	72,153
I	64,281	64,924	65,573	66,229	66,891	67,560	68,235	68,918	69,607	70,303	71,006	71,716	72,433	73,158	73,889	74,628	75,374	76,128	76,889	77,658	78,435	79,219	80,011	80,811
J	71,994	72,714	73,442	74,176	74,918	75,667	76,424	77,188	77,960	78,739	79,527	80,322	81,125	81,936	82,756	83,583	84,419	85,263	86,116	86,977	87,847	88,725	89,613	90,509
K	87,113	87,984	88,864	89,753	90,650	91,557	92,473	93,397	94,331	95,275	96,227	97,190	98,161	99,143	100,134	101,136	102,147	103,169	104,200	105,242	106,295	107,358	108,431	109,516
L	101,923	102,942	103,971	105,011	106,061	107,122	108,193	109,275	110,368	111,471	112,586	113,712	114,849	115,997	117,157	118,329	119,512	120,707	121,914	123,134	124,365	125,609	126,865	128,133
M	119,249	120,442	121,646	122,863	124,091	125,332	126,586	127,851	129,130	130,421	131,726	133,043	134,373	135,717	137,074	138,445	139,829	141,228	142,640	144,066	145,507	146,962	148,432	149,916
N	128,789	130,077	131,378	132,692	134,019	135,359	136,712	138,080	139,460	140,855	142,264	143,686	145,123	146,574	148,040	149,520	151,016	152,526	154,051	155,592	157,147	158,719	160,306	161,909
O	145,532	146,987	148,457	149,942	151,441	152,956	154,485	156,030	157,590	159,166	160,758	162,365	163,989	165,629	167,285	168,958	170,648	172,354	174,078	175,818	177,577	179,352	181,146	182,957
P	168,817	170,505	172,210	173,932	175,672	177,428	179,203	180,995	182,805	184,633	186,479	188,344	190,227	192,130	194,051	195,991	197,951	199,931	201,930	203,949	205,989	208,049	210,129	212,231
Q	189,075	190,966	192,876	194,804	196,752	198,720	200,707	202,714	204,741	206,789	208,857	210,945	213,055	215,185	217,337	219,510	221,705	223,922	226,162	228,423	230,708	233,015	235,345	237,698
R	215,546	217,701	219,878	222,077	224,298	226,541	228,806	231,094	233,405	235,739	238,096	240,477	242,882	245,311	247,764	250,242	252,744	255,272	257,824	260,403	263,007	265,637	268,293	270,976
S	243,567	246,002	248,462	250,947	253,456	255,991	258,551	261,136	263,748	266,385	269,049	271,740	274,457	277,201	279,973	282,773	285,601	288,457	291,342	294,255	297,197	300,169	303,171	306,203
T	270,359	273,062	275,793	278,551	281,337	284,150	286,991	289,861	292,760	295,688	298,644	301,631	304,647	307,694	310,771	313,878	317,017	320,187	323,389	326,623	329,889	333,188	336,520	339,885
U	300,098	303,099	306,130	309,192	312,284	315,406	318,560	321,746	324,964	328,213	331,495	334,810	338,158	341,540	344,955	348,405	351,889	355,408	358,962	362,552	366,177	369,839	373,537	377,273
V	333,109	336,440	339,805	343,203	346,635	350,101	353,602	357,138	360,710	364,317	367,960	371,639	375,356	379,109	382,900	386,729	390,597	394,503	398,448	402,432	406,457	410,521	414,626	418,773
W	369,751	373,449	377,183	380,955	384,765	388,612	392,498	396,423	400,388	404,391	408,435	412,520	416,645	420,811	425,019	429,270	433,562	437,898	442,277	446,700	451,167	455,678	460,235	464,838
X	410,424	414,528	418,673	422,860	427,089	431,360	435,673	440,030	444,430	448,874	453,363	457,897	462,476	467,101	471,772	476,489	481,254	486,067	490,927	495,837	500,795	505,803	510,861	515,970
Y	455,570	460,126	464,727	469,375	474,068	478,809	483,597	488,433	493,318	498,251	503,233	508,266	513,348	518,482	523,666	528,903	534,192	539,534	544,929	550,379	555,883	561,441	567,056	572,726
Z	505,683	510,740	515,847	521,006	526,216	531,478	536,793	542,161	547,582	553,058	558,589	564,175	569,816	575,515	581,270	587,082	592,953	598,883	604,872	610,920	617,030	623,200	629,432	635,726

APPENDIX B3

CTP POSITIONS (GWA)

Authority	Position	JE Points	Grade
GWA	Accountant I	670	J
GWA	Accountant II	796	K
GWA	Accountant III	913	L
GWA	Accounting Technician I	431	F
GWA	Accounting Technician II	503	G
GWA	Accounting Technician III	606	I
GWA	Administrative Aide	353	D
GWA	Administrative Assistant	527	H
GWA	Administrative Officer	611	I
GWA	Asset Man. and Maint. Information System Officer	913	L
GWA	Assistant Chief Engineer	1232	Q
GWA	Assistant Chief Financial Officer	1122	O
GWA	Assistant General Manager Collection & Distribution	1173	P
GWA	Assistant General Manager Compliance & Safety	1152	O
GWA	Assistant General Manager Production & Treatment	1173	P
GWA	Automotive Mechanic I	477	G
GWA	Automotive Mechanic II	561	I
GWA	Biologist I	590	H
GWA	Biologist II	708	J
GWA	Biologist III	848	K
GWA	Budget Analyst	779	K
GWA	Building Custodian	228	A
GWA	Buyer I	381	F
GWA	Buyer II	496	H
GWA	Buyer Supervisor I	735	J
GWA	Buyer Supervisor II	834	K
GWA	Carpenter I	461	G

Appendix C

CTP POSITIONS (GWA)

Authority	Position	JE Points	Grade
GWA	Carpenter II	543	I
GWA	Carpenter Leader	683	J
GWA	Cashier I	315	C
GWA	Cashier II	358	E
GWA	Centralized Wastewater Maintenance Superintendent	998	N
GWA	Chemist I	600	I
GWA	Chemist II	754	J
GWA	Chemist III	858	L
GWA	Chief Budget Officer	994	N
GWA	Chief Engineer, PE (GWA)	1514	R
GWA	Chief Water and Wastewater Systems Dispatcher	984	N
GWA	Clerk I	212	A
GWA	Clerk II	270	B
GWA	Clerk III	322	C
GWA	Clerk Typist I	270	B
GWA	Clerk Typist II	322	C
GWA	Clerk Typist III	346	D
GWA	Collection Agent	421	E
GWA	Collection Supervisor	795	K
GWA	Communications Manager	1060	N
GWA	Community Maintenance Worker	422	E
GWA	Computer Operations Supervisor	844	K
GWA	Computer Operator I	356	E
GWA	Computer Operator II	506	G
GWA	Computer Operator III	637	I
GWA	Computer Technician I	479	G
GWA	Computer Technician II	575	I

Appendix C1

CTP POSITIONS (GWA)

Authority	Position	JE Points	Grade
GWA	Computer Technician Leader	709	J
GWA	Computer Technician Supervisor	897	L
GWA	Construction Inspector I	498	G
GWA	Construction Inspector II	622	I
GWA	Construction Inspector III	732	K
GWA	Contracts & Small Claims Administrator	798	K
GWA	Controller	1079	O
GWA	Customer Service Representative	461	G
GWA	Customer Service Representative Supervisor	795	K
GWA	Electrician I	478	G
GWA	Electrician II	569	I
GWA	Electrician Leader	712	J
GWA	Employee Development Specialist I	503	H
GWA	Employee Development Specialist II	670	J
GWA	Employee Development Specialist III	796	K
GWA	Engineer I	687	J
GWA	Engineer II	809	K
GWA	Engineer III	931	M
GWA	Engineer Supervisor	1044	O
GWA	Equipment Maintenance Superintendent	998	N
GWA	Equipment Operator I	397	E
GWA	Equipment Operator II	445	F
GWA	Equipment Operator III	511	G
GWA	Equipment Operator IV	546	H
GWA	Equipment Operator Leader I	644	I
GWA	Equipment Operator Leader II	661	J
GWA	Equipment Operator Supervisor	795	K

Appendix C2

CTP POSITIONS (GWA)

Authority	Position	JE Points	Grade
GWA	General Accounting Supervisor	1001	N
GWA	General Manager (GWA)	1734	S
GWA	GIS Analyst I	502	H
GWA	GIS Analyst II	612	J
GWA	GIS Analyst III	756	K
GWA	GIS/LIS Manager	910	L
GWA	Grants Administrator	994	N
GWA	Heavy Equipment Mechanic I	477	G
GWA	Heavy Equipment Mechanic II	561	I
GWA	Heavy Equipment Mechanic Leader	700	J
GWA	Heavy Equipment Mechanic Supervisor	909	L
GWA	Information Technology Manager	1064	O
GWA	Internal Auditor	1019	N
GWA	Inventory Management Officer	824	K
GWA	Laboratory Technician I	469	F
GWA	Laboratory Technician II	576	I
GWA	Laboratory Technician Supervisor	837	K
GWA	Land Agent I	362	E
GWA	Land Agent II	465	G
GWA	Land Agent III	531	I
GWA	Legal Secretary I	397	E
GWA	Legal Secretary II	460	G
GWA	Legal Secretary III	532	H
GWA	Maintenance Welder I	477	G
GWA	Maintenance Welder II	557	I
GWA	Maintenance Welder III	696	J
GWA	Maintenance Worker	422	E

Appendix C3

CTP POSITIONS (GWA)

Authority	Position	JE Points	Grade
GWA	Management Analyst I	503	H
GWA	Management Analyst II	670	J
GWA	Management Analyst III	796	K
GWA	Management Analyst IV	913	L
GWA	Meter Reader I	319	C
GWA	Meter Reader II	406	E
GWA	Meter Reader Leader	553	H
GWA	Monitoring Laboratory Services Administrator	1074	O
GWA	Network Analyst	793	J
GWA	Network Systems Administrator	897	L
GWA	Operations & Maintenance Manager	1189	P
GWA	Payroll Clerk I	346	D
GWA	Payroll Clerk II	438	G
GWA	Payroll Clerk III	493	H
GWA	Payroll Supervisor	805	K
GWA	Personnel Assistant I	364	D
GWA	Personnel Assistant II	433	F
GWA	Personnel Services Administrator	1064	O
GWA	Personnel Specialist I	503	H
GWA	Personnel Specialist II	670	J
GWA	Personnel Specialist III	796	K
GWA	Personnel Specialist IV	913	L
GWA	Planner / Co-ordinator I	503	H
GWA	Planner / Co-ordinator II	670	J
GWA	Planner / Co-ordinator III	796	K
GWA	Planner / Co-ordinator IV	913	L
GWA	Planner I	503	H

Appendix C4

CTP POSITIONS (GWA)

Authority	Position	JE Points	Grade
GWA	Planner II	670	J
GWA	Planner III	796	K
GWA	Planner IV	913	L
GWA	Plant Electrical Instrument Superintendent	1003	N
GWA	Plant Electrical Instrument Technician I	488	G
GWA	Plant Electrical Instrument Technician II	576	I
GWA	Plant Electrical Instrument Technician Leader	722	J
GWA	Program Coordinator I	503	H
GWA	Program Coordinator II	670	J
GWA	Program Coordinator III	796	K
GWA	Program Coordinator IV	913	L
GWA	Programmer Analyst I	683	J
GWA	Programmer Analyst II	910	L
GWA	Pumping Station Leader	702	J
GWA	Pumping Station Operator I	486	G
GWA	Pumping Station Operator II	568	I
GWA	Pumping Station Supervisor	866	L
GWA	Quality Control / Quality Assurance Officer	851	L
GWA	Refrigeration Mechanic I	477	G
GWA	Refrigeration Mechanic II	561	I
GWA	Refrigeration Mechanic Leader	696	J
GWA	Right of Way Supervisor	915	L
GWA	Safety Inspector I	418	F
GWA	Safety Inspector II	539	H
GWA	Safety Inspector III	741	J
GWA	Safety Supervisor	872	K
GWA	Secretary I	378	E

Appendix C5

CTP POSITIONS (GWA)

Authority	Position	JE Points	Grade
GWA	Secretary I (Typist)	378	E
GWA	Secretary II	438	G
GWA	Secretary II (Typist)	438	G
GWA	Senior Engineer Supervisor, PE	1217	P
GWA	Senior Engineer, PE	1044	O
GWA	Senior Regulatory Analyst	1019	N
GWA	Sewer Plant Leader	702	J
GWA	Sewer Plant Operator I	486	G
GWA	Sewer Plant Operator II	568	I
GWA	Sewer Plant Supervisor	866	L
GWA	Shop Planner	786	K
GWA	Source Control Manager	980	M
GWA	Staff Attorney	1199	P
GWA	Storekeeper I	322	C
GWA	Storekeeper II	424	F
GWA	Supply Management Administrator	990	M
GWA	Survey Supervisor	900	L
GWA	Systems & Programming Administrator	968	L
GWA	Systems / Trouble Dispatch Supervisor	788	K
GWA	Systems Dispatcher I	660	J
GWA	Systems Dispatcher II	788	K
GWA	Systems Dispatcher III	911	L
GWA	Technical Support Analyst	683	J
GWA	Tool Clerk	275	B
GWA	Trades Helper	272	B
GWA	Training & Development Manager	913	L
GWA	Training Specialist	503	H

Appendix C6

CTP POSITIONS (GWA)

Authority	Position	JE Points	Grade
GWA	Trouble Dispatcher	474	G
GWA	Trouble Dispatcher Leader	600	J
GWA	Trouble Dispatcher Supervisor	788	K
GWA	Utility Services Administrator	1075	O
GWA	Warehouse Supervisor I	724	J
GWA	Warehouse Supervisor II	803	K
GWA	Wastewater Collection Superintendent	998	N
GWA	Wastewater Construction / Maintenance Superintendent	998	N
GWA	Wastewater Maintenance Mechanic I	486	G
GWA	Wastewater Maintenance Mechanic II	568	I
GWA	Wastewater Maintenance Mechanic Leader	702	J
GWA	Wastewater Maintenance Mechanic Supervisor	866	L
GWA	Wastewater Plant Superintendent	998	N
GWA	Water & Wastewater Systems Control Dispatcher I	660	J
GWA	Water & Wastewater Systems Control Dispatcher II	788	K
GWA	Water / Sewer Maintenance Leader	702	J
GWA	Water / Sewer Maintenance Supervisor	866	L
GWA	Water / Sewer Maintenance Worker I	486	G
GWA	Water / Sewer Maintenance Worker II	568	I
GWA	Water and Wastewater Systems Leader	702	J
GWA	Water Construction / Maintenance Superintendent	998	N
GWA	Water Distribution System Manager	998	N
GWA	Water Meter Maintenance & Repair Leader	702	J
GWA	Water Meter Maintenance & Repair Supervisor	866	L
GWA	Water Meter Maintenance & Repair Worker I	486	G
GWA	Water Meter Maintenance & Repair Worker II	568	I
GWA	Water Meter Reader I	319	C

Appendix C7

CTP POSITIONS (GWA)

Authority	Position	JE Points	Grade
GWA	Water Meter Reader II	406	E
GWA	Water Meter Reader Leader	553	H
GWA	Water Meter Reader Supervisor	734	J
GWA	Water Plant Leader	702	J
GWA	Water Plant Operator I	486	G
GWA	Water Plant Operator II	568	I
GWA	Water Plant Supervisor	866	L
GWA	Water Treatment Plant Superintendent	998	N
GWA	Welder I	477	G
GWA	Welder II	557	I
GWA	Welder III	696	J
GWA	Word Processing Secretary I	378	E
GWA	Word Processing Secretary II	438	G

Appendix C8

PROPOSED NEW POSITIONS TO ADD TO CTP LIST (GWA)

Authority	Position	JE Points	Grade
GWA	Utility Accounting Technician I	431	F
GWA	Utility Accounting Technician II	503	G
GWA	Utility Accounting Technician III	606	I
GWA	Utility Administrative Aide	353	D
GWA	Utility Administrative Assistant	527	H
GWA	Utility Cashier I	315	C
GWA	Utility Cashier II	358	E
GWA	Utility General Accounting Supervisor	1001	N
GWA	Utility Personnel Assistant I	364	D
GWA	Utility Personnel Assistant II	433	F
GWA	Utility Storekeeper I	322	C
GWA	Utility Storekeeper II	424	F
GWA	Utility Trades Helper	272	B

Appendix D1

CONSOLIDATED COMMISSION ON UTILITIES

RESOLUTION NO. 2012-49

RESOLUTION RELATIVE TO AMENDING THE PROMOTION/DEMOTION/TRANSFER POLICY

WHEREAS, the General Manager, Guam Power Authority petitions the Consolidated Commission on Utilities (CCU) to amend the Promotion/Demotion/Transfer Policy, and

WHEREAS, the CCU has the lawful authority under Public Law 28-159, Section 3.0.b to approve and amend a unified pay scale and implementation plan for employees in certified, technical, and professional positions; and

WHEREAS, the Guam Power Authority is a public corporation established and existing under the laws of Guam; and

WHEREAS, in 2007, the CCU adopted the recommendations of the Compensation and Benefits Study conducted by Alan Searle & Associates; and

WHEREAS, the CCU also endorsed a plan to transition GPA to the new compensation model over a five (5) year period beginning fiscal year 2008; and

WHEREAS, the transition plan also included a compensation formula used to determine new rates of pay upon an employee's promotion and/or demotion into another position; and

WHEREAS, based on the current pay policy, upon promotion, an employee's new base salary is determined by slotting the current salary into the higher pay grade closest to but not less than the current salary earned and is then awarded a further six sub-steps; and

Appendix E1

WHEREAS, the implementation of the current pay policy distorts internal equity; and

WHEREAS, when upon promotion, junior employees are slotted at the minimum range with an additional six sub-steps increase surpassing senior employees whose step placements were slotted at the minimum range at the time of a transitional movement to the next market percentile.

WHEREAS, the proposed policy change corrects this problem by making a process change to when the six sub-steps is applied.

WHEREAS, when an employee is being promoted the first step will be to identify a new base salary six sub-steps up from the employee's current base salary. If the new base salary is still below the minimum of the implementation range he/she is promoted to then they are slotted at the minimum of the new implementation range.

WHEREAS, for demotions, the process will be applied with a six sub-step decrease down the grade prior to slotting into the new lower grade.

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

1. The amendment of the Promotion/Demotion/Transfer Policy applicable to CTP positions and personnel at GPA as delineated in Appendices "D, E and F" of Exhibit 1.
2. That the Guam Waterworks Authority also review the effect of the pay policy applicable to the determination of new pay rates assigned upon a promotion/demotion/transfer of personnel in CTP positions as delineated in Appendices "D, E and F" of Exhibit 1.

Appendix E2

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

DULY AND REGULARLY ADOPTED this 24th day of July, 2012.

Certified by:

SIMON A. SANCHEZ, II
Chairperson
Consolidated Commission on Utilities

Attested by:

GLORIA B. NELSON
Secretary
Consolidated Commission on Utilities

SECRETARY'S CERTIFICATE

I, Gloria B. Nelson, Board Secretary of the Consolidated Commission on Utilities evidenced by my signature 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

Appendix E3

GUAM POWER AUTHORITY
HUMAN RESOURCES DIVISION
STAFF REPORT

I. REQUEST:

The General Manager requests the Consolidated Commission on Utilities (CCU) to amend the Promotion/Demotion/Transfer Policy applicable to certified, technical, and professional (CTP) positions.

II. AUTHORITY: P.L. 28-159, Section 3.0.b.

III. BACKGROUND:

In March 2007, the CCU adopted the recommendations of the Compensation and Benefits Study conducted by Alan Searle and Associates. These recommendations included a comprehensive compensation methodology, a pay scale, an implementation plan and a list of positions distributed as List A and List B of certified, technical and professional positions. The scope of the study involved comparisons of all GPA positions to industry standards and the national average market conditions. This was necessary to retain employees and provide incentives to attract new ones. Further, the pay scale in effect prior to the adoption of the new pay scale was outdated and had not been revisited since its implementation in 1990.

In adopting the recommendations presented by Alan Searle and Associates, the CCU was prudent and endorsed a plan to transition GPA to the new compensation model over a five year period beginning in fiscal year 2008. The incremental transitions provide a more competitive market position for GPA. The initial structural adjustment was made to the 5th market percentile in 2008. In 2009, GPA targeted a second structural pay adjustment at the 15^{th} market percentile. However, based on funding availability the second structural pay adjustment was allocated at the 10^{th} market percentile. To date, most positions are on or near the 12^{th} market percentile as a result of performance pay increments.

The recommendations adopted by the CCU also included a compensation formula that is used to determine new rates of pay upon an employee's promotion and or demotion into another position. Based on the current policy, 6% is tagged on to the new base salary in the higher grade closest to but not less than the current salary earned. At face value, the formula appeared to work well. However, in its implementation there was discrepancy overall in the slotting of new rates with regard the implementation range of a position during a transitional pay adjustment placing the new rate of pay above the minimum range creating internal inequity.

IV. DISCUSSION:

When moving from one market percentile to the next higher percentile, the impact in moving from a position of a lower grade and implementation pay range to a position of a higher grade and implementation pay range is significant. The result of this process is similar to a step to step movement which creates a wider gap between incumbent employees being bypassed by the newly promoted employees in the same position. It is important to note, that when moving from one market percentile to the next higher market percentile, there are incumbent employees in positions whose current salaries are below the minimum step of the implementation range. From there, their salaries will be brought up to the minimum range during the transitional and structural pay adjustment. There are also employees whose current salaries are slotted above the minimum step of the implementation range. This is where the discrepancy exists. Under the current pay policy, junior employees who are promoted are slotted above the minimum range with an additional six percent increase. Thus, exceeding current incumbents placements during a transitional movement.

The proposed amendment will provide the six percent increase from the employees current pay grade and sub-step prior to slotting into the new pay grade and sub-step of the position promoted to. This process will maintain internal equity between the positions and the gaps that exist between junior and senior employees. (See Exhibit 1 Alan Searle & Associates Report, May 2012).

V. RECOMMENDATION:

a. To approve the amendment of the Promotion/Demotion/Transfer Policy applicable to CTP positions and personnel at GPA as delineated in Appendices "D, E and F" of Exhibit 1.

b. To request that the Guam Waterworks Authority also review the effect of the pay policy applicable to the determination of new pay rates assigned upon the promotion/demotion/transfer of personnel in CTP positions as delineated in Appendices "D, E and F" of Exhibit 1.

Julie L. Quinata
Personnel Services Administrator

7/6/12
JOAQUIN C. FLORES, P.E.
General Manager, GPA

Appendix E5

GUAM POWER AUTHORITY

COMPENSATION & BENEFITS STUDY

Request to Amend

Promotion / Demotion Policy

May 2012

ALAN SEARLE & ASSOCIATES LIMITED

Management Consultants, Auckland, New Zealand

EXHIBIT "1"

Appendix E6

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Current Policy

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Proposed Policy

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Appendix E7

GUAM POWER AUTHORITY

Request To Amend Promotion / Demotion / Transfer Policy

1.0 Background

When the compensation study for GPA and GWA was ratified a policy (Appendix A) concerning promotions, demotions and transfers was also included. However it has since been identified that under certain promotional situations employees are effectively receiving "two bites at the cake" so to speak. The certain situations referred to above are those instances where (prior to the promotion) the employee's current base salary is below the minimum of the implementation range they are being promoted to. In this situation current policy is such that the employee is initially slotted at the minimum of the implementation range he/she is being promoted to (seen as the first "bite of the cake") and is then awarded a further six sub-steps (seen as the second "bite of the cake") in order to identify their new base salary. This policy whilst attractive to the employee being promoted needs to be amended in order to ensure internal relativities and equity are maintained.

Please note that the above also applies to PAG, GIAA and GCC who also have the same policy in place with regards their compensation models.

2.0 Current Policy

Current policy (to handling promotions and demotions) is outlined in Appendix A
An example of current policy relating to promotions is outlined in Appendix B
An example of current policy relating to demotions is outlined in Appendix C

3.0 Proposed Policy

The proposed policy change corrects the problem by simply making a process change to when the six sub-steps is applied. In short, when an employee is being promoted the first step will be to identify a new base

salary six sub-steps up from the employee's current base salary (grade, step and sub-step). If this new base salary is still below the minimum of the implementation range he/she is being promoted to then they are simply slotted at the minimum of the new implementation range. If on the other hand the new base salary is above the minimum of the implementation range he/she is being promoted to then they would be slotted at the closest sub-step just on the high side.

In summary, the proposed change simply applies (as an initial step) the six sub-steps to the employee's current base salary and grade. For promotions this is a six sub-step increase up the grade or for demotions it is a six sub-step decrease down the grade. This then identifies a value that can then be compared to the implementation range of the position the employee is being promoted or demoted to.

The proposed policy (to handling promotions and demotions) is outlined in Appendix D
An example of the proposed policy relating to promotions is outlined in Appendix E
An example of the proposed policy relating to demotions is outlined in Appendix F

4.0 Impact / Handling of Proposed Policy Change

Whilst some employees at GPA have benefited from existing policy in the handling of their promotion we cannot turn around now and reduce their base salaries as the policy was correctly followed at the time the promotion was calculated. However, any advantage can be brought back to a "level playing field" when GPA / GWA make their next structural adjustment in pay and move i.e. to a higher market percentile. For information purposes, both GPA / GWA are currently around the 10^{th} - 15^{th} market percentile compared to utilities (both electric and water) on the U.S. mainland.

The "level playing field" is achieved as follows : when the next structural adjustment in calculated we identify (which is part of the normal process) a new implementation range for every position. With regards the minimum of that range an employee's current base salary is either above or below it. So therefore the salary of an employee who (by virtue of their promotion) may have exceeded a longer serving employee in the same position are now both treated the same and depending on the implementation criteria will be slotted accordingly.

5.0 Summary

Whilst current promotion policy has benefited some employees slightly the situation can be corrected. As outlined earlier, the optimum time to make that change is when GPA / GWA make their next structural adjustment in pay and move to a higher market percentile. The process is straightforward for once the new implementation ranges have been identified (at the preferred market percentile) all employees are treated the same, and as previously outlined, depending on the implementation criteria will be slotted accordingly.

APPENDIX A

1.1 Promotion

a) A pay adjustment resulting in an increase / promotion either by competition, reclassification, pay grade reassignment or temporary appointment is effectuated by identifying from the new pay grade the salary (sub-step) closest to, but not less than the salary currently being received prior to promotion plus an additional six (6) sub-steps. This identifies the new base salary.

b) A pay adjustment where the salary received prior to promotion is below the low end of the new implementation range shall be slotted at the lowest sub-step of the new implementation range plus an additional six (6) sub-steps. This identifies the new base salary.

c) The General Manager at his / her discretion, or upon the recommendation of a respective Division Manager, may grant up to three (3) additional sub-steps, based on superior performance, significant contributions made to the business unit or the Authority as a whole, or demonstration of personal enrichment and development related to and beyond the job requirement. All requests for additional sub-step placement must be justified in writing.

1.2 Demotion

a) A pay adjustment resulting in a decrease either by demotion, voluntary, reclassification, or pay grade reassignment is effectuated by identifying from the amended pay grade the salary (sub-step) closest to, but not more than the salary (sub-step) currently being received prior to demotion less an additional six (6) sub-steps. This identifies the new base salary.

b) A pay adjustment where the salary received prior to demotion, voluntary, reclassification, or pay grade reassignment is below the lowest sub-step of the new implementation range shall be slotted at the lowest sub-step of the new implementation range. This identifies the new base salary.

APPENDIX "A"

Appendix B : Example - Promotions (Current Policy)

			Step 3				Step 4				Step 5				Step 6				Step 7				Step 8		
	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C
Position A	33,309	33,642	33,978	34,318	34,661	35,008	35,358	35,712	36,069	36,429	36,794	37,162	37,533	37,909	38,288	38,671	39,057	39,448	39,842	40,241	40,643	41,050	41,460	41,875	42,293
Position B	37,972	38,352	38,735	39,123	39,514	39,909	40,308	40,711	41,118	41,530	41,945	42,364 (1)	42,788 (2)	43,216 (3)	43,648 (4)	44,084 (5)	44,525 (6)	44,971	45,420	45,874	46,333	46,797	47,264	47,737	48,214
Position C	43,288	43,721	44,158	44,600	45,046	45,496	45,951	46,411	46,875	47,344	47,817	48,295	48,778	49,266	49,759	50,256	50,759	51,266	51,779	52,297	52,820	53,348	53,881	54,420	54,965

Low end of implementation range

Employees current grade, step and sub-step prior to promotion i.e. Grade I, Step 8, Sub-step B ($41,875)

Step 1 : Initially move to closest sub-step on new grade (high side) i.e. Grade J, Step 5, Sub-step A ($41,945)

Step 2 : Increase by a further 6 (six) sub-steps to indentify final grade, step and sub-step i.e. Grade J, Step 6, Sub-step C ($44,525)

	Step 2				Step 3				Step 4				Step 5				Step 6				Step 7				Step 8
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A
Position A	25,125	25,376	25,630	25,886	26,145	26,407	26,671	26,937	27,207	27,479	27,754	28,031	28,312	28,595	28,881	29,169	29,461	29,756	30,053	30,354	30,657	30,964	31,274	31,586	31,902
Position B	28,643	28,929	29,218	29,510 (1)	29,806 (2)	30,104 (3)	30,405 (4)	30,709 (5)	31,016 (6)	31,326	31,639	31,956	32,275	32,598	32,924	33,253	33,586	33,922	34,261	34,603	34,949	35,299	35,652	36,008	36,368

Low end of implementation range

Employees current grade, step and sub-step prior to promotion i.e. Grade G, Step 4, Sub-step C ($27,754)

Step 1 : As employees current base salary is below minimum initially move to low end of implementation range of new grade i.e. Grade H, Step 2, Sub-step C ($29,218)

Step 2 : Increase by 6 (six) sub-steps to indentify new grade, step and sub-step i.e. Grade H, Step 4, Sub-step A ($31,016)

APPENDIX "B"

Appendix E12

Appendix C : Example - Demotions (Current Policy)

			Step 3				Step 4				Step 5				Step 6				Step 7				Step 8		
	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C
																		(6)	(5)	(4)	(3)	(2)	(1)		
Position A	33,309	33,642	33,978	34,318	34,661	35,008	35,358	35,712	36,069	36,429	36,794	37,162	37,533	37,909	38,288	38,671	39,057	39,448	39,842	40,241	40,643	41,050	41,460	41,875	42,293
Position B	37,972	38,352	38,735	39,123	39,514	39,909	40,308	40,711	41,118	41,530	41,945	42,364	42,788	43,216	43,648	44,084	44,525	44,971	45,420	45,874	46,333	46,797	47,264	47,737	48,214
Position C	43,268	43,721	44,158	44,600	45,046	45,496	45,951	46,411	46,875	47,344	47,817	48,295	48,778	49,266	49,759	50,256	50,759	51,266	51,779	52,297	52,820	53,348	53,881	54,420	54,965

Low end of implementation range

Employees current grade, step and sub-step prior to demotion i.e. Grade J, Step 5, Sub-step A ($41,945)

Step 1 : Initially move to closest substep on lower grade (low side) i.e. Grade I, Step 8, Sub-step B ($41,875)

Step 2 : Decrease by 6 (six) sub-steps to indentify final grade, step and sub-step i.e. Grade I, Step 8, Sub-step D ($39,448)

			Step 3				Step 4				Step 5				Step 6				Step 7				Step 8		
	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C
									(6)	(5)	(4)	(3)	(2)	(1)											
Position A	33,309	33,642	33,978	34,318	34,661	35,008	35,358	35,712	36,069	36,429	36,794	37,162	37,533	37,909	38,288	38,671	39,057	39,448	39,842	40,241	40,643	41,050	41,460	41,875	42,293
Position B	37,972	38,352	38,735	39,123	39,514	39,909	40,308	40,711	41,118	41,530	41,945	42,364	42,788	43,216	43,648	44,084	44,525	44,971	45,420	45,874	46,333	46,797	47,264	47,737	48,214
Position C	43,268	43,721	44,158	44,600	45,046	45,496	45,951	46,411	46,875	47,344	47,817	48,295	48,778	49,266	49,759	50,256	50,759	51,266	51,779	52,297	52,820	53,348	53,881	54,420	54,965

Low end of implementation range

Employees current grade, step and sub-step prior to demotion i.e. Grade J, Step 2, Sub-step D ($38,352)

Step 1 : Initially move to closest substep on lower grade (low side) i.e. Grade I, Step 6, Sub-step A ($38,288)

Step 2 : Decrease by 6 (six) sub-steps to indentify final grade, step and sub-step i.e. Grade I, Step 4, Sub-step C ($36,069)

Note : if six (6) sub-steps cannot be taken, take low end of implementation range as new base salary

APPENDIX "C"
Appendix E13

APPENDIX D

1.1 Promotion

A pay adjustment resulting in a promotion either by competition, reclassification, pay grade reassignment or temporary appointment is effectuated by initially increasing the employee's current base salary by six (6) sub-steps on the grade they are currently allocated. If this figure is :

a) below the minimum of the new implementation range they would be slotted at the minimum of the new implementation range. This identifies the employee's new base salary.

b) above the minimum of the new implementation range they would be slotted at the closest sub-step (just on the high side) of the new grade. This identifies the employee's new base salary.

c) The General Manager at his / her discretion, or upon the recommendation of a respective Division Manager, may grant up to three (3) additional sub-steps, based on superior performance, significant contributions made to the business unit or the Authority as a whole, or demonstration of personal enrichment and development related to and beyond the job requirement. All requests for additional sub-step placement must be justified in writing.

1.2 Demotion

A pay adjustment resulting in a decrease either by demotion, voluntary, reclassification, or pay grade reassignment is effectuated by initially decreasing the employee's current base salary by six (6) sub-steps on the grade they are currently allocated. If this figure is :

d) below the minimum of the new implementation range they would be slotted at the minimum of the new implementation range. This identifies the employee's new base salary.

e) above the minimum of the new implementation range they would be slotted at the closest sub-step (just on the low side) of the new grade. This identifies the employee's new base salary.

APPENDIX "D"

Appendix E : Example - Promotions (Proposed Policy)

SCENARIO 1.

		Step 2				Step 3				Step 4				Step 5				Step 6				Step 7	
		A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B
											①	②	③	④	⑤	⑥							
Position A	Grade F	25,125	25,376	25,630	25,886	26,145	26,407	26,671	26,937	27,207	27,479	27,754	28,031	28,312	28,595	28,881	29,169	29,461	29,756	30,053	30,354	30,657	30,964
Position B	Grade H	28,643	28,929	29,218	29,510	29,806	30,104	30,405	30,709	31,016	31,326	31,639	31,956	32,275	32,598	32,924	33,253	33,586	33,922	34,261	34,603	34,949	35,299

Low end of implementation ranges (both Positions A & B)

Employees current grade, step and sub-step prior to promotion i.e. Grade F, Step 4, Sub-step A ($27,207)

Step 1 : Initially move up the employees current grade by six sub-steps to identify a value i.e. Grade F, Step 5, Sub-step C ($28,881)

Step 2 : Transpose that value to the new grade that the employee is being promoted to and to the closest sub-step "just on the high side" i.e. Grade H, Step 2, Sub-step B ($28,929)

As this value is still BELOW the minimum of the new implementation range the employee would move to the minimum of the new implementation range i.e. Grade H, Step3, Substep C ($30,405) as their new base salary

SCENARIO 2.

		Step 2				Step 3				Step 4				Step 5				Step 6				Step 7	
		A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B
																	①	②	③	④	⑤	⑥	
Position A	Grade F	25,125	25,376	25,630	25,886	26,145	26,407	26,671	26,937	27,207	27,479	27,754	28,031	28,312	28,595	28,881	29,169	29,461	29,756	30,053	30,354	30,657	30,964
Position B	Grade H	28,643	28,929	29,218	29,510	29,806	30,104	30,405	30,709	31,016	31,326	31,639	31,956	32,275	32,598	32,924	33,253	33,586	33,922	34,261	34,603	34,949	35,299

Low end of implementation ranges (both Positions A & B)

Employees current grade, step and sub-step prior to promotion i.e. Grade F, Step 5, Sub-step C ($28,881)

Step 1 : Initially move up the employees current grade by six sub-steps to identify a value i.e. Grade F, Step 7, Sub-step A ($30,657)

Step 2 : Transpose that value to the new grade that the employee is being promoted to and to the closest sub-step "just on the high side" i.e. Grade H, Step 3, Sub-step D ($30,709)

As this value is ABOVE the minimum of the new implementation range the employee would stay at that value i.e. Grade H, Step 3, Sub-step D ($30,709) as their new base salary

APPENDIX "E"

Appendix E15

Appendix F : Example - Demotions (Proposed Policy)

SCENARIO 1.

		Step 2				Step 3				Step 4				Step 5				Step 6				Step 7	
		A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B
Position A	Grade F	25,125	25,376	25,630	25,886	26,145	26,407	26,671	26,937	27,207	27,479	27,754	28,031	28,312	28,595	28,881	29,169	29,461	29,756	30,053	30,354	30,657	30,964
Position B	Grade H	28,643	28,929	29,218	29,510	29,806	30,104	30,405	30,709	31,016	31,326	31,639	31,956	32,275	32,598	32,924	33,253	33,586	33,922	34,261	34,603	34,949	35,299

(6) (5) (4) (3) (2) (1)

Low end of implementation ranges (both Positions A & B)

Employees current grade, step and sub-step prior to demotion i.e. Grade H, Step 5, Sub-step B ($32,598)

Step 1 : Initially move down six sub-steps from the employees current salary to identify a value i.e. Grade H, Step 3, Sub-step D ($30,709)

Step 2 : Transpose that value to the new grade that the employee is being demoted to, and to the closest sub-step "just on the low side" i.e. Grade F, Step 7, Sub-step A ($30,657)

As this value is still ABOVE the minimum of the new implementation range management reserves the right (depending on the circumstances of the demotion) to further reduce this to the minimum.

SCENARIO 2.

		Step 2				Step 3				Step 4				Step 5				Step 6				Step 7	
		A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B
Position A	Grade F	25,125	25,376	25,630	25,886	26,145	26,407	26,671	26,937	27,207	27,479	27,754	28,031	28,312	28,595	28,881	29,169	29,461	29,756	30,053	30,354	30,657	30,964
Position B	Grade H	28,643	28,929	29,218	29,510	29,806	30,104	30,405	30,709	31,016	31,326	31,639	31,956	32,275	32,598	32,924	33,253	33,586	33,922	34,261	34,603	34,949	35,299

(6) (5) (4) (3) (2) (1)

Low end of implementation ranges (both Positions A & B)

Employees current grade, step and sub-step prior to demotion i.e. Grade H, Step 3, Sub-step D ($30,709)

Step 1 : Initially move down six sub-steps from the employees current salary to identify a value i.e. Grade H, Step 2, Sub-step B ($28,929). Please note (that with this scenario) this action goes below the minimum of the current grade.

Step 2 : Transpose that value to the new grade that the employee is being demoted to, and to the closest sub-step "just on the low side" i.e. Grade F, Step 5, Sub-step C ($28,881)

As this value is still ABOVE the minimum of the new implementation range management reserves the right (depending on the circumstances of the demotion) to further reduce this to the minimum.

APPENDIX "F"
Appendix E16

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. 54-FY2017 Relative to Approving Contract Amendment No. 7 for Program Management Services

What is the project's objective and is it necessary and urgent?
The objective of the project is to provide additional Program Management Services to GWA. The PMO currently provides various engineering services, financial analysis, and operational training to GWA and there is a need for additional services above the original contract value and amendments to date. The additional services needed include general programmatic work that covers needs throughout GWA, consulting engineer's report for 2018 revenue bond financing, project management for new wells AG10, AG12 and Y8, hydraulic modeling and training for wastewater collection system, and continued assistance with project management over USEPA SRF projects. The proposed amendment and funding are generally in line with GWA Management's transition plan for the PMO as presented to the PCU in December of 2016.

How much will it cost?
The additional cost for PMO services is Two Million Ninety Five Thousand Nine Hundred Four Dollars ($2,095,904.00).

When will it be completed?
The latest PMO service related to this Amendment No. 7 will be completed by December 2018.

What is the funding source?
The source of funding will be from the 2010, 2013 and 2015 bond series proceeds, GWA revenue funds as well as State Revolving Funds that are applicable to the PMO's work and which are eligible to be used.

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

RESOLUTION NO. 54–FY2017

RELATIVE TO APPROVING CONTRACT AMENDMENT NO. 7 FOR PROGRAM MANAGEMENT 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, on December 12, 2011 GWA received approval by the CCU via Resolution No. 11-FY2012 to seek from the PUC a request for approval to execute an initial contract with the engineering consultant "Brown & Caldwell" for Program Management Services at a cost not to exceed $3.2 million; and

WHEREAS, Resolution No. 11-FY2012 resolved that the General Manager is authorized an increase in obligating authority to effectuate a contract with Brown & Caldwell subject to CCU and PUC approval; and

WHEREAS, the PUC ORDER via GPA Docket 11-02 dated March 21, 2011 authorized GWA to execute a contract with Brown and Caldwell for Program Management Services; and

WHEREAS, GWA has utilized the PMO for various engineering services, financial analysis, operational training and determine the need for additional services above the original contract value and as such sought and received approval from the CCU via Resolution 53-FY2012, Resolution 34-FY2013, Resolution 07-FY2014, Resolution 37-FY2014, Resolution 39-FY2015 and Resolution 47-FY2016 to seek PUC approval to increase the contract value for the

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PMO services by an additional One Million Two Hundred Thousand Dollars ($1,200,000.00), Two Million One Hundred Sixty Six Thousand Ninety One Dollars ($2,166,091.00), Three Million One Hundred Ninety Nine Thousand Four Hundred Ninety Three Dollars ($3,199,493.00), Two Million Four Hundred Fifty Eight Thousand Three Hundred Fifteen Dollars ($2,458,315.00), Five Million Three Hundred Three Thousand One Hundred Forty Five Dollars ($5,303,145.00) and Four Million Fifty Nine Thousand Eight Hundred Seventy Seven Dollars ($4,059,877.00) respectively; and

WHEREAS, the PUC ORDER via GPA Docket 11-02 dated April 30, 2013, the GWA Docket 13-01 dated December 30, 2013, July 31, 2014 and December 29, 2014, the GWA Docket 15-07 dated September 24, 2015 and the GWA Docket 16-06 dated September 29, 2016 approved GWA's request to increase the contract value for the PMO an additional One Million Two Hundred Thousand Dollars ($1,200,000.00), Two Million One Hundred Sixty Six Thousand Ninety One Dollars ($2,166,091.00), Three Million One Hundred Ninety Nine Thousand Four Hundred Ninety Three Dollars ($3,199,493.00), Two Million Four Hundred Fifty Eight Thousand Three Hundred Fifteen Dollars ($2,458,315.00), Five Million Three Hundred Three Thousand One Hundred Forty Five Dollars ($5,303,145.00) and Four Million Fifty Nine Thousand Eight Hundred Seventy Seven Dollars ($4,059,877.00) respectively to the PUC dockets noted above; and

WHEREAS, GWA management continues to support the fact that Brown & Caldwell provides tremendous benefit to GWA through subject matter expertise for all aspects of utility services provided by GWA, including issues or projects related to the 2011 Court Order as well as projects associated with USEPA State Revolving Funds (See Exhibit A); and

WHEREAS, GWA management again seeks CCU approval to amend the contract with Brown & Caldwell to increase the contract value an additional Two Million Ninety Five Thousand Nine Hundred Four Dollars ($2,095,904.00) for additional services to GWA (See Exhibit B); and

WHEREAS, GWA management finds the cost associated with the PMO to be commensurate to average PMO cost to the original $400M capital improvements program and the graph shown in Exhibit C illustrates the anticipated spending amounts for the PMO discussed with the PUC and the actual amounts approved by the PUC; and

WHEREAS, the proposed amendment and funding amounts are generally in line with GWA Management's transition plan for the PMO, which was submitted to the PUC in December of 2016; and

WHEREAS, GWA management further seeks CCU approval to petition the PUC's approval to increase the contract value of the Program Management Services a funding increase "not to exceed" Two Million Ninety Five Thousand Nine Hundred Four Dollars ($2,095,904.00) specific to additional PMO services; and

WHEREAS, the source of funding will be from the 2010, 2013 and 2015 bond series proceeds, GWA revenue funds as well as State Revolving Funds that are applicable to the PMO's work and which are eligible to be used; and

WHEREAS, the GWA Chief Engineer will identify specific CIP line items that are to fund the additional contract value to the PMO; 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. That GWA Management amends the contract with Brown and Caldwell for an additional, "not to exceed" Two Million Ninety Five Thousand Nine Hundred Four Dollars ($2,095,904.00) for additional Program Management Services (Exhibit B).

3. GWA management seeks immediate PUC approval to increase the contract value for PMO services by Brown and Caldwell an additional "not to exceed" Two Million Ninety Five Thousand Nine Hundred Four Dollars ($2,095,904.00).

//

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

DULY AND REGULARLY ADOPTED, this 26th day of September 2017.

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

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

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

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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EXHIBIT "A" (1 of 23)

GUAM WATERWORKS AUTHORITY

Program Management Office

Quarterly Report to the Public Utilities Commission

2nd Quarter Report for 2017

Dated

06/30/2017

Preface

Guam Waterworks Authority (GWA) is committed to providing excellent water and wastewater products, programs and services in a safe, reliable, responsible, and cost effective manner. GWA has made meeting the deadlines stipulated in the 2011 Court Order its top priority, including the retainage of an engineering consultant to assist in the form of a Program Management Office (PMO). In addition, GWA has been subject to scrutiny by the USEPA through the NEIC Findings of Significant Deficiencies in the Water and Wastewater Systems and in the SRF Grants program. The PMO is being used to assist GWA in meeting obligations in these programs.

The estimated $300 million 2011 Court-Ordered projects must be constructed by 2020. The 5-Year Capital Improvement Program (CIP) contains approximately $457 million in water and wastewater projects. GWA is understaffed and requires the PMO's support to meet court-order deadlines, the NEIC Significant Findings requirements, the USEPA SRF Project implementation requests, and other work that is necessary to achieve completion of the CIP.

In recent years, GWA has emphasized employee and management training programs to increase the knowledge and skills of its workforce. The PMO is working with GWA to provide training to staff within the Engineering and Operations Divisions.

This quarterly report provides the status of projects in which the PMO is currently engaged. This information reflects a cut-off date of June 30, 2017.

Section 1.0: Active and Completed Work Authorizations

This section includes a listing of the active work authorizations performed under GWA's PMO during the reporting quarter. Table 1-1 below indicates each active work authorization, work authorization budget, invoiced amount prior to the current quarter, the amount invoiced in the current quarter, and the respective percent complete as of the cut-off date. New work authorizations pending funding certification are excluded from this table.

Table 1-1: Active PMO Work Authorizations

Work Authorization #	Project Title	Approved Budget	Invoiced Prior to Current Quarter	Invoiced in Current Quarter	Invoiced to Date	Percent (%) Complete
2012-14	NPDES Negotiation Support	$246,000	$218,488	$ 0	$218,488	89%
2013-02-A1	Phase II Constr Mgmt Agana WWTP Upgrades	$326,450	$326,445	$ 0	$326,445	100%*
2014-01-A2	Program Management Support	$99,920	$99,920	$ 0	$99,920	100%*
2014-02	Ugum WTP Operations Support	$415,390	$411,516	$ 0	$411,516	99%*
2014-03	NEIC Wastewater System Inspection	$90,095	$24,663	$ 0	$24,663	27%
2014-04	PUC Stipulations 2013	$160,019	$160,019	$ 0	$160,019	98%*
2014-05	Groundwater Well Rehab Plan	$373,350	$354,080	$ 0	$354,080	95%*
2014-06	Water System Hydraulic Analysis	$370,240	$329,276	$1,889	$331,165	89%
2014-07	Hydraulic Model for Sewer System	$250,324	$250,273	$ 0	$250,273	100%*
2014-09	Formal Training Program	$247,025	$221,457	$ 0	$221,457	90%

Table 1-1: Active PMO Work Authorizations						
Work Authorization #	Project Title	Approved Budget	Invoiced Prior to Current Quarter	Invoiced in Current Quarter	Invoiced to Date	Percent (%) Complete
2014-10	Design Management New Agat WWTP	$499,630	$490,975	$ 0	$490,975	98%*
2014-11	SRF Project Management	$544,925	$544,924	$ 0	$544,924	100%*
2014-12	Umatac-Merizo WWTP Water Quality Standards	$357,827	$348,625	$ 0	$348,625	97%
2014-13	Baza Gardens Wastewater Cross-Island Design	$299,780	$278,332	$ 0	$278,332	93%
2014-11-A1	SRF Program Support Amendment No. 1	$544,925	$544,924	$ 0	$544,924	100%*
2014-11-A2	SRF Program Support Amendment No. 2	$730,000	$102,152	$354,115	$456,268	63%
2015-01	Program Management Support	$894,882	$894,880	$ 0	$894,880	100%*
2015-05	2015 Revenue Bond Financing	$218,772	$218,772	$ 0	$218,772	100%*
2015-06	Facility Planning	$975,382	$577,236	$48,344	$625,580	64%
2015-07	Water Resources Master Plan Update	$2,623,300	$1,699,052	$198,360	$1,897,412	72%
2015-08	Source Control Program	$471,368	$74,441	$71,153	$145,594	31%
2016-01	Agat to Umatac Potable Waterline Analysis	$56,030	$ 260	$6,729	$6,990	13%
2016-02	Phase I: Tumon Sewer Basin Study	$187,990	$ 0	$ 0	$ 0	0%
2016-03	Mixing Zone Study for Agat-Santa Rita WWTP Discharge to Tipalao Bay	$447,250	$115,132	$322,002	$437,134	98%
2016-04	Hydraulic Modeling Phase 3	$148,746	$ 0	$ 0	$ 0	0%
2016-05	Engineering for Groundwater Well Production Meters	$301,539	$ 0	$ 0	$ 0	0%
2016-07	Project Management for Umatac-Merizo WWTP Upgrade and D/B Preparation	$1,250,757	$42,276	$309,393	$351,669	28%
2016-08	Program Management 2016-2017	$782,995	$31,748	$283,061	$314,809	40%
2016-09	Backflow Prevention and Cross-Connection Control Program	$154,570	$1,269	$17,641	$18,909	12%
Total		$14,069,481	$8,361,135	$1,612,687**	$9,973,823	

**Work Authorizations essentially complete but not formally closed.*

***Value is rounded.*

Table 1-2 below is a listing of completed work authorizations performed under GWA's Program Management Office.

Table 1-2. Completed PMO Work Authorizations			
Work Authorization #	Work Authorization Title	Approved Budget	Final Amount Invoiced
2012-01	Program Management/2013/Amend. 3	$956,700	$956,700
2012-02	Programmatic Overview	$28,548	$28,548
2012-03	Northern District Interim Improvements	$239,760	$239,760
2012-04	Agat/Santa Rita Interim Measures	$42,920	$42,920
2012-05	Baza Gardens Interim Measures	$46,200	$46,200
2012-06	Agana Interim Measures	$89,885	$89,885

Table 1-2. Completed PMO Work Authorizations			
Work Authorization #	Work Authorization Title	Approved Budget	Final Amount Invoiced
2012-07	Hydraulic Model	$389,024	$389,024
2012-08	Lifeline Program	$5,269	$5,269
2012-09	SSES Implementation	$80,602	$80,602
2012-10	Chaot/ Agana Heights Tank DB Package	$271,071	$271,071
2012-11	PUC Stipulated Order	$131,554	$131,554
2012-12	Phase I Facility Eval. Umatac-Merizo WW	$105,635	$105,635
2012-13	Phase I Ugum Inspection and Training	$135,986	135,986
2012-15	Well Corrosion Specialist	$48,610	$48,610
2012-16	Umatac-Merizo Overflow	$25,170	$25,170
2012-17	NEIC Water System Support	$288,488	$288,488
2012-01-A2	General Program Management Support	$289,414	$289,414
2012-01-A3	General Program Management Support	$583,709	$583,709
2012-12-A1	WW Eval Umatac PH 2	$205,172	$205,172
2012-13-A1	Update O&M Manual Ugum SWTP	$17,412	$17,412
2013-01	Phase I PM Agana WWTP Upgrades	$110,158	$110,158
2013-02	Phase I CM Agana WWTP Upgrades	$223,867	$223,867
2013-03	Southern Sewer Basin SSES	$452,329	$452,329
2013-04	Central I/I Tech Support	$47,991	$47,991
2013-05	WW Eval Agat-SR & Baza Gardens	$582,765	$582,765
2013-06	Engineer's Report Revenue Bond	$247,810	$247,810
2013-01-A1	Phase II PM-Agana WWTP Upgrades	$70,860	$70,860
2014-01	Program Management Support	$1,286,120	$1,286,120
2014-01-A1	Program Management Support	$100,000	$100,000
Total		$7,103,029	$7,103,029

Section 2.0: Work Authorization Highlights

This section includes information pertaining to work authorizations performed during this quarterly period. The information in this section contains: program successes and problems, project successes and status, and if applicable, projects exceeding budget and projects behind schedule.

Table 2-1 shows the work authorizations that were worked on during this quarterly period. Significant highlights of these work authorizations are provided to show the progress of each work authorization. Where appropriate, a summary of successes and/or problems are provided.

Table 2-1. Work Authorization Highlights for Active Work This Period				
Work Authorization #	Work Authorization Title	Significant Highlights	Successes	Problems
2012-14	NPDES Negotiation Support	• No action this period		
2013-02-A1	Phase II Constr Mgmt Agana WWTP Upgrades	• No action this period • Slated for close-out	• Project is substantially complete	
2014-01-A2	Program Management Support	• No action this period • Slated for close-out	• Project is substantially complete	
2014-02	Ugum WTP Operations Support	• No action this period • Slated for close-out	• Project is substantially complete	
2014-03	NEIC Wastewater System Support	• No action this period		
2014-04	PUC Stipulations 2013	• No action this period	• Project is substantially complete	• Awaiting approval from GWA to issue draft report as final
2014-05	Groundwater Well Rehabilitation Plan	• No action this period • Slated for close-out	• Project is substantially complete	
2014-06	Water System Hydraulic Analysis	• No action this period		
2014-07	Hydraulic Model for Sewer System	• No action this period • Slated for close-out	• Project is substantially complete	
2014-09	Formal Training Program Assistance	• No action this period		
2014-10	Design Management New Agat WWTP	• No action this period • Slated for close-out	• Project is substantially complete	
2014-11	SRF Project Management	• No action this period • Slated for close-out	• Project is substantially complete	
2014-11-A1	SRF Project Management	• No action this period	• Project is substantially complete	
2014-11-A2	SRF Project Management, Amendment 2	• CO 11 Approved Budget of additional $365,000 Southern SSES Rehabilitation – Phase I (Agat, Santa Rita, Umatac, Merizo) (Construction) • Led Discussions on warranty issues regarding CIPP installation/liner issues • Coordinated efforts on preparation and collection of final closeout documentation ○ Reviewed Contractor's revised standby claim ○ Prepared record drawings, and O&M Manual ○ Reviewed CM Claim response letter ○ Performed various follow-ups (e.g. CCTV, CM progress, etc.) Southern SSES Rehabilitation – Phase II (Baza Gardens, Santa Rita, Talofofo) (Construction) • Reviewed, and submitted CM Invoice no. 8, and 9, and Construction invoice no. 7 to GWA for payment	• Engineering Design underway for ○ Rt. 1 Sewer Rehab (99% Complete) ○ Rt. 2 Sewer Rehab (99% Complete) ○ Rt. 4 Sewer Rehab (95% Complete) • Engineering Design underway for:	• A/F-series (Design) Deep Well Rehabilitation Projects are both experiencing delays. Delays are primarily due to issues with pilot hole development and locating wells with adequate

Table 2-1. Work Authorization Highlights for Active Work This Period				
Work Authorization #	Work Authorization Title	Significant Highlights	Successes	Problems
		• Managed CM Change Order request no. 2; submitted CO no. 2 for further processing • Reviewed construction submittals • Conducted Santa Rita site visits regarding manhole leaks, CCTV work, and CIPP installation • Led discussions regarding CIPP work and other technical complications • Coordinated on-site Davis-Bacon labor inspection interviews • Coordinated certified payroll and project schedule submittals to GWA Rt. 1 Asan-Adelup-Hagatna Sewer Line Rehabilitation (Engineering Design) • Prepared, reviewed, and submitted final bid plans and specifications; assisted with preparation of EJCDC documents for bidding and construction contract • Participated in Pre-bid meeting, and CM Scoping Meeting • Reviewed, and submitted Design Invoice no. 16, and 17 to GWA for payment • Participated in Route 1 bid opening ○ Discussed escalated cost of project ○ Discussed bid evaluation ○ Steps to move forward with bid/re-bid Rt. 1 Sewer Rehabilitation and Replacement (Asan-Adelup-Hagatna) Asan Sewer Break Repair • Reviewed, and submitted Construction invoice no. 1 to GWA for payment • Managed Construction Change Order request no. 1; led discussions on no-cost CO and means to re-allocate funding; submitted CO no. 1 for further processing • Corresponded on, and developed responses to RFI questions • Led discussions on the following: asbestos abatement, additional work upstream, challenges ongoing at current job sites, traffic control, proper shoring/trench support, etc. • Performed follow-ups (e.g. traffic control, archaeological monitoring, bypass set-up, removal of metal plans, and excavation schedule, etc.) • Coordinated on-site Davis-Bacon labor inspection interviews Rt. 2 Agat War-in-the-Pacific National Park (Engineering Design) • Developed, finalized, and submitted bid plans and specifications; assisted with preparation of EJCDC documents for bidding and construction contract • Participated in Pre-bid meeting; led discussions, reviewed, and submitted responses to RFIs Rt. 4 Relief Sewer Line Rehabilitation and Replacement (Engineering Design) • Received, reviewed, provided comments, finalized, and submitted 90% design plans and specifications to USEPA; discussed comments and costs implications • Received, reviewed, provided comments, and discussed 100% design plans and specifications submittal • Reviewed, and submitted Design Invoice no. 8, and 9 to GWA for payment D-series Deep Well Rehabilitation (Construction) • Reviewed, and submitted CM invoice nos. 5, 6, and 7, and Construction invoice no. 8, and 9 to GWA for payment	○ A & F-series Deep Well Rehab (30% Complete) ○ Tumon Hot Spots Sewer Rehab (40% Complete) ○ Tamuning Hot Spots Sewer Rehab (40% Complete) • Construction underway for: ○ Agat-Santa Rita-Umatac-Merizo Sewer Rehab (99% Original Scope Complete) ○ Baza Gardens-Santa Rita-Talofofo Sewer Rehab (60% Complete) ○ D-series Deep Well Rehab (60% Complete) ○ Route 1, Asan Sewer Break Repair (10% Complete) • (SSES, Phase II) Executed CM Change Order no. 2 • (D-series) Executed Construction Change Order no. 5 • (Rt.1 Asan Sewer Break) Executed Construction Change Order no. 1 • (Tamuning Hot Spots) Executed Change Order no. 1	capacity; additional pilot holes have been required and additional equipment was required by the drilling company to complete some of the pilot holes • SSES, Phase I, Subcontractor (CIPP) slow to respond to warranty claim • SSES, Phase II, Subcontractor (CIPP) delays due to mobilization from off-island

Table 2-1. Work Authorization Highlights for Active Work This Period				
Work Authorization #	Work Authorization Title	Significant Highlights	Successes	Problems
		• Managed Construction Change Order request no. 5; submitted CO no. 5 for further processing and approval • Led discussions, participated in additional meetings with GHD, GWA, and the CM regarding issues (M-09 shut down, sound tube modifications, electrical modifications and requirements, new M-09 scope of work, isolation of D-17 and D-18 to dry tap, additional requirements for gravel, completion of D-18 and D-22 boreholes, new isolation valves, additional time needed, etc.) A/F-series Deep Well Rehabilitation (Engineering Design) • Reviewed, and submitted Designer invoice no. 6, and 7 to GWA for payment • Managed Design Change Order request no. 1; submitted CO no. 1 to GWA for further processing • Led discussions on drilling for A-02, A-07, A-12 and D-05, status of borehole for F-03, design considerations for drilling deeper, etc. • Received, reviewed, provided comments on Draft DAR, and discussed options and associated costs Tumon Hot Spots Engineering Design • Participated in bi-weekly project progress meetings, and performed various follow-up tasks • Received, reviewed, provided comments, and discussed Draft 30% Design and associated costs • Reviewed, and submitted Design Invoice no. 6, to GWA for payment Tamuning Hot Spots Engineering Design • Participated in meetings to discuss cleaning/CCTV work and manhole inspections of additional lines • Led discussions on field work status updates, property/easement issues, survey work, etc. • Assisted Engineer and GWA with several property issues in the project • Received, reviewed, provided comments, and discussed Draft 30% Design and associated costs • Reviewed, and submitted Design Invoice no. 5 to GWA for payment • Managed Design Change Order request no. 1; submitted CO no. 1 to GWA for further processing	• (Tumon Hot Spots) Report (DAR) to USEPA • (Rt. 2) 100% Design Plans and Specifications submitted to GWA and Advertised for Bid • (Rt. 1) 100% Design Plan and Specifications submitted to GWA and Advertised for Bid • (Rt. 4) 90% Design Plans and Specifications to USEPA • (D-series) Pump tested D-22 borehole successfully	
2014-12	Umatac-Merizo WWTP Water Quality Standards	• No action this period • Slated for close-out	• Project is substantially complete	
2014-13	Baza Gardens Wastewater Cross-Island Design	• No action this period • Slated for close-out	• Project is substantially complete	
2015-01	Program Management Support 2016	• No action this period		
2015-05	2016 Revenue Bond Financing	• No action this period • Slated for close-out	• Project is substantially complete	

Table 2-1. Work Authorization Highlights for Active Work This Period				
Work Authorization #	Work Authorization Title	Significant Highlights	Successes	Problems

2015-06	Facility Plans for the HWWTP and NDWWTP	• Developed, reviewed, and submitted Northern District WWTP Facility Plan Report
		  ○ NDWWTP Liquid Treatment Options
		  ○ NDWWTP Solid Treatment Options
		  ○ NDWWTP Recommendations
		• Developed, and reviewed Request for Proposal (RFP) for the Northern District WWTP
		• Developed, reviewed, and submitted draft Hagåtña WWTP Existing Conditions and Flow Projects Technical Memorandum
		• Developed, and reviewed Hagåtña WWTP Location Alternatives Technical Memorandum
		  ○ Performed site visits for research and to gain information
		  ○ Coordinated internally on cost estimate development efforts; developed cost estimates
		  ○ Developed, and reviewed figures
		• Conducted Internal Workshop in Hagåtña WWTP Treatment Options
		• Performed clarifier/activated sludge calculations for HWWTP report incorporation
			• Project is 69% complete
			• Issued Northern District WWTP Facility Plan
			• Issued draft Hagåtña WWTP Existing Conditions and Flow Projections TM	

2015-07	Water Resources Master Plan Update	• Reviewed CDM's Invoice no. 5, and 6, and coded invoices for further processing and payment • Developed, and executed CDM Subcontractor Amendment No. 3, providing CDM with 159 calendar days from the date of the amendment to complete scope of services • Developed, reviewed, and submitted Preliminary Draft Water Resources Master Plan Update, Volume 3, for GWA review and comment • Prepared for, and conducted Capital Improvement Project (CIP) Workshops for Water and Wastewater Systems for inclusion into the WRMPU • Developed CIP sections of the Volume 2 (Water System) and Volume 3 (Wastewater System) for the GWRMPU; submitted Final Draft Water Resources Master Plan Update, Volume 2	• Issued Preliminary Draft Water Resources Master Plan Update, Volume 3 • Issued Final Draft Water Resources Master Plan Update, Volume 2 • Executed CDM Subcontract, Amendment No. 3 for Time Completion • Project is 70% complete	

2015-08	Source Control Program	• CO 11 Approved Budget of additional $227,368
		• Developed the following:
		  ○ GARR 28 revisions
		  ○ Pretreatment Program Enforcement Response Plan
		  ○ Fees, fines, and Implementation Plan for the Pretreatment Program
		  ○ FOG Control Manual
		  ○ ICID Control Program
			• Project is 31% complete
			• Developed Interagency Memorandum of Understanding with GEPA, DPW and DPHSS on FOG program and ICID program	

2016-01	Agat to Umatac Potable Waterline Analysis	• Performed analysis and modeling of piping		
2016-02	Phase I: Tumon Sewer Basin Study	• CO 11 Approved Budget: $187,990 • Project set-up in anticipation of budget and funding approval • Performed preliminary project set-up and management tasks through approval of budget in CO 11		

Table 2-1. Work Authorization Highlights for Active Work This Period				
Work Authorization #	Work Authorization Title	Significant Highlights	Successes	Problems
2016-03	Mixing Zone Study for Agat-Santa Rita WWTP Discharge to Tipalao Bay	• Reviewed Daily Monitoring Report (DMRs) and NPDES permits for metal limits and readings • Performed modeling update in preparation for final report submittal • Developed, reviewed, and submitted Mixing Zone Dilution Analysis Study – Field and Model Analysis Report	• Issued final Mixing Zone Dilution Analysis Study – Field and Model Analysis Report	
2016-04	Hydraulic Modeling Phase 3	• CO 11 Approved Budget: $148,746 • Project set-up in anticipation of budget and funding approval • Performed preliminary project set-up and management tasks through approval of budget in CO 11 • Performed updates to the hydraulic water model		
2016-05	Engineering for Groundwater Well Production Meters	• CO 11 Approved Budget: $301,539 • Project set-up in anticipation of budget and funding approval • Performed preliminary project set-up and management tasks through approval of budget in CO 11		

2016-07	Project Management for Umatac-Merizo WWTP Upgrade and D/B Preparation	• CO 11 Approved Budget of additional $665,757
		• Participated in Bid Opening meeting; submitted bid submittal packages for bid analysis preparations and recommendations
		  ○ Developed CCU Resolution and Summary
		  ○ Reviewed Bid Disqualification requirements and mobilization payment verbiage
		  ○ Reviewed winning Step 1 Proposal (CoreTech/Hawaiian Dredging)
		• Participated in CM/OSR scoping meeting preparations; reviewed CM fee proposal
		• Performed CM Proposal Evaluation, and provided recommendation
		  ○ Submitted CM RFP proposal submittals for analysis preparation
		  ○ Reviewed CM Proposal submittals, and complete scoresheets
		• Developed, reviewed, prepared, and submitted the addenda, and Step 2 RFI responses
		• Participated in Water Quality Standard Meeting; performed evaluations and report development
		  ○ Reviewed WERI Toguan River flow report
		• Developed wastewater treatment plant effluent discharge model and preliminary Toguan River dilution model
			• Successfully bid the Design/Build Contract
			• The bid amount came in within engineer's estimate and under budget
			• Issued Notice to Proceed (NTP) on June 29, 2017 meeting the Court Order deadline of June 30, 2017
			• Successfully negotiated the CM contract for GWA with a fee which is substantially under budget	

2016-08	Program Management Support 2017	• Change Order No. 11 approved, providing additional WA funding • CO 11 Approved Budget of additional $391,498 • Continued coordination efforts in adopting the Engineers Joint Contract Documents Committee (EJCDC) specifications in GWA's procurement • Continued development, and review efforts for draft GWA Water Standard Details • Provided GWA with guidance and engaged in discussion, as requested, for acquisition of well maintenance rig, as well as coordination efforts • Prepared for, and conducted second session of Scattergraph Analysis Training	• Successfully assist GWA in adopting the EJCDC front end construction contract document	

Table 2-1. Work Authorization Highlights for Active Work This Period				
Work Authorization #	Work Authorization Title	Significant Highlights	Successes	Problems

		• Prepared, and submitted PMO Invoices for January, February, March, and April 2017, for review and payment
		• Prepared documentation of 145437 WA closures, funding de-obligations/re-obligations, and extensions per GWA request
		• Change Order No. 11 approved, providing additional funding for:
		  ○ WA 2016-02, Phase I: Tumon Sewer Basin Study
		  ○ WA 2016-04, Hydraulic Modeling Phase 3
		  ○ WA 2014-11-A2, SRF Program Amendment No. 2
		  ○ WA 2016-05, Engineering for Groundwater Well Production Meters
		  ○ WA 2016-07, Project Management for Umatac-Merizo WWTP Upgrade and D/B Preparation
		  ○ WA 2016-08, Program Management 2016-2017
		  ○ WA 2015-08, Source Control Program
		• Developed, reviewed, and submitted 1st Quarter PUC Report to GWA for PUC consideration
		• Led discussions, both internally and with GWA on future training and personnel development work for GWA staff		

2016-09	Backflow Prevention and Cross-Connection Control Program	• Performed research and gathering on GWA customer service data • Developed a program overview • Reviewed CCC programs, and ID gaps within GWA data ○ Reviewed M14 • Developed policies and procedures for cross connection control and backflow prevention • Developed, and reviewed 1st Draft Program TM; performed data analysis		

Tables 2-2 and 2-3 show the projects that were over budget by more than 10% during this quarter and the projects that are behind schedule, respectively. As shown on Table 2-3, the PUC Stipulation 2013 Rate Study is behind schedule by six months. The draft study report is currently under GWA management's review. All work authorizations that were performed during this period are within budget.

Table 2-2. Projects Over Budget

Work Authorization #	Project Title	% Over Budget	Remarks
N/A	N/A	N/A	N/A

Table 2-3. Projects Behind Schedule

Work Authorization #	Project Title	Time Behind (Mo.)	Corrective Actions
2014-04	PUC Stipulation 2013	6	Draft Report Currently under GWA Management's Review

Table 2-4 summarizes the staff trainings that were conducted during the quarterly period. Staff trainings include operational instruction and guidance not formally documented as a training session or module.

Table 2-4. Summary of Staff Training

Date	Course Description	Instructor(s)	# of Attendees	Duration (Hrs.)
5/5/2017	EJCDC Front End Documentation	Bill Chang/Bill Gilman Brown and Caldwell	2	8
6/30/2017	Supplemental Flow Meter Calibration, Reliability, and Field Validation Training (In-class)	Mark Poppe Brown and Caldwell	4	1.0
6/30/2017	Manhole Hydraulic Analysis to Determine Flow Meter Installation Suitability (Field Exercise)	Mark Poppe Brown and Caldwell	2	1.5

In addition, GWA's in-house training efforts for the past quarter have included the following:

- In an effort to measure GWA's Human Resource needs, a Training Needs Assessment (TNA) was conducted on March 23, 2017. The focus group for the TNA included Managers, Supervisors, and Leaders. Participants were given time to complete the TNA up to April 7, 2017. The results of the TNA are currently being analyzed to develop specific courses/workshops for implementation in the near future.
- As GWA continues to improve its Network Systems, GWA participated in the Certified Information Systems Security Professional (CISSP) Training Camp. The Training Camp is one of the leading, most informative, and most comprehensive Information Systems training. With threats to our network systems on the rise, GWA took measures to mitigate threats to our network and provided CISSP Certification to 2 employees in the Information Technology Division, the Network Systems Administrator and the Systems Programmer Administrator.
- GWA is actively training on Cyber Security Awareness – provided to 217 employees.

- Operations staff were trained on the following CBT Materials:
    - Water Supply Operations: Filtration – provided to 4 employees
    - Water Distribution Operator's Training: Valves - provided to 5 employees
    - Water Distribution Operator's Training: Service and Meters – provided to 5 employees
    - Water Distribution Operator's Training: Pumps and Motors – provided to 5 employees
    - Water Supply Operations: Pumps – provided to 6 employees
    - Water Distribution Operator Training: Hydrants – provided to 5 employees
    - Turbidity Measurement and Particle Counting – provided to 6 employees
    - Water Distribution Operator Training: Water Mains – provided to 6 employees
    - Membrane Technology: provided to 3 employees
- Chlorination Leak Response Training – provided to 5 employees; This 4-hr training was facilitated by Island Equipment.
- Sulzer Pump & Motor Training – provided to 48 employees; The Pump and Motor training was a 2-day training consisting of both Classroom and Hands-on Training. Course overview:
    a. Submersible Pump/Motor Overview
    b. General Pump Theory
    c. Submersible Pump and Motor Application, Installation, and Maintenance
    d. VFD Theory
    e. MCU 33, DI Sensors & Thermal Sensors
    f. Pump Maintenance & Troubleshooting
- AWWA-HIWPS Training Workshop "Complying with Regulations" – provided to 32 employees
- NASSCO Pipeline Assessment Certification Program (PACP)/Manhole & Lateral Assessment Certification Program (MACP/LACP) – provided to 9 employees; This certification program was necessary to comply with the standardized reporting requirements used by USEPA and GWA Consultants.
- 2017 Safety Conference – provided to 18 employees
- SHRM Guam Chapter "Labor Relations Training" – provided to 2 employees
- SHRM Guam Chapter "Employment Law Update" – provided to 2 employees
- Customer Service Training (Job-site specific duties) – provided to 10 employees
- 8HR HazWOPER Refresher – provided to 2 employees
- 8HR DOT HazMat Safe Transportation – provided to 5 employees
- First Aid/CPR AED Certification is on-going and has provided training thus far to 23 employees, to date.
- Government Procurement Training: - provided to 3 employees

Section 3.0: Summary of Hours and Fees Received by Local Contractors and PMO

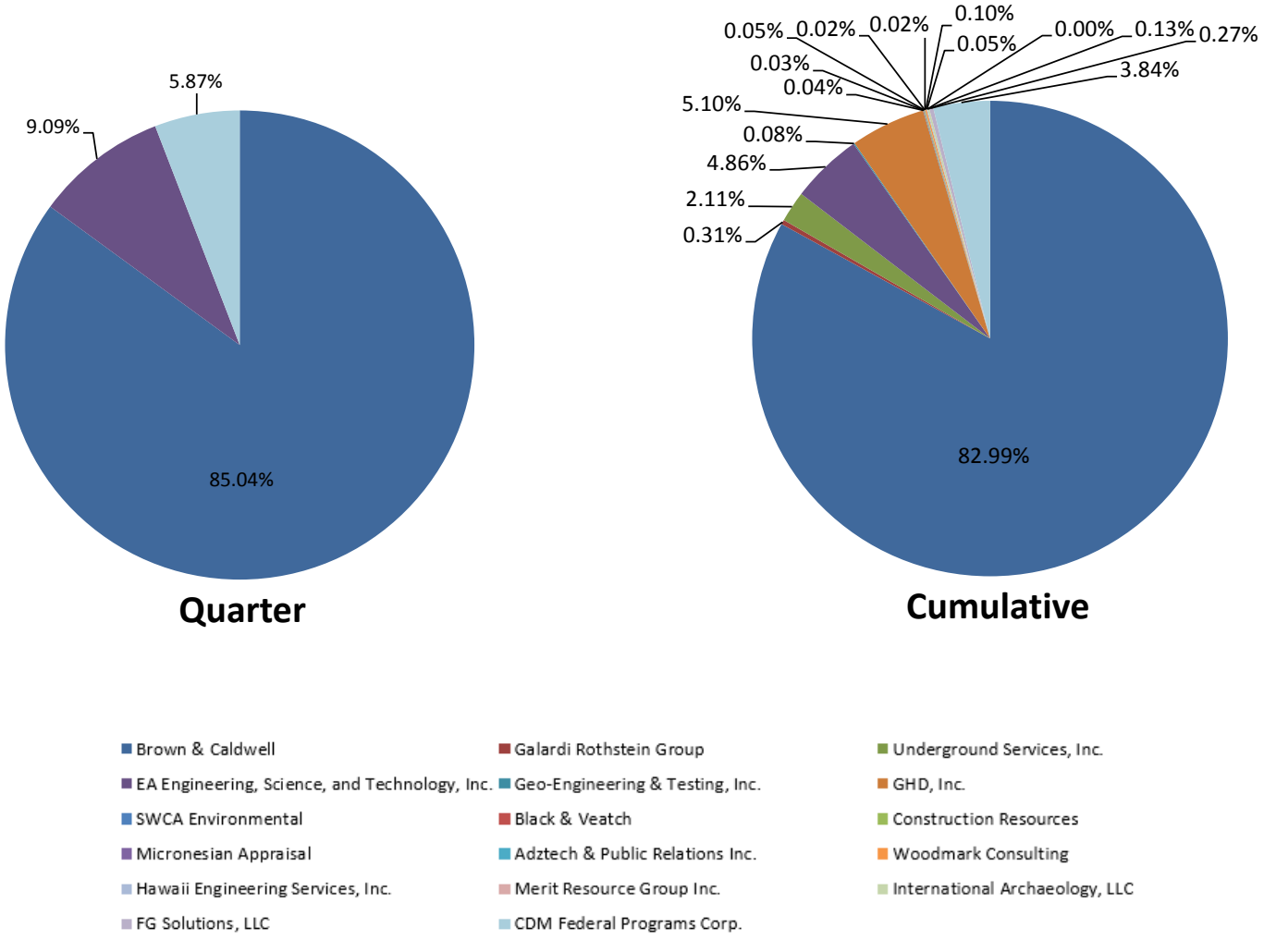
This section provides a summary of the fees invoiced by the PMO, local contractors, and subconsultants during the quarter. Table 3-1, Summary of Hours and Fees, and Figure 3-1, Percentage of Work by Firm, provides a summary of the total invoiced amount for work performed during the quarter compared to the cumulative invoiced amounts over the duration of the Program. Percentages of work performed by each subconsultant during the quarter and cumulative over program duration are also shown. GRT taxes are also depicted and represent a significant cost. Significant activities by subconsultants are anticipated in the upcoming work authorizations later in 2016.

Table 3-1. Summary of Hours and Fees

Company	Total Billed in Quarter	Hours Worked	% of Total Billed for Quarter (Less Taxes)	Cumulative Billed	Cumulative %
Brown and Caldwell (PMO)*	$1,316,618.72	5991.25	85.04%	$13,605,624.90	82.99%
Galardi Rothstein Group	$ 0.00	N/a	0.00%	$50,579.83	0.31%
Underground Services, Inc.	$ 0.00	N/a	0.00%	$345,331.25	2.11%
EA Engineering, Science, and Technology, Inc., PBC*	$140,733.00	785.50	9.09%	$797,290.17	4.86%
Geo-Engineering & Testing, Inc.*	$ 0.00	N/a	0.00%	$12,917.08	0.08%
GHD, Inc. *	$ 0.00	N/a	0.00%	$836,356.37	5.10%
SWCA Environmental*	$ 0.00	N/a	0.00%	$6,062.28	0.04%
Black & Veatch	$ 0.00	N/a	0.00%	$4,598.00	0.03%
Construction Resources*	$ 0.00	N/a	0.00%	$8,107.50	0.05%
Micronesian Appraisal*	$ 0.00	N/a	0.00%	$2,800.00	0.02%
Adztech & Public Relations, Inc.*	$ 0.00	N/a	0.00%	$2,625.00	0.02%
Woodmark Consulting	$ 0.00	N/a	0.00%	$17,002.43	0.10%
Hawaii Engineering Services, Inc.	$ 0.00	N/a	0.00%	$9,000.00	0.05%
Merit Resource Group, Inc.	$ 0.00	N/a	0.00%	$ 743.60	0.00%
International Archaeology, LLC	$ 0.00	N/a	0.00%	$20,642.75	0.13%
FG Solutions, LLC	$ 0.00	N/a	0.00%	$44,237.13	0.27%
CDM Federal Programs Corporation	$90,824.10	693.20	5.87%	$629,808.43	3.84%
Taxes (GRT)	$64,512.49			$683,126.59	
Total	$1,612,688.31	7469.95	100%	$17,076,853.31	100%
Cumulative Paid to Date**				$16,045,461.11	94%

** Local Guam Firm*
*** Cumulative Paid to Date only reflects the periods on the invoices submitted within the quarter (i.e. only reflects payments received until June 30, 2017).*

Figure 3-1. Percentage of Work by Firm



Section 4.0: Summary of Progress of Major Project Categories and Status

This section provides a summary of the progress of the major project categories and the progress status of the projects.

Figure 4-1, PMO Progress by Major Project Categories describes the major project categories – General Program & Small Project Support, Water System Support, Wastewater System Support, Planning Support, and Other Support for each quarter through the 1st Quarter of Year 6.

Figure 4-2, PMO Progress Status illustrates the PUC approved budgets to date, the actual spending to date along with an assessment of the Program percentage completed to date, and the PMO approved budget by year.

Figure 4-1. PMO Progress by Major Project Categories

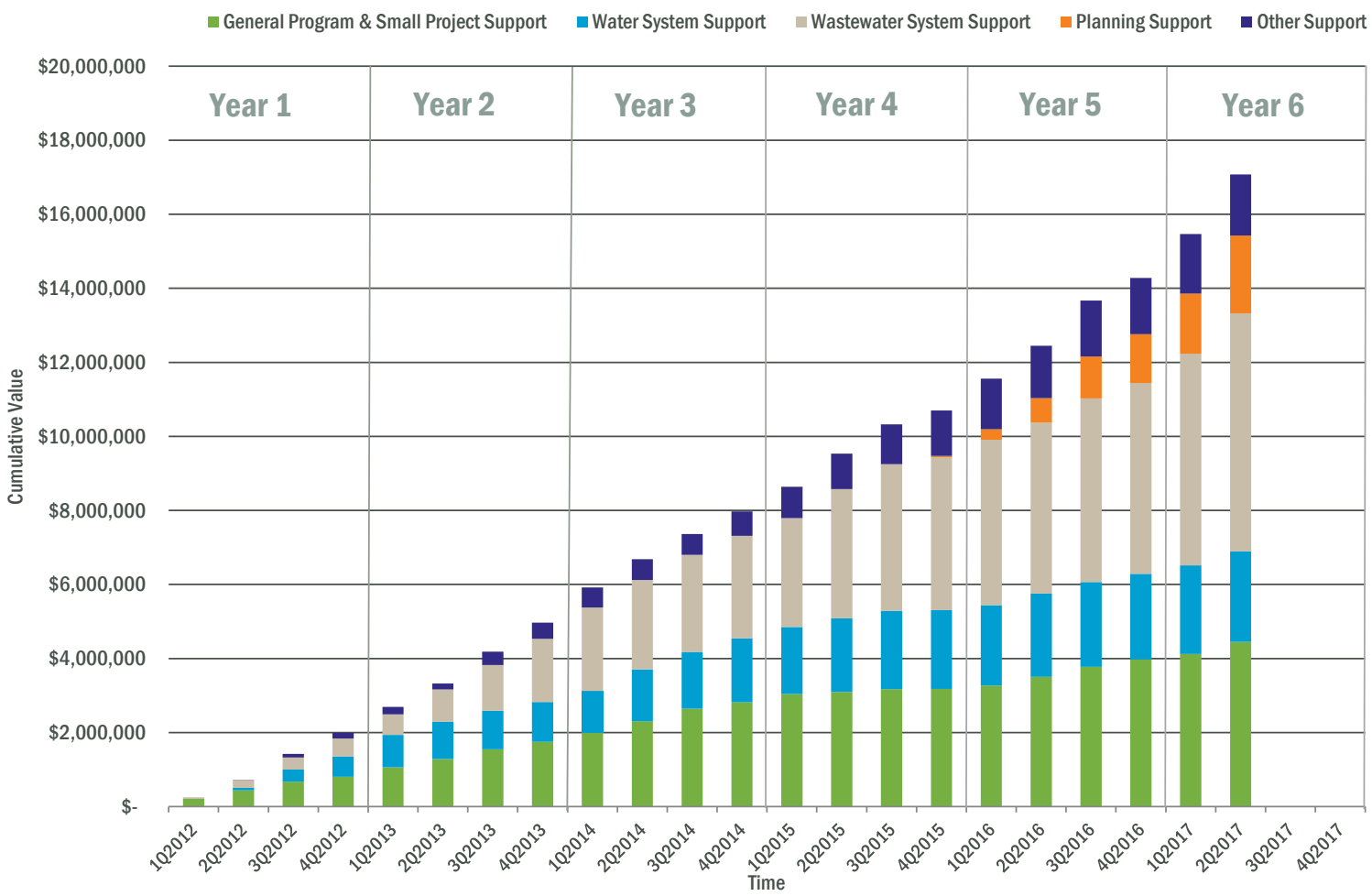
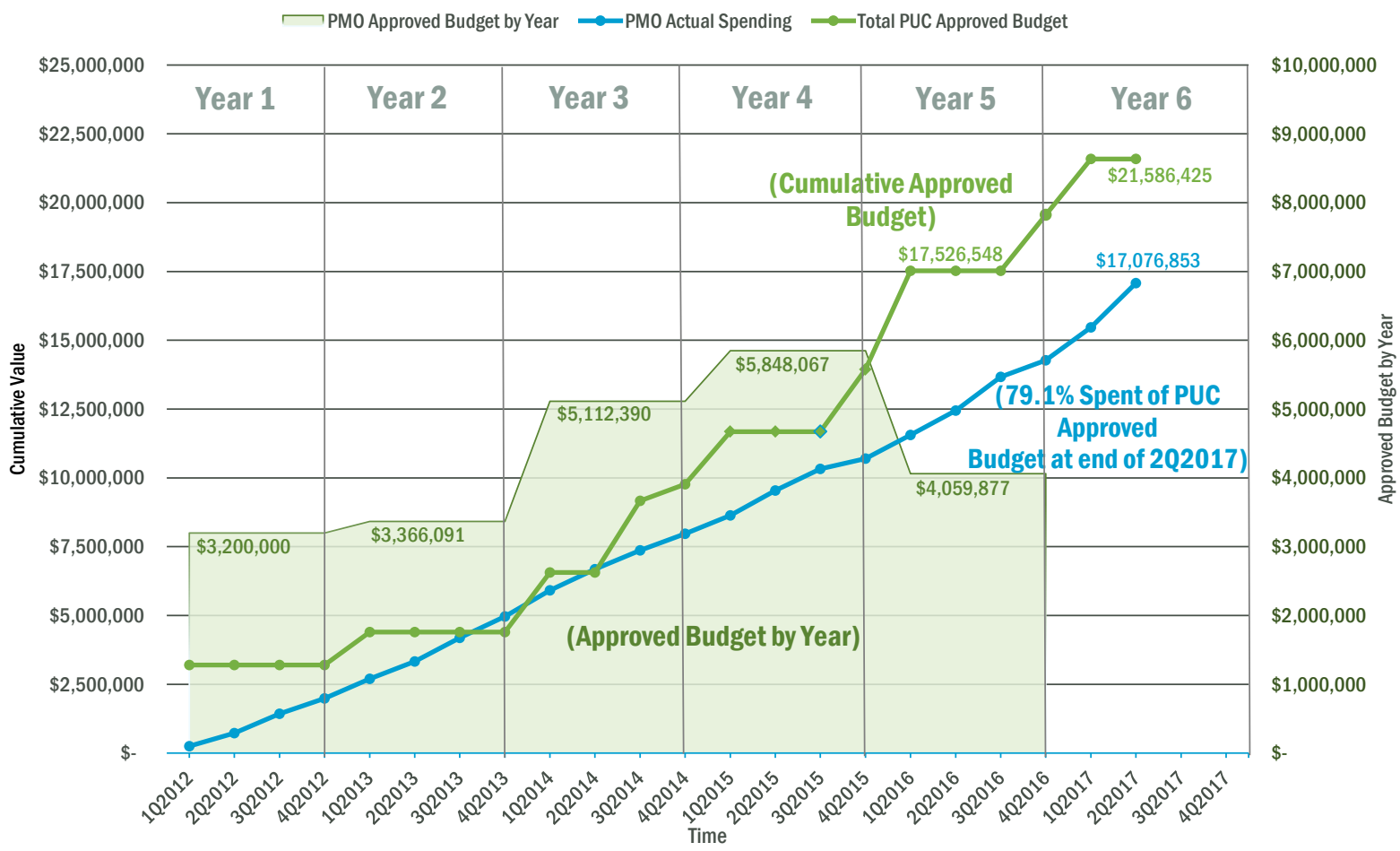


Figure 4-2. PMO Progress Status



Section 5.0: GWA Project Bidding Process Utilizing the PMO

Based on PUC Docket 13-01, dated July 31, 2014, Ordering Provision Number 7, an indication is required of whether certain projects managed by the PMO could be separately pursued under the competitive bidding process for all projects that are not typical management and supervisory assistance. The PMO is used primarily for technical review and subject matter knowledge, training support, and design/project/construction management support. The PMO continues to reinforce GWA's capabilities and limited manpower by identifying project needs and establishing clear scopes of work so that the design work can be openly procured from the consulting engineering community. The PMO encourages the local engineering community to participate in solving GWA's needs by acting in a supervisory project management and technical resource capacity, allowing the engineering community to do detailed design and construction management.

Projects initiated by the PMO and currently being performed by the Guam consulting engineering community as a result of open procurement are shown in Table 5-1 below.

Table 5-1. Work Distributed to the Consulting Engineering Community

Project	Consulting Engineer
Agat-Santa Rita WWTP	GHD, Inc.
Umatac-Merizo WWTP – Toguan River Monitoring	Water and Environmental Research Institute of the Western Pacific EA Engineering, Science, and Technology, Inc.
Baza Cross-Island Wastewater Conveyance	Dueñas, Camacho & Associates, Inc.
Route 1 Sewer Line Rehabilitation	HDR, Inc.
Route 1 Asan Sewer Break Repair	HDR, Inc.
Route 2 Sewer Line Rehabilitation	SSFM, Inc.
Route 4 Sewer Line Rehabilitation	AECOM
Tumon Hot Spots Sewer Line Rehabilitation	TG Engineers, Inc.
Tamuning Hot Spots Sewer Line Rehabilitation	TG Engineers, Inc.
Agat-Santa Rita Sewer Line Rehabilitation	TG Engineers, Inc.
Baza Gardens-Talafofo Sewer Line Rehabilitation	EMPSCO Engineering Consultants
Umatac-Merizo Sewer Line Rehabilitation	TG Engineers, Inc.
D-Series Wells	EA Engineering, Science, and Technology, Inc., PBC
A-Series Wells	AECOM
Water Resources Master Plan Update	CDM Smith
Mixing Zone Study for Agat-Santa Rita WWTP	EA Engineering, Science, and Technology, Inc., PBC
Source Control Program	EA Engineering, Science, and Technology, Inc., PBC

Table 5-2 provides a summary of PMO involvement with GWA's Capital Improvement Program (CIP) projects. While GWA has many active projects in the CIP, only 38% of the projects in the CIP have any participation by the PMO. The PMO provides technical review (TR), design management (DM), construction management (CM), and project management (PM) for 38%, 6%, 4.5%, and 3% of the total CIP projects, respectively, and several PMO services are offered on the same CIP project. The PMO's involvement on a CIP project is primarily to prepare the project for open procurement for the Engineering community on Guam.

Table 5-2. Plan Summary of PMO Involvement with GWA CIP

CIP #	Project Description	PMO Involvement		Remarks*
		No	Yes	
PW 05-01	Ground Water Disinfection	●		
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	●		
PW 05-05	"A" Series Well Transmission Line	●		
PW 05-06	Water Booster Pump Station	●		
PW 05-07	Meter Replacement Program	●		
PW 05-08	Barrigada Tank Repair/Replacement	●		
PW 05-09	Leak Detection	●		
PW 05-10	Potable Water System Planning		●	TR, TRNG
PW 05-11	Implement Ground Water Rule	●		
PW 05-12	Brigade II (Ugum List) BPS Upgrade	●		
PW 05-13	Deep Well Rehabilitation		●	TR
PW 05-14	New Deep Wells at Down Hard	●		
PW 05-15	Rehablitation of Asan Springs		●	TR
PW 05-16	Master Meters		●	TR
PW 09-01	Ugum Water Treatment Plant Intake		●	TR, TRNG, CM
PW 09-02	Water Wells		●	TR, TRNG
PW 09-03	Water Distribution System Pipe Replacement and Upgrades		●	TR
PW 09-04	Pressure Zone Realignment/Development 2005 Improvements		●	TR
PW 09-06	Central Water Distribution System 2005 Improvements	●		
PW 09-08	Mechanical/Electrical Equipment	●		
PW 09-09	Water Reservoir Internal/External	●		
PW 09-10	Water Reservoir Internal/External	●		
PW 09-11	Water System Reservoirs 2005 Improvements		●	TR
PW 11-01	Distribution System Upgrade	●		
PW 11-02	Ugum Water Treatment Plant Reservoir		●	TR
PW 12-01	Water Audit Program & Water Loss Control Plan	●		
PW 12-02	Production Plan/Reduce Navy Purchases	●		
PW 12-03	Hydraulic Assessment of Tanks	●		
PW 12-04	Agana Heights & Chaot Tanks		●	TR, DM
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1	●		
PW 12-06	Tank Replacement Piti & Hyundai	●		

Table 5-2. Plan Summary of PMO Involvement with GWA CIP				
CIP #	Project Description	PMO Involvement		Remarks*
		No	Yes	
PW 12-07	Assessment/Replacement of Malojloj Elevated & Yigo Elevated	●		
PW 12-08	Public Water System Asset Inventory/Condition Assessment	●		
PW 12-09	Public Water System GIS & Mapping	●		
PW 14-01	Fire Hydrant Replacement Program	●		
WW 05-04	Wastewater System Planning		●	TR, DM
WW 09-01	Lift Station Upgrades	●		
WW 09-02	Moratorium		●	TR
WW 09-06	Wastewater Collection System Repl/ Rehabilitation		●	TR
WW 09-08	Facilities Plan/Design/Interim for Baza Gardens STP Impr.		●	TR
WW 09-10	Facilities Plan/Design/Interim for Agat-Santa Rita STP Impr.		●	TR
WW 09-11	WTP Priority 1 Upgrades	●		
WW 11-03	Baza Gardens STP Replacement		●	TR
WW 11-04	Facilities Plan/Design/Interim for Umatac-Merizo STP Impr.		●	TR
WW 11-08	Agat/Santa Rita STP Replacement		●	TR, DM
WW 12-01	Northern District WWTP Primary Treatment Upgrades		●	TR, CM
WW 12-02	Bio Solids Management Plan	●		
WW 12-03	Agana WWTP Interim Measures		●	TR, DM, PM, CM
WW 12-04	I&I SSES Southern		●	TR, TRNG, PM
WW 12-05	I&I SSES Central	●		
WW 12-06	I&I SSES Northern	●		
WW 12-07	Umatac Merizo STP Replacement		●	TR
WW 12-09	Wastewater Facility Back Up Power	●		
EE 05-02	SCADA Pilot Project	●		
EE 09-01	Wastewater Pumping Station Electrical Upgrade	●		
EE 09-02	Electrical Upgrade - Water Wells	●		
EE 09-03	Electrical Upgrade - Water Booster	●		
EE 09-04	Electrical Upgrade - Water Booster	●		
EE 09-05	Electrical Upgrade - Other Water	●		
EE 09-07	SCADA Improvements - Phase 2	●		
EE 09-08	SCADA Improvements - Phase 3	●		
EE 09-09	SCADA Improvements - Phase 4		●	TR
MC 05-01	Laboratory Modernization		●	TR
MC 05-02	Land Survey	●		
MC 09-01	General Plant Improvements/Water	●		
MC 15-01	Information Technology Integration Improvements	●		

**Remarks:* *TR – Technical Review*
TRNG – Training
DM – Design Management
PM – Project Management
CM – Construction Management

Section 6.0: Training Anticipated for Next Quarter

The PMO will continue to provide training to GWA staff through organized classroom training and facilitate knowledge transfer through collaboration with GWA staff on Work Authorization assignments.

For the next quarter, the PMO plans to conduct the following training for GWA:

1. Backflow Prevention and Cross Connection Control. The program will assist GWA in providing reasonable protection for its potable public water supply and system. Such protection will help prevent contamination resulting from backflow through uncontrolled plumbing connections and cross connections. GWA is increasing the staff assigned to compliance duties for these programs, and intends to provide training to the staff in the coming months.
2. Groundwater Operation, including:
    a. Groundwater Disinfection, Principle, Regulations and Calculation.
    b. Disinfection Monitoring.
    c. Chlorination/Chlorine Cylinders Management.
    d. Chlorination Equipment Operation and Maintenance.
    e. Water Well Production Rates/Monitoring.
    f. Well and Well Pump Service.
    g. Water Well Site Management.
    h. Water Well Rehabilitation.

In addition, GWA plans to implement the following training activities in-house through its Personnel Services Division:

- Employee Safety Orientation
- Cross Connection/Back Flow Prevention Awareness Training
- Computer Training
- Supervisory Training (i.e. Effective Communications, Adverse Action Procedures, etc.)
- Crane Operator Certification
- Well-Driller's Licensure
- Physical Security Training
- Customer Service Training
- Hazardous Communication
- Confined Space 8hr refresher
- Excavation
- Slips trips and falls CBT
- Safety Awareness OSHA 10hr.
- Forklift Safety
- MUTCD Temporary Traffic Control
- Office Safety
- Lockout/Tagout

Section 7.0: Make-up of the PMO Team

The Program Management Team consists of Brown and Caldwell (BC) as the prime engineer supported by seventeen (17) consultants as shown in Table 3-1. The number of local residents hired by BC since 2011 –

- 3 Engineering Interns, part-time
- 4 Full-time Engineers
- 1 Part-time Administrative Coordinator
- 1 Full-time Administrative Coordinator

The number of BC Employees who reside locally and worked on Guam projects during the quarter -

- 4 Full-time Engineers
- 1 Full-time Administrative Coordinator

Section 8.0: Use of Local Firms

The Ordering Provisions of the PUC, GWA Docket 13-01, dated 12/24/2014, OP #8, requires the PMO to indicate its use of local firms. Per Guam Procurement Law, 5 GCA Chapter 5, Section 5008(d), Policy in Favor of Local Procurement,

> *"All procurement of supplies and services shall be made from among businesses licensed to do business on Guam and that maintain an office or other facility on Guam, whenever a business that is willing to be a contractor is:*
>
> *(d) A service business actually in business, doing a substantial portion of its business on Guam, and hiring at least 95% U. S. Citizens, lawfully admitted permanent residents or nationals of the United States, or persons who are lawfully admitted to the United States to work, based on their citizenship in any of the nations previously comprising the Trust Territory of the Pacific Islands."*

The Brown and Caldwell Guam office is a service business, actually in business, doing business on Guam, and hiring 100% U.S. Citizens. In addition, Brown and Caldwell has maintained a Certificate of Authority (File# F-1236) to do business on Guam since January 25, 1990. Brown and Caldwell is considered a local business.

EXHIBIT "B" (1 of 1)

	Work Authorizations for Amendment No. 7	Fees	Recommended Reduction	Amount reduced	Adjusted Amounts	Comments
WA 2017-01	PMO Support 2017-18	$862,012	15%	$131,457	$730,555	Covers until Oct 1, 2017 to September 2018. I am ok with this.
WA 2014-11-A3	SRF Grant Funded Project Support Amendment No. 3	$914,571	10%	$94,201	$820,370	Covers until December 2018. I am ok with this because some of the SRF projects may be competed prior to the PMO ending so if there are anything movinig past engineeirng can take up.
WA 2017-03	Consulting Engineer's Report for 2018 Revenue Bond Financing	$243,387	14%	$33,344	$210,043	Needed for 2018 Bond
WA 2017-04	Project Management for New Wells AG10, AG12 and Y8	$221,131	50%	$111,118	$110,013	I was the one who asked for this but I think we can limit their involvemet to only provide technical input when necessary. GWA CIP Water would take the lead and the PMO support.
WA 2017-05	Hydraulic Modeling and Training forWastewater Collection System	$333,714	33%	$108,791	$224,923	We have started using the wasetwater hydraulic modeling but not to the level as water. The training is necessary but I think we can reduce the effort.
WA 2017-06	Southern Guam Water Supply Study	$468,251	100%	$468,251	$0	I don't think this is necessary at this time.
	Total	3,043,066			$2,095,904	

Guam Waterworks Authority
Program Management Support 2017-2018

TO: Brown and Caldwell
414 W. Soledad Ave.
Suite 602
Hagatna, Guam 96910

WORK AUTHORIZATION NO.: 2017-01

SUBMITTAL DATE: August 21, 2017

FROM: Miguel C. Bordallo, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

You are hereby authorized to perform the services described below in accordance with the Contract for Technical and Professional Services executed February 6, 2012 between Brown and Caldwell (BC) and Guam Waterworks Authority (GWA) for Program Management Services, GPA-RFP-11-005.

DESCRIPTION OF WORK AND FEE ESTIMATES

DESCRIPTION: Program Management Support 2017-2018

Defined cost, scope, and schedule on a time and materials basis are provided below and consist of providing general program management support for GWA from Oct 1, 2017 to September 30, 2018. General program management support consists of managing and consulting oversight of GWA's capital improvements program and engineering advice on projects and programs that have critical and urgent deadlines, a brief scope and limited budget. Additionally, updates to the Program Strategy, Master Program Schedule, and Program Benefits Delivery are included.

NOT TO EXCEED amount: **$ 862,012**

Signed: _____ Date August 31, 2017
RAYMOND N. MATASCI
SR. VICE PRESIDENT/PROGRAM MANAGER
BROWN AND CALDWELL

GWA Reviewer: _____ Date_____
THOMAS F. CRUZ, P.E.
CHIEF ENGINEER

Signed: _____ Date_____
MIGUEL C. BORDALLO, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority
Program Management Support 2017-2018

WORK AUTHORIZATION NO: 2017-01
DESCRIPTION: Program Management Support
GWA PROJECT MANAGER: Thomas F. Cruz, P.E.

PROJECT BACKGROUND AND OBJECTIVE

The purpose of this task order is to provide general program management support as part of GWA's Program Management Office (PMO) for GWA's Capital Improvements Program and engineering advice on critical issues facing GWA.

SCOPE OF WORK

Task 1: Program Planning, Implementation, and Management

Approach: The Program has completed its fifth year and many accomplishments and objectives have been achieved. A review of the program with respect to strategy, benefits realization, and execution will be performed to assure alignment with GWA's goals and objectives. Working together with GWA, program needs and direction will be developed with GWA staff and validated by the PMO. Improvements and changes will be documented in the updated program management plan. The following proposed subtasks will assist GWA in improving efficiency and internal capabilities.

The PMO will assist GWA with identifying component-project needs, planning the work, and coordinating with other Government of Guam agencies as required. The PMO will assist GWA in developing scopes of work and work plans for CIP projects, PUC Stipulated Order projects, and Court Order projects as required including preparation of work authorizations. PMO staff will collect information via document review and GWA staff interviews to develop work authorizations including scopes, schedules, budgets, and staffing plans for tasks that GWA delegates to the PMO. The PMO will effectively manage the project team members and perform administrative tasks for the projects to produce a quality product within budget and schedule.

The PMO will:

- be responsible for updating and implementing the program management plan;
- use a progress monitoring system to track team expenditures and product completion, providing the basis for PMO actions;
- use a monthly review process that estimates level of effort to complete and determines value earned, providing the basis for work plan modifications to meet budget and schedule;
- manage staff resources and sub-consultants to assure timely product generation and response; and
- conduct periodic quality control review of the work before final submittal to GWA.

The program will provide for housing subsistence, utilities, and leased cars for two full-time employees dedicated to the contract. In addition, airfare and per diem to bring subject knowledge technical experts as needed to Guam is limited to a total of seven (7) personnel, each for one week duration.

Guam Waterworks Authority
Program Management Support 2017-2018

PMO Team Responsibilities: PMO staff will provide updates to the program management plan and implement the plans and protocols listed in the program management plan. The PMO will develop work authorizations, scopes, schedules, budgets, and staffing plans.

GWA Responsibilities: GWA staff will review and provide comments on the plans, schedules, recommendations, and deliverables. GWA staff will participate in reviews and analyses, and abide by the protocols set forth in the plans. GWA staff will participate in subject matter technical discussions.

Products: Program management plan updates, scopes of work, meetings.

Task 2: Meeting and Reporting

Approach: PMO staff will be working closely with GWA staff to successfully deliver the program and will meet with GWA's Chief Engineer and Asst. General Manager of Compliance and Safety regularly. It is expected that PMO staff will meet with GWA staff weekly and provide weekly action items' reports along with monthly progress reports. Monthly reports will address project highlights and percent resources (man-hours and expenses) expended to date, decision tracking reports (issues and their resolutions), schedule for design and construction activities, and program changes (initiated by GWA, design-related, and/or other forces).

The PMO will prepare quarterly reports to the PUC on the status and performance of the PMO team. Reports will be comprised of a narrative, numerical, and graphical formats that track project performance and progress. The PMO will prepare periodic reports on training provided to GWA. The PMO will attend PUC and CCU meetings and work sessions, as necessary.

PMO Team Responsibilities: BC staff will coordinate and attend weekly status meetings, develop weekly and monthly progress reports and invoices, and develop quarterly and periodic reports.

GWA Responsibilities: GWA staff will be required to attend meetings and review progress reports.

Products: Weekly, monthly, and quarterly progress reports, monthly invoices, and training reports.

Task 3: Program and Technical Support

Approach: On an as-needed basis, the PMO will provide a highly qualified, specialized technical support team that covers engineering, management, business, and organizational processes, technical and analytical presentations, inspection, claims management, and scientific disciplines necessary to respond to issues that may require specialized support during the contract period. This team shall be available for resolution of critical issues, claims, special design reviews and reports, inspections, and other specialized technical assistance during planning, design, construction and close-out phases of the component-projects and the program.

Guam Waterworks Authority
Program Management Support 2017-2018

During the course of the program it is expected that GWA will require the PMO to conduct short-duration and immediate tasks such as independent research, document review, technical opinions and evaluations. These tasks will often have critical and urgent deadlines, a brief scope, and limited budget. It may be inefficient for such tasks to require the development of a stand-alone work authorization. Program support will be used for the PMO to respond to GWA's immediate needs required to support the overall program and GWA's operations. Tasks will be assigned to the PMO on an as-needed basis. Examples of such tasks as directed by GWA are, but not limited to:

- Support for ONE-GUAM water initiative requiring hydraulic analysis, mapping, studies and technical memoranda.
- Provide technical support for construction-related and startup issues on water and wastewater treatment plant and pumping station facilities.
- Review and edit specifications for GWA's specific equipment purchase.
- Identify appropriate curriculum for GWA to conduct internal training for "Utility Performance" improvement.
- Work with GWA in promoting knowledge transfer between members of the PMO and GWA staff through mentoring and training.
- Assist GWA in staff training programs for Engineering and Operations staff which include but are not limited to project management, risk management, and design-build project delivery.
- Provide on-call consultation services to GWA on its organizational rules and policies.
- Assist GWA in addressing emergency operational problems and regulatory compliance issues such as problems associated with the Ugum Surface Water Treatment Plant and the PFOS issues.
- Continue to support GWA in improving its construction contract front-end documents using the Engineers Joint Contract Documents Committee (EJCDC) format for design, technical, and construction contracts.
- Continue to support GWA in establishing Guam Water Standards and Water Standard Details.
- Strategic/CIP planning and scheduling.
- Review/evaluate/support current GWA contractor and consultant contracts, procurement, change orders, project close-out, invoice processing and other administrative practices to support GWA's on-going efforts to become more efficient and cost effective in the management of resources.
- Provide engineering services to report on and support environmental compliance with US EPA and Guam EPA. This includes supporting GWA on current court-order requirements as well as potential new enforcement actions.
- Provide technical support for Environmental Attorney in regards to USEPA actions.

Guam Waterworks Authority
Program Management Support 2017-2018

- Conduct business case evaluations on technical proposals presented to GWA including present worth analyses, cost-benefit ratios, economic and non-economic analyses and preparation of technical memoranda.
- Participate in and provide technical support during project meetings.
- Provide peer review, comments, and recommendations on engineering studies, reports, and designs conducted by others.
- Provide support for procurement of GWA projects and evaluate bids, technical engineering capabilities, contractor qualifications and review of contract bidding documents.
- Work with GWA to develop a basic information system to support Project Management by providing project information on budget, cost, schedule, scope, status, and location.

PMO Team Responsibilities: The PMO will provide the technical support team as needed. The PMO will conduct short-duration and immediate tasks as directed by GWA.

GWA Responsibilities: GWA staff will be required to attend meetings and provide available information to the PMO on upcoming tasks. GWA staff will be required to document the effort needed via e-mail or letter to the PMO.

Products: General services such as research and document review, reports, opinions, white papers, studies, meeting minutes, and memoranda.

Task 4: Program Contract Assistance

Approach: At GWA's discretion, the PMO team will prepare and review requests for proposals and scopes of work to procure engineering and construction contracting services from the local community. The program manager will also be available to participate in the negotiation of contracts with selected consultants and contractors for individual projects. Services are intended to include planning, design, design/build, construction, plant information and asset management systems, instrumentation contracts, and other tasks as may be requested by GWA.

PMO Team Responsibilities: The PMO will provide contract assistance, as needed.

GWA Responsibilities: GWA staff will review contract documentation and provide guidance to the PMO on services requested for individual projects.

Products: Contract documents.

SCHEDULE

The effort described in this work authorization will be conducted from October 1, 2017 through September 30, 2018.

Guam Waterworks Authority
Program Management Support 2017-2018

BUDGET SUMMARY

Labor (Labor Hours – 3,221)	$712,334
ODC	$115,195
GRT	$34,483
Total	$862,012

Guam Waterworks Authority
Program Management Support 2017-2018

BUDGET DETAILS

This work order will be performed on a time and materials basis, and will not exceed $862,012 without written consent from GWA.

Labor				
Name	**Labor Code**	**Labor Rate**	**Hours**	**Amount**
Chang	L	$270	639	$172,530
Bilz	K	$260	501	$130,260
Riegel	K	$260	251	$65,260
Matasci	N	$270	341	$92,070
Watson	G	$160	181	$30,046
Marble	G	$160	88	$14,608
Honda	I	$210	120	$26,160
Tamai	G	$166	344	$57,104
Sr. Advisor	M	$260	324	$87,480
Bourke	E	$130	60	$7,800
Admin	B	$78	372	$29,016
		Labor Subtotal	3,221	$712,334

Other Direct Costs	
Description	**Amount**
Airfare $2000 (x4) from HNL	$8,000
Airfare $3000 (x3) from Mainland	$9,000
Rental Car $75/day (35 days)	$2,625
Per Diem $250/day (35 days)	$8,750
Mileage	$420
Overseas Housing Allowance $2250/month (x2)	$54,000
Utility/Recurring Maintenance $600/month (x2)	$14,400
Lease Car $750/month (x2)	$18,000
ODC Subtotal	$115,195

Total Work Authorization Estimate	
Labor Subtotal	$712,334
ODC Subtotal	$115,195
GRT (4.167%)	$34,483
Total	$862,012

Guam Waterworks Authority
State Revolving Fund (SRF) Grant Project Support Amendment No. 3

TO: Brown and Caldwell
414 W. Soledad Ave.
Suite 602
Hagatna, Guam 96910

WORK AUTHORIZATION NO.: 2014-11-A3

SUBMITTAL DATE: August 21, 2017

FROM: Miguel C. Bordallo, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

You are hereby authorized to perform the services described below in accordance with the Contract for Technical and Professional Services executed February 6, 2012 between Brown and Caldwell (BC) and Guam Waterworks Authority (GWA) for Program Management Services, GPA-RFP-11-005.

DESCRIPTION OF WORK AND FEE ESTIMATES

DESCRIPTION: State Revolving Fund (SRF) Grant Program Support Amendment No. 3

Defined cost, scope, and schedule on a time and materials basis are provided below and consist of providing project management, scheduling, reporting and tracking of SRF Grant and other related GWA projects for implementation in accordance with GWA's Programmatic Project Management Plan (PPMP).

NOT TO EXCEED amount: **$ 914,571**

Signed _____ Date August 31, 2017
RAYMOND N. MATASCI
SR. VICE PRESIDENT/PROGRAM MANAGER
BROWN AND CALDWELL

GWA Reviewer: _____ Date_____
THOMAS F. CRUZ, P.E.
CHIEF ENGINEER

Signed _____ Date_____
MIGUEL C. BORDALLO, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority
State Revolving Fund (SRF) Grant Project Support Amendment No. 3

WORK AUTHORIZATION NO: 2014-11-A3
DESCRIPTION: State Revolving Fund (SRF) Grant Project Support Amendment No. 3
GWA PROJECT MANAGER: Thomas F. Cruz, P.E.

PROJECT BACKGROUND AND OBJECTIVE

In February, 2015, Brown and Caldwell (PMO) was authorized by GWA under Work Authorization No. 2014-11 to support GWA in the planning, development, review, prioritization, project management, scheduling, and tracking of State Revolving Fund (SRF) Grant projects for implementation in accordance with GWA's Programmatic Project Management Plan (PPMP). Over the past two and a half years, the PMO has managed ten (10) sewer rehabilitation and groundwater well reconstruction projects with total estimated construction costs over $30 million. The table below summarizes the status of each of the ten (10) projects.

Project Description		Estimated Completion Dates		
		Design	Bidding	Construction
1	Southern SSES Rehabilitation (Agat-Santa Rita-Umatac-Merizo)	Complete	Complete	9/30/2017
2	Route 1 Asan-Adelup-Hagatna	Complete	10/30/2017	2/28/2019
3	Asan Sewer Break Repair	Complete	Complete	12/31/17
4	Route 2 Agat War-in-the-Pacific	Complete	07/31/2017	7/31/2018
5	F and A Series Wells Rehab	9/30/2017	1/8/2018	5/22/2019
6	Tumon Sewer Hot Spots	9/4/2017	11/30/2017	11/30/2018
7	Route 4 Hagatna	Complete	10/30/2017	1/31/2019
8	D-Series Wells Rehabilitation	Complete	Complete	11/3/2017
9	Baza Gardens-Talafofo SSES	Complete	Complete	Delayed
10	Tamuning Sewer Hot Spots	9/4/2017	11/30/2017	11/17/2018

To make sure the projects are completed and SRF funding deadlines are met, and continuity is maintained through the remainder of the projects, the PMO requests an extension of PMO support through December 31 2018. Further extensions for PMO support will be reviewed by GWA on an annual basis.

SCOPE OF WORK

This work authorization will be performed by Brown and Caldwell listed herein as the PMO Team. This scope outlines the overall PMO Team scope, schedule, and budget.

Task 1: Task Management

Approach: Brown and Caldwell's PMO staff will manage the scope, schedule, and budget associated with the work described in this Work Authorization to ensure that this work is managed in a manner that meets the intent of the GWA PMO Program Management Plan. This includes, but is not limited to, management of documents, change, risk, and quality assurance and control. This task shall include regular progress meetings and conference calls (at least every

two weeks) between PMO and GWA personnel to review project progress, issues to be resolved, project reports and contractor procurement and payment procedures.

PMO Team Responsibilities: PMO staff will manage the scope, schedule and budget in accordance with the protocols set forth in the GWA PMO Program Management Plan.

GWA Responsibilities: GWA staff will attend meetings, review progress reports, and adhere to the protocols set forth in the GWA PMO Program Management Plan.

Task 2: Project Management

Approach: The PMO Team will manage assigned projects from initiation phase, through pre-design, design, bidding, construction and closeout. The PMO Team assumes a continuation of management services for the ten (10) individual SRF projects as listed in the table above.

In accordance with Grant Conditions P3, P7, P8:
The PMO will work with the GWA Engineering staff and manage projects as directed by GWA. The PMO will provide project management oversight and technical subject matter expertise for the individual projects assigned to the PMO. The PMO will handle consultant and contractor payment requests and substantiate documentation for pay requests. The PMO will assist GWA in submitting project updates, change order requests and payment requests to USEPA, and address USEPA comments. The PMO will oversee preparation of QA/QC Plans by consultants for data collection, attend bid openings, collect bid tabs and submit to USEPA through GWA, provide written statements when and if the lowest bidder was not selected and documentation of the reasons, and provide recommendations of award.

The PMO will:

- provide bi-weekly progress reporting via teleconference with GWA and USEPA;
- control costs and manage budget;
- facilitate project team cooperation and input;
- maintain project files;
- track and report on cash flow projections;
- receive, review, distribute, and return comments on meeting minutes and reports issued by construction managers;
- facilitate resolution of construction problems;
- review invoices and recommend payment;
- obtain input and consensus from operations and maintenance divisions;
- arrange for and coordinate easement and right-of-way procurement activities;
- coordinate building permits from Dept. of Public Works;
- coordinate necessary stream buffers or 404 permits; and
- coordinate USEPA review and approval as needed.

In accordance with Grant Conditions P9:
The PMO will assist GWA in Federal and Territory Agency notification, SHPO notification, development of procedures for protection or salvage during construction, and obtaining SHPO concurrence. The PMO will assist GWA in selecting consultants to prepare an Archaeological

monitoring, discovery and data recovery Plan, and provide project notification to the Guam Historic Preservation Officer, as necessary. Archeological and cultural resources work will be performed by others under separate contract with GWA.

In accordance with Grant Conditions P11, P19:
The PMO will verify that procurement follows Federal Regulations as defined in the Grant conditions and maintain necessary documentation, validate contractor performance, payment and other bonds, and validate that purchase orders and contracts include appropriate clauses required by Federal statues, regulations and Executive Orders as defined in the Grant conditions.

PMO Team Responsibilities: Manage projects as directed by GWA in accordance with the Grant conditions.

GWA Responsibilities Participate in reviews and project management of SRF-funded projects.

Products: Project documentation.

Task 3: Contract and Construction Management

Approach: The PMO Team will manage assigned projects from initiation phase, through pre-design, design, bidding, construction and closeout. The PMO Team assumes that the ten (10) individual projects currently assigned to the PMO will continue to require the following project management services during construction:

In accordance with Grant Conditions P14, P16, P17, P18, P20, P22, P23, P24:
As directed by GWA, the PMO will perform contract management, monitor contractor work plans, review cost breakdowns and schedules of values, notify USEPA of construction start, attend meetings with USEPA during construction, verify as-built drawings are being prepared by others, and submit final copies of work products to USEPA through GWA. The PMO will perform Change Order management and provide advance notification of changed conditions and budget category transfer requests to the USEPA and seek USEPA approvals.

For each infrastructure project funded by the Grant, the PMO will work with the contractor to obtain a Plan of Operation including O&M Manual, emergency operation plan, site safety plan, and personnel training plan as required.

In accordance with Grant Conditions P26, P29, P30, P34:
The PMO will assist GWA in issuing a letter at the close of the project certifying that the project meets or does not meet project performance standards. Corrective action reports and cost estimates for corrective action will be prepared, along with a schedule for corrective action. The PMO will assist GWA in meeting Federal cross-cutting requirements and conformance compliance with Federal regulations. The PMO will assist GWA with Davis-Bacon compliance efforts by accompanying GWA's grant specialist in wage rate interviews as requested by GWA. The PMO will assist GWA in notification of Public Media Events and publicity for accomplishments.

Guam Waterworks Authority
State Revolving Fund (SRF) Grant Project Support Amendment No. 3

Examples of such tasks are, but not limited to:

- Arrange for and coordinate bid award activities.
- Review Contractor prequalification and preparation of the qualified bidders list.
- Manage construction management contracts.
- Supervise and monitor the activities and schedules for materials testing consultant.
- Coordinate change orders.
- Coordinate, review, approve, and monitor erosion and sediment control measures.
- Attend periodic site visits.
- Monitor easement conditions.
- Track RFI's, RFP's, Work Change Directives (WCD's), change orders, shop drawings and other submittals.
- Assist Construction Manager with claims analysis and resolution.
- Coordinate, review, and approve payments to contractor and consultants; verify quantities.
- Determine substantial completion and prepare lists of incomplete or unsatisfactory items, and a schedule for their completion.
- Ensure appropriate levels of communication and public outreach.
- Submit fixed asset management reports to GWA.
- Oversee start-up training provided by others.
- Assist with O & M Manual Review.
- Deliver all project files to GWA digitally archived and in single hard copy format.
- Deliver as-built record drawings to GWA.

PMO Team Responsibilities: PMO staff will manage projects as directed by GWA in accordance with the Grant conditions.

GWA Responsibilities GWA staff will participate in reviews and project management of SRF-funded projects. Perform wage rage interview and administer Davis Bacon compliance.

Products: Project documentation.

SCHEDULE

The PMO Team will conduct the effort described in this work authorization to support GWA in the project management, scheduling, and tracking of projects. The PMO will conduct this effort for a period from January 1, 2018, to December 31, 2018. Work beyond the December 31, 2018, will proceed upon written authorization from GWA.

Guam Waterworks Authority
State Revolving Fund (SRF) Grant Project Support Amendment No. 3

BUDGET SUMMARY

Labor (4,458 hours)	$862,080
ODC	$15,905
GRT	$36,586
Total	$914,571

Guam Waterworks Authority
State Revolving Fund (SRF) Grant Project Support Amendment No. 3

BUDGET DETAILS
This work order will be performed on a time and materials basis and will not exceed $914,571 without written consent from GWA.

Labor				
Name	**Labor Code**	**Labor Rate**	**Hours**	**Amount**
Matasci	N	$270	52	$14,040
Chang	L	$270	208	$56,160
Bilz	K	$260	676	$175,760
Riegel	K	$260	312	$81,120
Marble	G	$166	1144	$189,904
Watson	G	$166	1196	$198,536
Poppe	H	$198	320	$63,360
Worster	K	$250	160	$41,600
Tamai	G	$166	104	$17,264
Admin	B	$78	312	$24,336
		Labor Subtotal	4,458	$862,080

Other Direct Costs	
Description	**Amount**
Airfare $2000 (x1) from HNL	$2,000
Airfare $3000 (x2) from Mainland	$6,000
Rental Car $75/day (21 days)	$1,575
Per Diem $250/day (21 days)	$5,250
Mileage	$1,080
ODC Subtotal	$15,905

Total Work Authorization Estimate	
Labor Subtotal	$862,080
ODC Subtotal	$15,905
GRT (4.167%)	$36,586
Total	$914,571

Guam Waterworks Authority
Consulting Engineer's Report for 2018 Revenue Bond Financing

TO: Brown and Caldwell
414 W. Soledad Ave.
Suite 602
Hagatna, Guam 96910

WORK AUTHORIZATION NO.: 2017-03

SUBMITTAL DATE: August 21, 2017

FROM: Miguel C. Bordallo, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

You are hereby authorized to perform the services described below in accordance with the Contract for Technical and Professional Services executed February 6, 2012 between Brown and Caldwell (BC) and Guam Waterworks Authority (GWA) for Program Management Services, GPA-RFP-11-005.

DESCRIPTION OF WORK AND FEE ESTIMATES

DESCRIPTION: Consulting Engineer's Report for 2018 Revenue Bond Financing

Defined cost, scope and schedule on a time and materials basis are provided in the attached proposal letter.

NOT TO EXCEED amount: **$ 243,387**

Signed _____ Date August 31, 2017
RAYMOND N. MATASCI
SR. VICE PRESIDENT/PROGRAM MANAGER
BROWN AND CALDWELL

GWA Reviewer: _____ Date _____
GREG CRUZ
CHIEF FINANCIAL OFFICER

Signed _____ Date _____
MIGUEL C. BORDALLO, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority
Consulting Engineer's Report for 2018 Revenue Bond Financing

WORK AUTHORIZATION NO: 2017-03
DESCRIPTION: Consulting Engineer's Report for 2018 Revenue Bond Financing
GWA PROJECT MANAGER: Greg Cruz

PROJECT BACKGROUND AND OBJECTIVE

A series of bond financing was approved by the Guam Consolidated Commission on Utilities in February 2013 in the act of approving the GWA 2014 – 2018 5-Year Rate Plan. The first bond sale in a series of three bond financings occurred in December 2013. The second bond sale occurred in January 2016. The third bond sale of the series is projected in the Rate Plan to take place in the 3rd quarter of calendar year 2018.

A condition of the bond sale is the preparation of a Consulting Engineer's Report and Consulting Engineer's Certification. The Report and Certification only provide engineering advice on this project, as that term is defined in Section 15B(e)(4)(C) of the Securities and Exchange Act, with respect to the regulation of municipal advisors. Brown and Caldwell has not, and does not, express any opinion or advice as to how to structure the existing or new issuance of municipal securities, including, but not limited to, the timing and terms of debt services payments. Brown and Caldwell is not subject to the relevant regulations as to municipal advisors including, without limitation, the fiduciary duty set forth in Section 15B(c)(1) of the Securities and Exchange Act. GWA has relied on the Guam Economic Development Authority (GEDA) and others for advice with respect to municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, and other similar matters concerning such financial products or issues.

This Work Authorization proposes the following Scope of Work to prepare the Consulting Engineer's Report and Consulting Engineer's Certificate.

SCOPE OF WORK

This work authorization will be performed by Brown and Caldwell and Galardi Rothstein Group listed herein as the PMO Team. This scope outlines the overall PMO Team scope, schedule, and budget.

Task 1: Task Management

Approach: The Program Management Office (PMO) Team will manage the scope, schedule, and budget associated with the work described in this Work Authorization to ensure that this work is managed in a manner that meets the intent of the GWA PMO Program Management Plan. This includes, but is not limited to, management of documents, change, risk, and quality assurance and control. This task shall include regular progress conference calls (at least every two weeks) or meetings between PMO and GWA personnel to review project progress, issues to be resolved, early study results, etc. This task covers efforts associated with the internal quality control and technical review process. Specifically, the PMO will conduct internal QA/QC meetings and follow-up with technical experts as necessary during the course of the project. Internal checking or peer review of all deliverables will also be performed.

Guam Waterworks Authority
Consulting Engineer's Report for 2018 Revenue Bond Financing

PMO Team Responsibilities: PMO staff will manage the scope, schedule, and budget. The PMO lead will manage tasks in this Work Authorization in accordance with the protocols set forth in the GWA PMO Program Management Plan.

GWA Responsibilities: GWA staff will attend meetings, review progress reports, and adhere to the protocols set forth in the GWA PMO Program Management Plan.

Products: Project meetings and meeting minutes.

Task 2: Data Gathering

Approach: PMO staff will request and review available reports, plans, permits, agreements, CIP, budgets, and other pertinent documentation. PMO staff will conduct interviews with GWA management to discuss significant issues facing the agency.

The PMO Team will review available reports and publicly available information on GWA, including but not limited to the FY 2017 True Up Narrative submitted to the Guam Public Utilities Commission, GWA's most recent bond offering statements, GWA operating budget and financial statements, and GWA Master Plan capital project schedules and cost estimates. The PMO Team will also collect information and descriptions of the GWA water and wastewater systems and proposed capital projects that will be the basis for components of the financial projections.

Interviews are expected to take place during the Fall of 2017. Interview questions and a data request will be prepared in advance and provided to GWA staff so that they can prepare for the interviews and collect the necessary data. A majority of the data must be received at least one week prior to the scheduled interviews in order for the PMO team to review the data and prepare for the interviews.

PMO Team Responsibilities: Request and review documentation, conduct management interviews.

GWA Responsibilities: Provide requested information, schedule, and coordinate interviews and interview locations, and participate in management interviews.

Products: Summary of data.

Task 3: Analysis and Preparation of Consulting Engineer's Report and Consulting Engineer's Certificate

Approach: PMO staff will prepare a Consulting Engineer's Report (CER) for inclusion in the Official Statement of the Revenue Bond documents. The CER will include:

1. Summary description of GWA's Organization
2. Summary description of GWA's water systems, including:
    - General overview.

Guam Waterworks Authority
Consulting Engineer's Report for 2018 Revenue Bond Financing

- Evaluation of sources of supply.
- Evaluation of current and future water demands.
- Evaluation of water treatment facilities.
- Evaluation of water distribution and storage.
- Review and assessment of regulatory issues as they relate to GWA operations.

3. Summary description of GWA's wastewater systems, including:
   - General overview.
   - Evaluation of collection and transmission systems.
   - Evaluation of wastewater treatment plants.
   - Evaluation of residuals management.
   - Review and assessment of regulatory issues as they relate to GWA operations.
4. Capital improvement program (CIP) summary, including:
   - Presentation of the CIP for the five-year period following the bond issue (2018-2023).
   - Determination if the budgeted CIP appears adequate for the identified future improvement needs.
5. Financial projections to support GWA's planned capital program and operations through 2023, including:
   - Projection of revenues
   - Projection of operating and maintenance expenses
   - Projection of capital costs and funding sources for the CIP
   - Projection of financial assurance targets, including applicable debt service coverage and operating reserve requirements
   - Projection of rate impacts arising from implementation of the planned CIP.
   - Update to GWA's strategic financial planning (SFP) model initially developed to facilitate Consent Decree negotiations. In updating the SFP model, the PMO Team will append cash-flow forecasts with schedules, tables, and graphs to address issues of concern to the municipal bond market (e.g., projected debt service coverage, debt/equity ratios, operating reserves, rate comparability).

The PMO team will develop up to two draft CERs for GWA review and comment. The PMO team will coordinate with the GWA financial consultant, GEDA, and Bond Counsel during preparation of the CER.

PMO Team Responsibilities: Prepare CER; coordinate with GWA, GWA's financial consultant, GEDA, and Bond Counsel.

GWA Responsibilities: Provide information as requested by the PMO, review draft CER, provide collective GWA comments on up to two draft reports; participate in conference calls and attend meetings.

Products: Up to two draft CERs and final CER. Certificate of Consulting Engineer per Bond

Guam Waterworks Authority
Consulting Engineer's Report for 2018 Revenue Bond Financing

Resolution.

Task 4: Preparation for Rating Agency Presentations/Meetings

Approach: The PMO team will support the finance team in rating agency/bond insurer presentations via conference calls. Up to three conference calls are assumed. Attendance by BC staff at rating agency/bond insurer presentations may be performed as additional services to be requested by GWA.

The PMO team will participate in monthly teleconference calls with the finance team. Up to six (6) conference calls are assumed.

PMO Team Responsibilities: Contribute to the preparation of presentations by GWA's finance team. Prepare for and participate in conference calls.

GWA Responsibilities: Provide information as requested by the PMO, prepare final rating agency presentation.

Products: Contributions to rating agency presentation (by others).

ASSUMPTIONS

1) A relatively current update of the SFP model will be effected through the on-going Water Resources Master Plan development process.

SCHEDULE

The PMO Team will conduct the effort described in this work authorization to produce the final deliverables by June 1, 2018. This assumes notice to proceed is issued in October 2017. Draft report reviews will begin in December 2017.

Guam Waterworks Authority
Consulting Engineer's Report for 2018 Revenue Bond Financing

BUDGET SUMMARY

Labor (Labor Hours – 766)	$180,756
ODC	$52,895
GRT	$9,736
Total	$243,387

Guam Waterworks Authority
Consulting Engineer's Report for 2018 Revenue Bond Financing

DGET DETAILS

This work authorization will be performed on a time and materials basis and will not exceed $243,387 without written consent from GWA.

Labor				
Name	**Labor Code**	**Labor Rate**	**Hours**	**Amount**
Gilman	M	$270	128	$34,560
Bilz	K	$260	204	$53,040
Sorensen	J	$250	196	$49,000
Sr. Manager	M	$270	16	$4,320
Matasci	N	$270	12	$3,240
Constantinescu	H	$218	50	$10,900
Kansakar	G	$166	120	$19,920
Tamai	G	$166	8	$1,328
Draheim	G	$166	8	$1,328
Admin	E	$130	24	$3,120
		Labor Subtotal	766	$180,756

Other Direct Costs	
Description	**Amount**
Supplies	$750
Airfare $2000 (x2) from HNL	$4,000
Airfare $3000 from Mainland	$3,000
Rental Car $75/day (15 days)	$1,125
Per Diem $250/day (15 days)	$3,750
Mileage	$270
Subconsultant	$40,000
ODC Subtotal	$52,895

Total Work Order Estimate	
Labor Subtotal	$180,756
ODC Subtotal	$52,895
GRT (4.167%)	$9,736
Total	$243,387

Guam Waterworks Authority
Project Management for New Wells AG-10, AG-12, and Y-8

TO: Brown and Caldwell
414 W. Soledad Ave.
Suite 602
Hagatna, Guam 96910

WORK AUTHORIZATION NO.: 2017-04

SUBMITTAL DATE: August 21, 2017

FROM: Miguel C. Bordallo, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

You are hereby authorized to perform the services described below in accordance with the Contract for Technical and Professional Services executed February 6, 2012 between Brown and Caldwell (BC) and Guam Waterworks Authority (GWA) for Program Management Services, GPA-RFP-11-005.

DESCRIPTION OF WORK AND FEE ESTIMATES

DESCRIPTION: Project Management for New Wells AG-10, AG-12, and Y-8

Defined cost, scope, and schedule on a time and materials basis are provided below and consist of providing project management and support for construction management, scheduling and reporting of New Wells AG-10, AG-12, and Y-8 Project.

NOT TO EXCEED amount: **$ 221,131**

Signed: _____ Date August 31, 2017
RAYMOND N. MATASCI
SR. VICE PRESIDENT/PROGRAM MANAGER
BROWN AND CALDWELL

GWA Reviewer: _____ Date _____
THOMAS F. CRUZ, P.E.
CHIEF ENGINEER

Signed: _____ Date _____
MIGUEL C. BORDALLO, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority
Project Management for New Wells AG-10, AG-12, and Y-8

WORK AUTHORIZATION NO: 2017-07
DESCRIPTION: Project Management for New Wells AG-10, AG-12, and Y-8
GWA PROJECT MANAGER: Thomas F. Cruz, P.E.

PROJECT BACKGROUND AND OBJECTIVE

GWA is committed to enhance its water service and to provide uninterrupted water supply to its customers by increasing its groundwater production capacity. In 2011, GWA investigated 27 potential new well sites in the Northern Guam Lens and identified the top three (3) sites for further development, based on the water quality, yield potential, groundwater recharge zones, land ownership, land use plan, geological features, presence of nearby utilities, and the wellhead protection. The three new well sites identified are designated as AG-10, AG-12, and Y-8, located in Dededo and Yigo areas. In 2014, GWA completed the plans and specifications for these three new wells under Project No. PW 09-02 Island-Wide Well Site Rehabilitation and New Well Site Development. The new wells have not been constructed due to insufficient staffing to manage and complete this project. GWA is in the process of adding more staff to fill new engineering positions and to replace retiring engineers including a Senior Well Engineer. However, it would take some time for a new engineer to become familiar with the groundwater's very unique and sensitive hydrogeology.

GWA's Program Management Office (PMO) is currently managing the rehabilitation of five (5) existing wells in the Dededo area under Project No. PW05-14 Island-Wide Well Site Rehabilitation and New Well Site Development, also known as the "D-series Wells." The PMO's subject matter experts have helped resolve numerous problems encountered during construction of the D-series wells. It is anticipated that construction of the three (3) new wells could have similar issues due to their proximity in the area, similar geological formation, and similar groundwater characteristics. The plans and specifications prepared in 2014 for the three new wells need to be updated to incorporate the standardized equipment established by GWA in 2015. The electrical system would need to be revised to be SCADA ready. Other design changes required before the project goes into construction include changes for final pump capacity, motor size, and electrical requirements based on the capacity established by the pilot wells, verification of and updates to the required well casing diameter and sounding tube locations, electrical revisions to reflect the standard systems currently installed at other wells, and verification of existing site conditions to identify any additional work necessary based on the current conditions, and updates required to reflect GWA's selected RTU/HMI, etc.

The objective of this work authorization is to:

1. Assist GWA in completing this project by providing project management services for the construction of the three new wells. The project management services include working with the engineer of record (EOR) to update the 2014 plans and specifications, assisting GWA in construction bidding, assisting GWA in procuring construction management (CM) services, and providing project management services during the construction.
2. Assist GWA staff in becoming familiar with and knowledgeable of the tasks performed for this Work Authorization. Allow GWA staff to shadow appropriate PMO personnel and take steps to increase the training of GWA's staff.

Guam Waterworks Authority
Project Management for New Wells AG-10, AG-12, and Y-8

SCOPE OF WORK

This work authorization will be performed by Brown and Caldwell listed herein as the PMO Team. This scope outlines the overall PMO Team scope, schedule, and budget.

Task 1: Task Management

Approach: Brown and Caldwell's PMO staff will manage the scope, schedule, and budget associated with the work described in this Work Authorization to ensure this work is managed to meet the intent of the GWA PMO Program Management Plan. This includes, but is not limited to, management of documents, change, risk, and quality assurance, and control. This task shall include regular progress meetings and conference calls between PMO and GWA personnel to review project progress, issues to be resolved, project reports, and contractor procurement, and payment procedures.

PMO Team Responsibilities: PMO staff will manage the scope, schedule and budget in accordance with the protocols set forth in the GWA PMO Program Management Plan.

GWA Responsibilities: GWA staff will attend meetings, review progress reports, and adhere to the protocols set forth in the GWA PMO Program Management Plan.

Products: Scope of work, project meetings and meeting minutes.

Task 2: Project Management

Approach: The PMO Team will manage the project from design, bidding, construction, and closeout. The PMO will work with the GWA Engineering group and manage the project as directed by GWA. The PMO will provide project management oversight and technical subject matter expertise for the project. The PMO will handle consultant and contractor payment requests and substantiate documentation for pay requests.

The PMO will:

- provide weekly progress reporting with GWA;
- control costs and manage budget;
- facilitate project team cooperation and input;
- maintain project files;
- provide equipment standardization, SCADA requirements and other design changes to EOR for design update;
- prepare RFP and scope of services for CM procurement;
- assist GWA in selection of consultants;
- arrange and attend meeting(s) to negotiate final scope and fees;
- update project cost estimates based on design consultant's input;
- receive, review, distribute, and return comments on technical memoranda and reports issued by EOR;
- review invoices and recommend payment;

Guam Waterworks Authority
Project Management for New Wells AG-10, AG-12, and Y-8

- conduct review meetings with design consultant;
- obtain input and consensus from operations and maintenance divisions;
- arrange for and coordinate easement and right-of-way procurement activities;
- coordinate power supply by GPA; and
- coordinate building permits from Dept. of Public Works.

The PMO will assist GWA in Federal and Territory Agency notification, SHPO notification, development of procedures for protection or salvage during construction, and obtaining SHPO concurrence. The PMO will assist GWA in selecting consultants to prepare an Archaeological Monitoring, Discovery and Data Recovery Plan, and provide project notification to the Guam Historic Preservation Officer, as necessary. Archeological and cultural resources work will be performed by others under separate contract with GWA.

PMO Team Responsibilities: Manage the project as directed by GWA.

GWA Responsibilities Participate in reviews of submittals related to the project.

Products: Project documentation.

Task 3: Contract and Construction Management

Approach: As directed by GWA, the PMO will perform contract management, monitor contractor work plans, review cost breakdowns and schedules of values, notify GWA of construction start, attend meetings with CM and contractor during construction, verify as-built drawings are being prepared by others, and submit final copies of work products to GWA. The PMO will perform change order management and provide advance notification of changed conditions and budget category transfer requests to GWA and seek GWA approvals.

The PMO will work with the contractor to obtain a Plan of Operation including O&M Manual, emergency operation plan, site safety plan, and personnel training plan as required.

The PMO will assist GWA in issuing a letter at the close of the project certifying that the project meets or does not meet project performance standards. Corrective action reports and cost estimates for corrective action will be prepared, along with a schedule for corrective action.

The PMO will:

- arrange for and coordinate bid award activities;
- review contractor prequalification and preparation of the qualified bidders list;
- manage construction management contracts;
- supervise and monitor the activities and schedules for materials' testing consultant;
- coordinate change orders;
- coordinate, review, approve, and monitor erosion and sediment control measures;
- attend periodic site visits;
- monitor easement conditions;
- track RFIs, RFPs, Work Change Directives (WCDs), change orders, shop drawings, and other submittals;

Guam Waterworks Authority
Project Management for New Wells AG-10, AG-12, and Y-8

- assist CM with conducting claims analysis and claims resolution;
- coordinate, review, and approve payments to contractor and consultants, verifying quantities;
- determine substantial completion and prepare lists of incomplete or unsatisfactory items and a schedule for their completion;
- ensure appropriate level of communications and public outreach;
- submit fixed asset management reports to GWA;
- arrange dedication as required;
- oversee start up training provided by others;
- O & M Manual Review;
- deliver all project files to GWA in digitally archived and hard copy format; and
- deliver as-built record drawings to GWA.

PMO Team Responsibilities: Manage projects as directed by GWA.

GWA Responsibilities Participate in reviews of submittals related to the project.

Products: Project documentation.

SCHEDULE

The PMO Team will conduct the effort described in this work authorization to support GWA in the project management, scheduling, and tracking of projects. The PMO will conduct this effort for a period of 18 months upon notice of approval.

Guam Waterworks Authority
Project Management for New Wells AG-10, AG-12, and Y-8

BUDGET SUMMARY

Labor (1,082 hours)	$206,740
ODC	$5,545
GRT	$8,846
Total	$221,131

Guam Waterworks Authority
Project Management for New Wells AG-10, AG-12, and Y-8

BUDGET DETAILS

This work order will be performed on a time and materials basis and will not exceed $221,131 without written consent from GWA.

Labor				
Name	**Labor Code**	**Labor Rate**	**Hours**	**Amount**
Matasci	N	$270	36	$9,720
Chang	L	$270	36	$9,720
Bilz	K	$260	312	$81,120
Riegel	K	$260	36	$9,360
Marble	G	$166	312	$51,792
Worster	K	$260	80	$20,800
Tamai	G	$166	36	$5,976
Admin	B	$78	234	$18,252
		Labor Subtotal	1,082	$206,740

Other Direct Costs	
Description	**Amount**
Airfare $3000 from Mainland	$3,000
Rental Car $75/day (7 days)	$525
Per Diem $250/day (7 days)	$1,750
Mileage	$270
ODC Subtotal	$5,545

Total Work Authorization Estimate	
Labor Subtotal	$206,740
ODC Subtotal	$5,545
GRT (4.167%)	$8,846
Total	$221,131

Guam Waterworks Authority
Hydraulic Modeling and Training for Wastewater Collection System

TO: Brown and Caldwell
414 W. Soledad Ave.
Suite 602
Hagatna, Guam 96910

WORK AUTHORIZATION NO.: 2017-05

SUBMITTAL DATE: August 21, 2017

FROM: Miguel C. Bordallo, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

You are hereby authorized to perform the services described below in accordance with the Contract for Technical and Professional Services executed February 6, 2012 between Brown and Caldwell (BC) and Guam Waterworks Authority (GWA) for Program Management Services, GPA-RFP-11-005.

DESCRIPTION OF WORK AND FEE ESTIMATES

DESCRIPTION: Hydraulic Modeling and Training for Wastewater Collection System

Defined cost, scope, and schedule on a time and materials basis are provided below and consist of updating, calibrating, and analyzing the GWA wastewater collection system model and providing GWA with wastewater collection system modeling support on an on-call basis.

NOT TO EXCEED amount: **$ 333,714**

Signed _____ Date August 31, 2017
RAYMOND N. MATASCI
SR. VICE PRESIDENT/PROGRAM MANAGER
BROWN AND CALDWELL

GWA Reviewer: _____ Date _____
THOMAS F. CRUZ, P.E.
CHIEF ENGINEER

Signed _____ Date _____
MIGUEL C. BORDALLO, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority
Hydraulic Modeling and Training for Wastewater Collection System

WORK AUTHORIZATION NO: 2017-05
DESCRIPTION: Hydraulic Modeling and Training for Wastewater Collection System
GWA PROJECT MANAGER: Thomas F. Cruz, P.E.

PROJECT BACKGROUND AND OBJECTIVE

Flow metering data was not adequate to calibrate portions of the wastewater collection system model for the Water Resources Master Plan (WRMP) update. Therefore, portions of the system could not be fully analyzed for the WRMP update. The purpose of this Work Authorization is to collect flow metering data and then update and calibrate the wastewater collection system model. The model can then be analyzed to identify deficiencies and recommend improvement projects. On-call assistance will also be given to answer questions about the wastewater collection system using the calibrated model.

SCOPE OF WORK

This work authorization will be performed by the BC's Program Management Office (PMO) Team. This scope outlines the overall PMO Team scope, schedule, and budget.

Task 1: Task Management

Approach: GWA PMO staff will manage the scope, schedule, and budget associated with the work described in this Work Authorization to ensure that this work is managed in a manner that meets the intent of the GWA PMO Program Management Plan. This includes, but is not limited to, the management of documents, changes, risk, and quality assurance (QA) and quality control (QC). This task shall include periodic progress conference calls or meetings between PMO and GWA personnel to review project progress, issues to be resolved, early study results, etc. This task covers efforts associated with the internal quality control and technical review process. Specifically, the PMO will conduct internal QA/QC meetings and follow-up with technical experts as necessary during the course of the project. Internal checking or peer review of all deliverables will also be performed.

PMO Team Responsibilities: PMO staff will manage the scope, schedule, and budget in accordance with the protocols set forth in the GWA PMO Program Management Plan.

GWA Responsibilities: GWA staff will attend meetings, review progress reports, and adhere to the protocols set forth in the GWA PMO Program Management Plan.

Task 2: Flow Metering

Approach: The PMO will develop a flow metering plan. GWA will then place flow meters in the collection system. To cover the desired areas, data may be gathered in one area and then the flow meters may be moved to another area.

GWA will periodically download the data. The PMO will review the flow metering data and inform GWA if any meters require maintenance based on the data.

Guam Waterworks Authority
Hydraulic Modeling and Training for Wastewater Collection System

PMO Team Responsibilities: Develop a flow metering plan, and review the flow metering data.

GWA Responsibilities: Install, maintain, and download the flow meters.

Products: Flow metering plan and data collected during flow metering.

Task 3: Data Gathering and Fieldwork

Approach: The PMO will work with GWA to collect data to update portions of the model that need to be updated. Work was done to update model piping and verify elevations during the WRMP update. However, there are additional areas that need to be verified to improve the model accuracy. Data gathering and fieldwork that will be done for this task will include the following:

1. *Interviews.* Interviews will be conducted by GWA's staff to collect information on system piping and operations. This task will include meeting with the following staff:
    a. Operations staff. The operations staff have knowledge of piping obtained during their daily field work that is not reflected in the GIS. Staff will also be interviewed to collect information on correct piping in key areas of the system.
    b. GIS and Engineering staff. The GIS and Engineering staff have knowledge of what is included in GIS and what remains to be added based on a backlog of field-collected data.
2. *Fieldwork.* Fieldwork will be done to visit manholes as needed to verify piping configuration.

PMO Team Responsibilities: Conduct interviews and fieldwork as needed.

GWA Responsibilities: Respond to interview requests and support the PMO team in conducting site visits and fieldwork. GWA will be responsible for supplying any tools and equipment required for fieldwork such as manhole cover hooks.

Products: Data gathered from interviews and collected during fieldwork.

Task 4: Update and Calibrate Hydraulic Model

Approach: The latest GWA wastewater collection system model will be updated through the following tasks:

1. *Update Model Piping.* A major GIS update was delivered to GWA after the sewer model was built and calibrated. The model piping and manholes will be updated within GIS to reflect new calibrated sewer model. The model piping will also be updated using data collected during Task 3.
2. *Update Model Facilities.* Lift station data, including wet well dimensions and pump data, was not available for many of the lift stations when the model was built and calibrated. Data delivered after the model calibration will be incorporated into the model.
3. *Update Loads.* Water demands will be used as the initial customer loading. The latest water demand data will be loaded into the model (and then adjusted during calibration).

Guam Waterworks Authority
Hydraulic Modeling and Training for Wastewater Collection System

4. *Calibrate Model*. The model will be calibrated by the PMO team using the flow metering data. Dry weather calibration will be performed followed by wet weather calibration. The calibration will focus on areas that are not currently well calibrated in the model.

PMO Team Responsibilities: Update and calibrate the model using the latest information and flow metering data.

GWA Responsibilities: Support the model update and calibration.

Products: Updated model.

Task 5: Model Analysis and Recommendations

Approach: The calibrated model will be analyzed and improvement projects will be developed similar to the approach used in the WRMP update. This task will include the following:

- *Model Analysis.* The model will be analyzed and deficiencies will be identified for gravity piping, force main piping, and lift stations using the criteria from the WRMP update.
- *Develop Improvement Projects.* Improvement projects will be developed for the pipe and pump deficiencies in a format similar to the format in the WRMP update.

PMO Team Responsibilities: Analyze the model, identify deficiencies, and develop recommendations.

GWA Responsibilities: Review the recommendations and provide feedback.

Products: Recommendation for improvement projects.

Task 6: On-Call Model Assistance

Approach: The PMO will assist GWA with wastewater system issues, which will include addressing specific concerns in the wastewater collection system and developing solutions using the model. Examples of typical assistance include:

- Analyze new developments and hotels.
- Assist in planning the implementation of proposed pipeline and lift station improvement projects. For example, the model was recently used to analyze the capacity of the pipeline running from Andersen AFB to the Northern District WWTP to answer pipe capacity questions from the DoD.
- Analyze wastewater collection system piping. For example, during the recent WRMP workshop, there was a discussion of using the model to analyze serving the Tiyan Donut Hole area off of Route 8.
- Analyze areas that could not be analyzed during the WRMP update. For example, as mentioned in Task 4 data was not available for many of the lift stations when the model was calibrated. Pump data that was delivered by GWA after the model was calibrated needs to be put into the model as part of Task 4. The lift stations then need to be analyzed for capacity.
- Conduct other analyses for growth, development, efficiency optimization, and maintenance.

Guam Waterworks Authority
Hydraulic Modeling and Training for Wastewater Collection System

PMO Team Responsibilities: The PMO will assist GWA staff in analyzing the model and generating results for use by GWA. Prepare Technical Memoranda as outlined in Task 7 below.

GWA Responsibilities: Supply information as requested. Review results and recommendations prepared by the PMO and offer comments and opinions.

Products: Modeling results and recommendations.

Task 7: Technical Memoranda

Approach: The PMO will prepare technical memoranda (TM) documenting the modeling and the analyses and evaluation requested by GWA. The TMs will be submitted to GWA for review and comment. At a minimum, the TMs will include the following:

- Description of the flow metering;
- Description of the model update including the modeling methodology and assumptions;
- Description of the model analyses and findings;
- Recommended improvement projects;
- Figures, including maps and graphs, to support the findings and recommendations; and
- Other supporting documentation.

PMO Team Responsibilities: The PMO will develop the TMs. The PMO will also submit the updated model to GWA's designated person responsible for the model.

GWA Responsibilities: GWA staff will be required to review and comment on the TMs.

Products: Draft and final TMs.

Task 8: Hydraulic Model Training

Approach: The latest GWA wastewater collection system model will be used for one training class for GWA staff. Training for the class will occur on Guam or by teleconference based on GWA's needs. The model may be shared with other Engineering consultants at the request and approval of GWA. Documentation will be written and provided to authorized Engineering consultants for use of the model. Important user instructions will be discussed by teleconference with said Engineering consultants.

PMO Team Responsibilities: Prepare for and provide one training class for GWA.

GWA Responsibilities: Provide venue and necessary facilities for training as requested. Provide approvals and directions for consultants desiring to use the updated hydraulic model.

Products: Training class.

Guam Waterworks Authority
Hydraulic Modeling and Training for Wastewater Collection System

SCHEDULE

The effort described in this task order will be completed by December 31, 2018.

BUDGET SUMMARY

Labor (labor hours – 1,438)	$288,764
ODC	$31,600
GRT	$13,350
Total	$333,714

Guam Waterworks Authority
Hydraulic Modeling and Training for Wastewater Collection System

BUDGET DETAILS

This work order will be performed on a time and materials basis, and will not exceed $333,714 without written consent from GWA.

Labor				
Name	**Labor Code**	**Labor Rate**	**Hours**	**Amount**
Chang	L	$ 270	86	$ 23,220
Liechty	M	$ 270	12	$ 3,240
Poppe	J	$ 218	100	$ 21,800
Fugal	J	$ 260	404	$ 105,040
Engineer II	F	$ 166	684	$113,544
Bourke	E	$ 130	92	$ 11,960
Tamai	F	$ 166	60	$ 9,960
		Labor Subtotal	1,438	$288,764

Other Direct Costs	
Description	**Amount**
Airfare $3000 (x6) from Mainland	$18,000
Rental Car $75/day (40 days)	$3,000
Per Diem $250/day (40 days)	$10,000
Training Materials	$600
ODC Subtotal	$31,600

Total Work Authorization Estimate	
Labor Subtotal	$288,764
ODC Subtotal	$31,600
GRT (4.167%)	$13,350
Total	$333,714

Guam Waterworks Authority
Southern Guam Water Supply Study

TO: Brown and Caldwell
414 W. Soledad Ave.
Suite 602
Hagatna, Guam 96910

WORK AUTHORIZATION NO.: 2017-06

SUBMITTAL DATE: August 21, 2017

FROM: Miguel C. Bordallo, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

You are hereby authorized to perform the services described below in accordance with the Contract for Technical and Professional Services executed February 6, 2012 between Brown and Caldwell (BC) and Guam Waterworks Authority (GWA) for Program Management Services, GPA-RFP-11-005.

DESCRIPTION OF WORK AND FEE ESTIMATES

DESCRIPTION: Southern Guam Water Supply Study

Defined cost, scope, and schedule on a time and materials basis are provided below and consist of providing engineering and technical support for the Southern Guam Water Supply Study.

NOT TO EXCEED amount: **$ 468,251**

Signed _____ Date August 31, 2017
RAYMOND N. MATASCI
SR. VICE PRESIDENT/PROGRAM MANAGER
BROWN AND CALDWELL

GWA Reviewer: _____ Date _____
THOMAS F. CRUZ, P.E.
CHIEF ENGINEER

Signed _____ Date _____
MIGUEL C. BORDALLO, P.E.
GENERAL MANAGER
GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority
Southern Guam Water Supply Study

WORK AUTHORIZATION NO: 2017-06
DESCRIPTION: Southern Guam Water Supply Study
GWA PROJECT MANAGER: Thomas F. Cruz, P.E.

PROJECT BACKGROUND AND OBJECTIVE

The 2016 GWA Water Master Plan Update (WRMP) identified the need for a Southern Guam Water Supply Study (SGWSS). The capability of GWA to provide reliable water to Southern Guam is limited by infrastructure condition, system capacity, inadequate redundancy, restricted access to developed sources, operational issues, excessive system losses, and lack of water-resource policy. Service interruptions are frequent and considered commonplace. At present, the southern system has inadequate transmission and distribution redundancy and does not consistently meet the 1.2 supply-to-demand contingency factor established by the 2010 GWA Potable Water Production Plan to address reliability. An analysis of billing and meter data completed as part of the 2016 WRMP estimates non-revenue water (NRW) at nearly 75% in Southern Guam.

Growing water demands can be met through either increasing system capacity or decreasing demand. Capacity can be added to the Southern Guam system through: development of new surface and/or subsurface water resources; re-development of inactive or abandoned springs, diversions and wells; access to existing private and military sources; purchasing raw or treated water from the Navy's Fena reservoir; or transporting water from the Northern Guam Lens Aquifer well network. Significant decreases in water demand can be achieved through the reduction of non-revenue water and conservation measures.

The water system in Southern Guam is also subject to deteriorating infrastructure which affects reliability of water supply. The dead end, single-line transmission configuration and sole reliance on treated water produced by the Ugum surface water treatment plant (SWTP) makes the system particularly vulnerable to service interruptions. System redundancy and reliability can be increased by alternatives such as looping the system, increasing storage and developing new sources, especially as variations in weather and climate impact raw water source supply and quality.

All options will involve capital investment, and the formalization of GWA water supply policy to justify expenditures. The SGWSS will examine options to increase the quantity and reliability of water supply to Southern Guam. Project components will include:

- Analysis of historical water sources and evaluation of the development or re-development of southern springs, ground and surface water resources.
- Impact of transporting water from central or northern Guam including the ongoing analysis for "closing the loop" from Agat to Umatac.

Guam Waterworks Authority
Southern Guam Water Supply Study

- Impact of water loss control efforts and strategic raw/treated water storage on supply and distribution.
- Analysis of alternate sources to supply water to the Ugum SWTP with the intent of maximizing Ugum production capabilities.
- Feasibility study for the long-term utilization of Fena Reservoir to supply treated and/or raw water to GWA.
- Suggestions for contingency planning in Southern Guam, including 1.2 supply-to-demand capability for system resilience.
- Business case evaluation and planning-level cost estimates for the recommended approach(es).

The end product of this study will be a roadmap and implementable plan for the reliable provision of enough quality potable water to Southern Guam over the planning horizon in compliance with Guam Safe Drinking Water Regulations.

SCOPE OF WORK

This work authorization will be performed by the Brown and Caldwell Program Management Office (PMO) Team. This scope outlines the overall PMO Team scope, schedule, and budget.

Task 1: Task Management

Approach: GWA PMO staff will manage the scope, schedule, and budget associated with the work described in this Work Authorization to ensure that this work is managed in a manner that meets the intent of the GWA PMO Program Management Plan. This includes, but is not limited to, management of documents, change, risk, and quality assurance and quality control.

PMO Team Responsibilities: PMO staff will manage the scope, schedule, and budget. The PMO will manage tasks in this Work Authorization in accordance with the protocols set forth in the GWA PMO Program Management Plan.

GWA Responsibilities: GWA staff will attend meetings, review progress reports, and adhere to the protocols set forth in the GWA PMO Program Management Plan.

Task 2: Existing Conditions

Approach: The PMO Team will review applicable studies, reports, plans, data, and recent evaluations relevant to the water supply in Southern Guam. The PMO Team Leader and key team members will conduct a kickoff meeting on Guam to develop goals for the Southern Guam Water Supply Study (SGWSS) in conjunction with GWA.

The PMO Team will review the Southern Guam service areas, island population projections,

Guam Waterworks Authority
Southern Guam Water Supply Study

potential development plans, and the island general plan as envisioned by the Guam Visitors Bureau, Guam Economic Development Authority, Comprehensive Economic Development Strategy (CEDS) and the Department of Land Management. A planning period will be established and approved by GWA. The PMO Team will develop demand projections for the planning period, updating the development and demand information outlined in the GWA 2017 Water Resources Master Plan Update (WRMPU).

Initial interviews will be carried out with GWA staff familiar with historic and current operation of the water supply system in Southern Guam to capture institutional knowledge regarding:

- Service interruption frequency and cause.
- Operational issues.
- Challenges to supplying water to the area.
- Underlying causes for elevated non-revenue water loss levels.
- Source water quality issues.

It is anticipated that as part of this phase meetings with key stakeholders in each Southern Guam community will be held to:

- Acquire historical data and anecdotal information to supplement the desktop literature review.
- Identify and access potential and historic water source site locations.
- Capture level of service issues and impacts at the community level.
- Determine the extent of private water supply available and utilized.

Input from other territorial stakeholders such as Guam EPA, the Navy and WERI will be sought.

Issues specific to or affecting water supply in Southern Guam will be identified during this task and may include:

- Water rights.
- Impact due to variations in weather and climate.
- Economic development.
- Watershed protection.
- Water quality.
- Security of supply.
- System redundancy.
- System resilience.
- Water policy and regulations.

A strategic planning workshop will be conducted to develop and formalize GWA water policy as it relates to Southern Guam. Workshop topics may include: establishing quantifiable goals for levels of service, environmental protection, economic development, pursuit of Fena resources as part of the OneGuam initiative, system reliability, and redundancy, contingency planning, and supply-to-demand ratio, as applicable.

The work effort will be documented in a TM for review and comment by GWA.

Guam Waterworks Authority
Southern Guam Water Supply Study

PMO Team Responsibilities: Request and review information, conduct kickoff meeting and site visits, conduct GWA in-house and community stakeholder interviews. Organize strategic planning workshop. Refine 2017 WRMPU demand and development projections. Produce TM.

GWA Responsibilities: Provide data as required. Attend kickoff meeting and strategic planning workshop. Participate in in-house interviews. Initiate contact with community stakeholders and attend stakeholder interviews, as needed. Facilitate access to existing and potential source water supply sites. TM review and comment.

Products: TM summarizing work effort and results.

Task 3: Identify and Develop Alternatives

3.1 Raw Water Supply and Storage Alternatives

Approach: The purpose of this phase is to identify and assess options to increase source water supply and raw water storage. The following project categories will be evaluated as applicable:

- Status quo – existing surface water and spring sources currently utilized by GWA.
- Enhanced status quo – options which add production or increase water quality using existing GWA sources (such as adding supply or raw water storage to the Ugum Surface Water Treatment Plant) or acquiring sources currently in use by private owners for irrigation, industrial, and potable water supply.
- Rehabilitation options – rehabilitating previously utilized sources (including Asan, Laelae, Silgin and Atlague springs, the Geus dam and Malojloj wells and others identified as part of the investigative work completed in Task 2).
- Renewal or new source options – developing new or re-developing long-abandoned wells, diversions, reservoirs, and spring sources (such as Laolao river, Fintasa falls, the abandoned Ylig treatment plant, and diversions at the Talofofo, and Tolaeyuus rivers).
- Navy water options – investigating the feasibility of the Fena Reservoir to supply raw water and/or continue to supply treated water to GWA.

The options will be ranked using a weighted matrix screening method, and GIS-based maps indicating source location and storage inundation areas, as applicable. For each potential new or rehabilitated supply source, yield will be estimated, and the impact of adding the supply to the system will be analyzed.

Preliminary water quality sampling and analysis may be required to further determine suitability of sources for treatment. The PMO Team will develop a schedule of sampling and analysis requirements as part of this task as needed. Sample collection and analysis are not included in this WA.

Guam Waterworks Authority
Southern Guam Water Supply Study

3.2 Water Treatment Options

Approach: The purpose of this phase is to identify the water treatment requirements for sources identified in Task 3.1.

Surface water diversions, springs, and ground water well sources will require different treatment processes based on contaminant levels, physical characteristics, and whether the groundwater source is considered Groundwater under the Direct Influence of Surface Water (GWUDI).

Available hydrogeologic and water quality data will be analyzed for up to five options from Task 3.1 to determine the likelihood of any groundwater sources (wells, springs, and infiltration galleries) being designated as GWUDI.

Any new surface water or potential GWUDI-designated groundwater sources will need to be treated to meet Guam Primary and Secondary Safe Drinking Water Regulations, up to and including Long Term 2 Enhanced Surface Water Treatment Rule, Stage 2 Disinfection Byproducts Rule, Revised Ground Water Rule, and Revised Total Coliform Rule, as applicable.

Water treatment will be investigated for the following project categories as applicable:

- Status quo - adequacy of treatment at current facilities (including Ugum, Fena and Santa Rita spring).
- Rehabilitation options – treatment upgrades necessary to bring developed GWA sources not currently producing water into the system (including Asan spring and Malojloj wells) online.
- New treatment options - treatment of new or abandoned sources to meet current Guam Primary and Secondary Safe Drinking Water Regulations.

Potential new sources may need to undergo preliminary water quality sampling and analysis to assist in the determination of treatment requirements at a planning level. In addition to characteristics such as turbidity, hardness, alkalinity, odor, pH, and conductivity, the analysis may include testing for microorganisms (including pathogens), inorganic contaminants, pesticides and herbicides, organic contaminants, and radioactive contaminants. GWA staff and laboratory facilities will be utilized as much as practicable for the water quality sampling and analyses. Should collection and testing requirements exceed the expertise or manpower of GWA resources, this work will be undertaken by a subconsultant. Sample collection and analysis are not included in this WA.

As part of this phase, the cost of power, chemicals, labor, and other operations and maintenance and capital data will be analyzed to determine the current “per gallon” cost of production from treatment facilities owned and/or operated by GWA including Ugum, Santa Rita Spring, and wells in the north. The history of water purchased from the Navy will be investigated including contractual conditions, rates, and the potential to integrate treatment facilities in accordance with the OneGuam Framework for an Integrated Water System for Guam.

Planning-level treatment options and conceptual process layouts will be presented for up to five options. GIS-based location and conceptual figures will be created to illustrate the options.

Guam Waterworks Authority
Southern Guam Water Supply Study

3.3 Water Transmission, Storage and Distribution Alternatives

Approach: The purpose of this phase is to identify and assess improvements to the distribution, pumping and treated water storage systems that will positively impact water supply in southern Guam. The following topics will be studied:

- System-wide cost of water transmission in terms of $/gal-mi.
- Non-revenue water and water loss control measures.
- Impact of potential new sources on pipe and pump capacity.
- Completion of pipeline, pump station and storage upgrades, replacement and rehabilitation as outlined in the 2016 WRMP update.
- "Closing the loop" between Agat and Umatac.
- Adding treated water storage to increase system reliability, resilience, and redundancy.
- Partially looping/twinning the transmission system to increase system reliability, resilience, and redundancy.
- Transmission from the north.

3.4 Modelling

Scenarios will be added to the current GWA hydraulic model, at locations where sufficient calibrated data exists and where feasible, to examine overall system impact of options identified in Tasks 3.1, 3.2, and 3.3.

Projected demand over the planning period will be combined with potential system enhancements including NRW reduction, addition of new raw or treated water storage, pipeline realignment, pumping from the north, looping, and addition of new water sources. It is anticipated that this phase will be completed by the PMO Team with GWA support.

PMO Team Responsibilities: Prepare weighted screening ranking for Task 3.1. Produce supplementary sampling requirements. Model storage, transmission and source options. Create GIS-based location maps and conceptual level treatment process drawings. Produce TM.

GWA Responsibilities: Provide data as required. Provide staff and laboratory facilities for water quality collection, sampling, and analyses. Assist with modelling efforts. TM review and comment.

Products: TM summarizing work effort and results of Tasks 3.1, 3.2, 3.3, and 3.4.

Guam Waterworks Authority
Southern Guam Water Supply Study

Task 4: Recommended Water Supply Strategy

4.1 Fatal Flaw Analysis

Approach: The purpose of this phase is to summarize and combine as applicable the options identified in Task 3 and subject them to analysis at a fatal flaw level. This will reduce the number of viable conceptual alternatives, justifiably dismissing those that are not feasible, are clearly inferior in comparison to other alternatives, or otherwise do not satisfy the SGWSS goals. The general approach will be:

- Determine methodology and objectives for the analysis.
- Establish evaluation criteria.
- Conduct an iterative fatal flaw screening process.

4.2 Business Case Evaluation

Approach: The conceptual alternatives that pass the fatal flaw analysis will be brought forward to be evaluated in greater detail.

Business case evaluations (BCE) will be conducted to compare alternatives and develop the recommended approach. The recommended approach(es) will be supplemented with descriptions and conceptual drawings. As necessary, workshops will be conducted to establish BCE criteria and present recommended approach(es) in conjunction with GWA.

4.3 Planning Level Cost Estimates

Approach: The PMO Team will develop planning-level (ASTM E2516-11 Level 5) cost estimates for alternatives that survive the fatal flaw analysis. Capital, O&M, and lifecycle cost projections will be developed, and project implementation schedules will be generated. The estimates may include rough costs for land acquisition and permitting as applicable.

PMO Team Responsibilities: Develop and combine alternatives. Conduct fatal flaw analysis. Conduct BCE workshops and complete BCEs. Prepare recommended approach evaluations and recommendations. Prepare cost estimates. Produce TM.

GWA Responsibilities: Supply information as requested. Participate in BCE workshops. TM review and comment.

Products: TM summarizing work effort and results of Tasks 4.1, 4.2, 4.3.

Task 5: Report

Approach: The TMs developed during Task 2 through 4 work efforts will be combined and consolidated into one report.

PMO Team Responsibilities: Prepare draft and final Southern Guam Water Supply Study reports.

Guam Waterworks Authority
Southern Guam Water Supply Study

GWA Responsibilities: Draft and final Southern Guam Water Supply Study reports review and comment.

Products: Draft and final Southern Guam Water Supply Study reports.

ASSUMPTIONS:

- Public outreach is not included in this work.
- Detailed field-level geotechnical, surveying, and hydrological investigations are not included in this work.
- It is assumed that proposed capacity and condition CIP projects relevant to the Southern Guam water supply (as outlined in the 2017 WRMPU) will be implemented.
- Sample collection and analysis are not included in this WA.

SCHEDULE

The PMO Team would be able to commence work immediately upon receiving a written Notice to Proceed (NTP). The scope of services described in this work authorization is expected to be completed within 12 months after NTP.

BUDGET SUMMARY

Labor (Labor Hours – 2,032)	$426,520
ODC	$23,275
GRT	$18,747
Total	$468,642

Guam Waterworks Authority
Southern Guam Water Supply Study

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Guam Waterworks Authority
Southern Guam Water Supply Study

BUDGET DETAILS

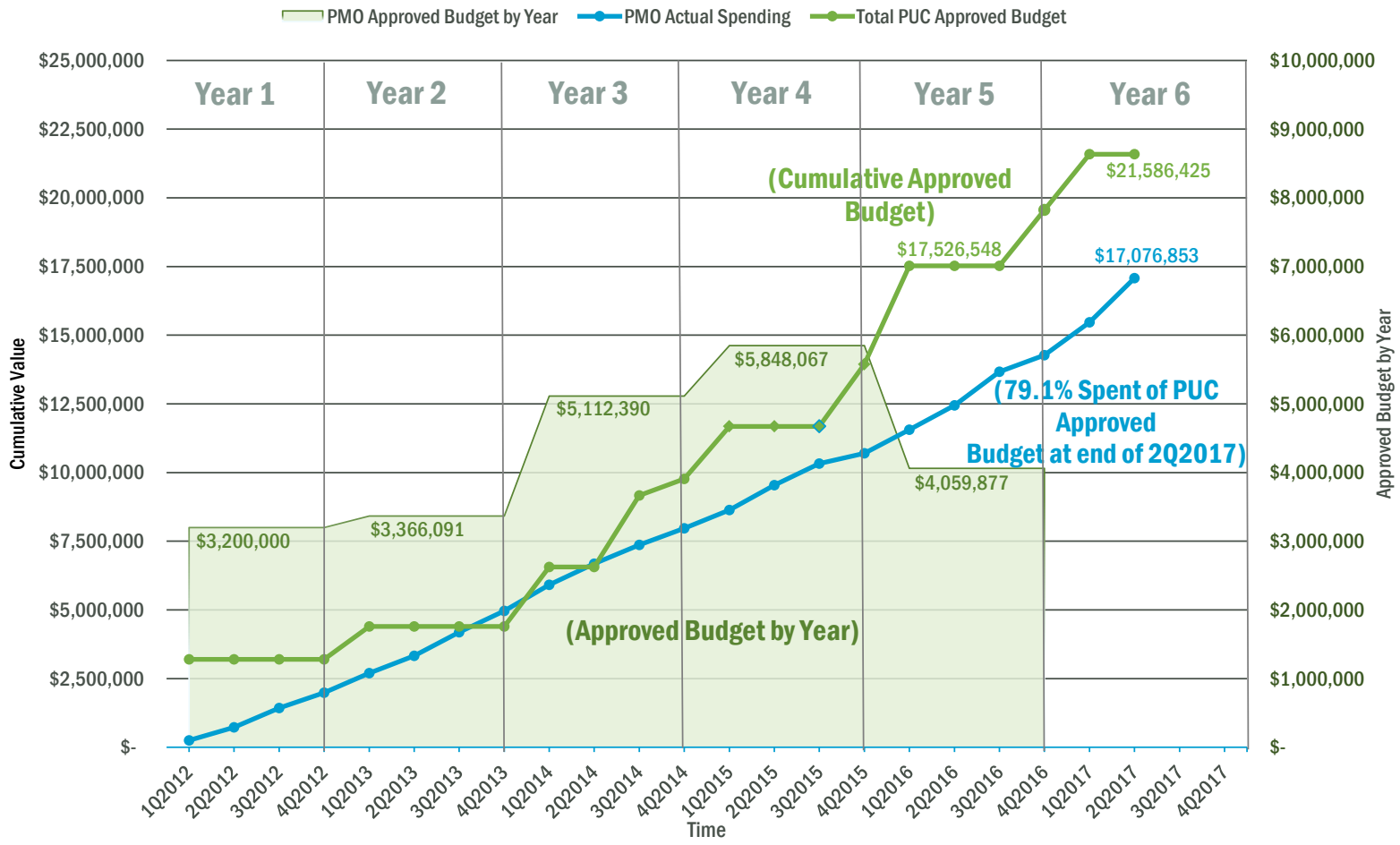
This work order will be performed on a time and materials basis, and will not exceed $468,642 without written consent from GWA.

Labor				
Name	**Labor Code**	**Labor Rate**	**Hours**	**Amount**
Chang	L	$270	24	$6,480
Matasci	N	$270	12	$3,240
Bilz	K	$260	96	$24,960
Engineer II	F	$151	640	$96,640
Senior Specialist	L	$270	280	$75,600
Worster	J	$250	120	$30,000
Faisst	M	$270	120	$32,400
Fugal	K	$260	100	$26,000
Sorensen	I	$218	480	$104,640
Tamai	G	$166	160	$26,560
		Labor Subtotal	2032	$426,520

Other Direct Costs	
Description	**Amount**
Airfare $3000 (x2) from US Mainland	$6,000
Airfare $2000 (x3) from Hawaii	$6,000
Rental Car $75/day (35 days)	$2,625
Per Diem $250/day (35 days)	$8,750
ODC Subtotal	$23,375

Total Work Authorization Estimate	
Labor Subtotal	$426,520
ODC Subtotal	$23,375
GRT (4.167%)	$18,747
Total	$468,642

EXHIBIT "C" (1 of 1)



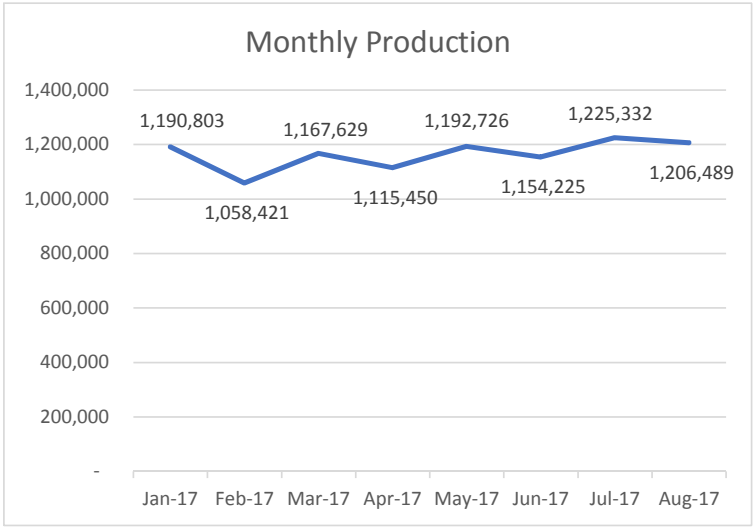
GUAM WATERWORKS AUTHORITY

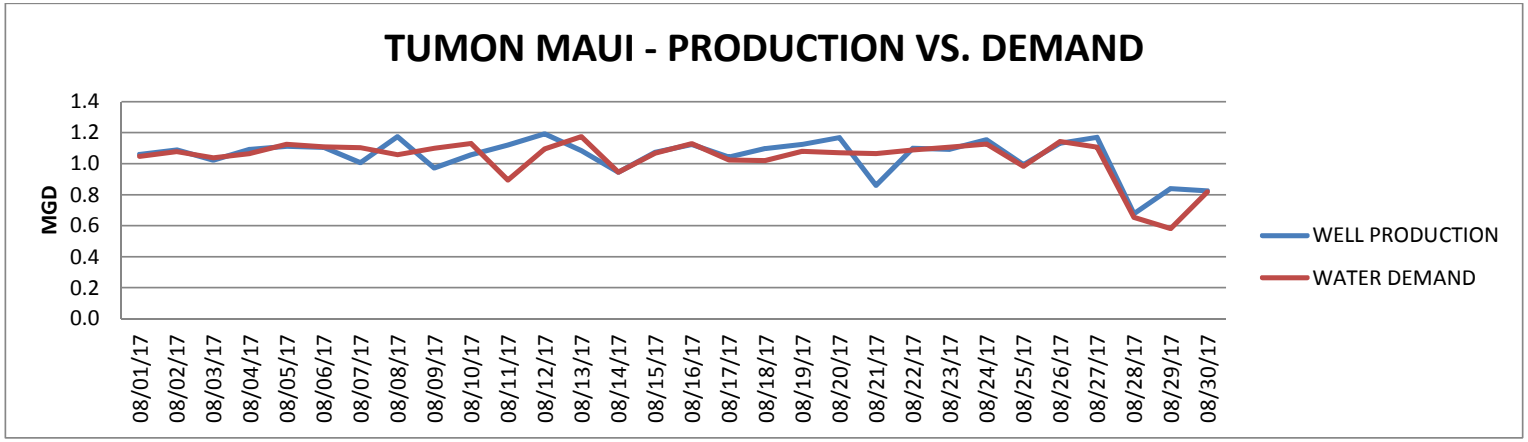
General Manager's Report
GWA CCU Work Session, September 21, 2017

Operations Update

Production

Monthly Production Summary - August 2017				
Deep Wells			35.5	MGD
Active wells =	94	of 120		
Avg days in operation =	30.11	days		
Total Production =	1,102,007	Kgals		
Springs			0.22	MGD
Avg days in operation =	31	days		
Total Production =	6912	Kgals		
Ugum Surface Water Plant			2.1	MGD
Avg days in operation =	31	days		
Total Production =	65,037	Kgals		
Tumon Maui Well			1.05	MGD
Avg days in operation =	31	days		
Total Production =	32,534	Kgals		
	1,206,489	Kgals	38.9	MGD



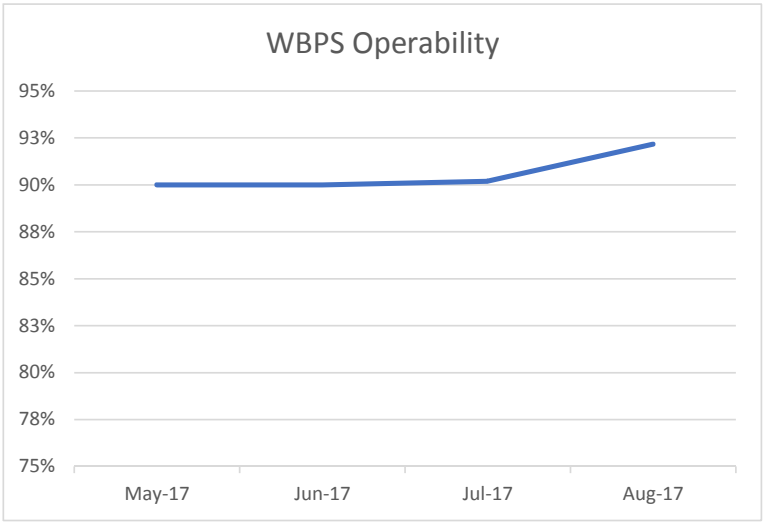


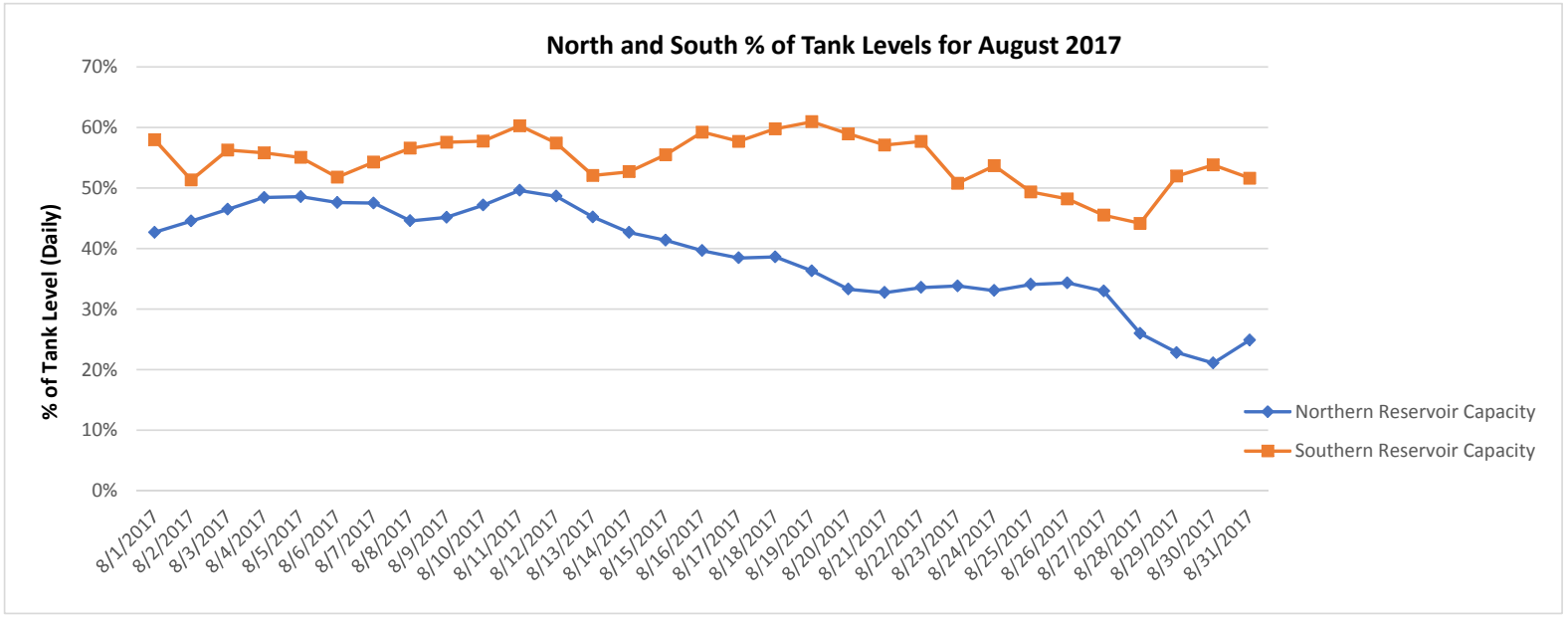
Distribution

Monthly Distribution Summary - August 2017

Water Booster Pump Stations

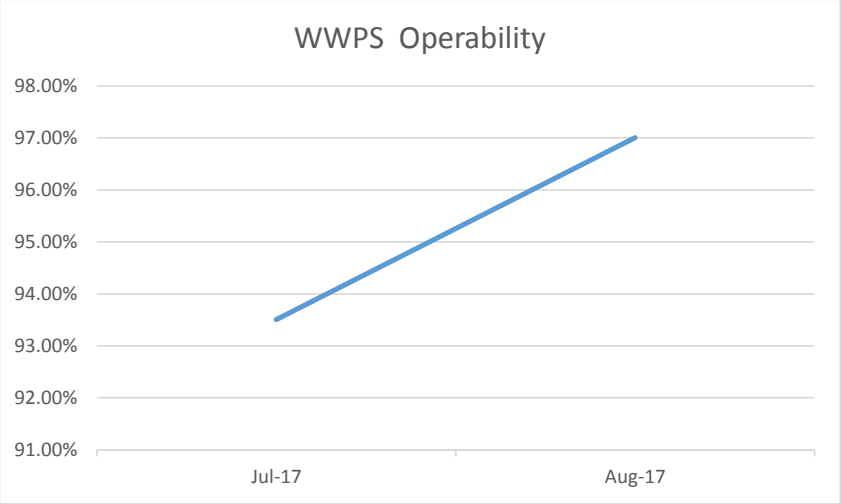
District	No. of Stations	Total Pumps	Pumps Operating	% Operational
Northern	11	21	20	95.2%
Central	7	15	12	80.0%
Southern	7	15	15	100.0%
	25	51	47	92.2%





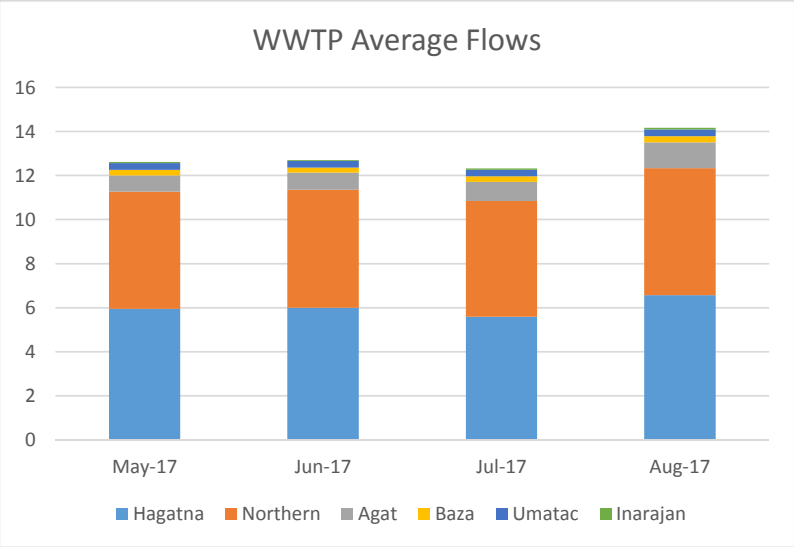
Wastewater Collections

Monthly Collections Summary - August 2017*					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	51	98.1%
	Central	29	65	62	95.4%
	Southern	25	51	50	98.0%
		76	168	163	97.0%

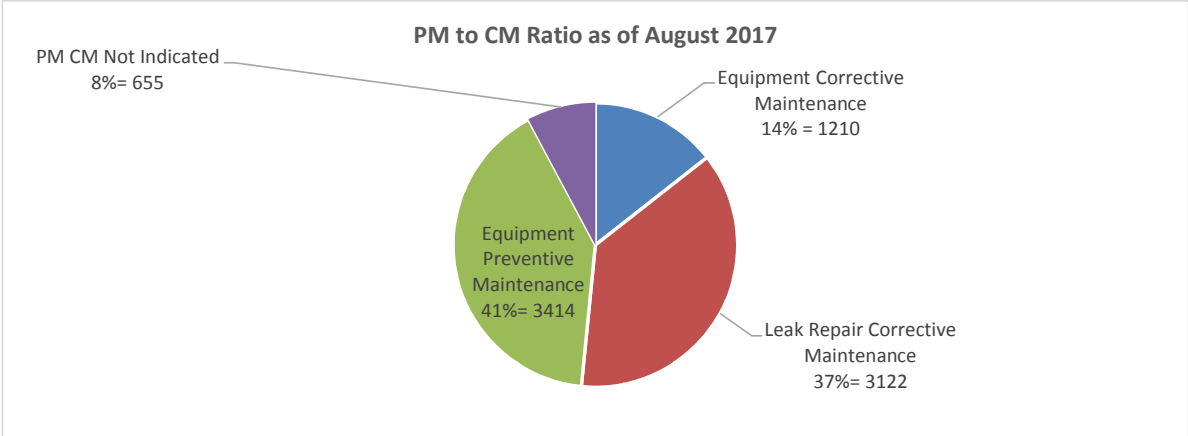


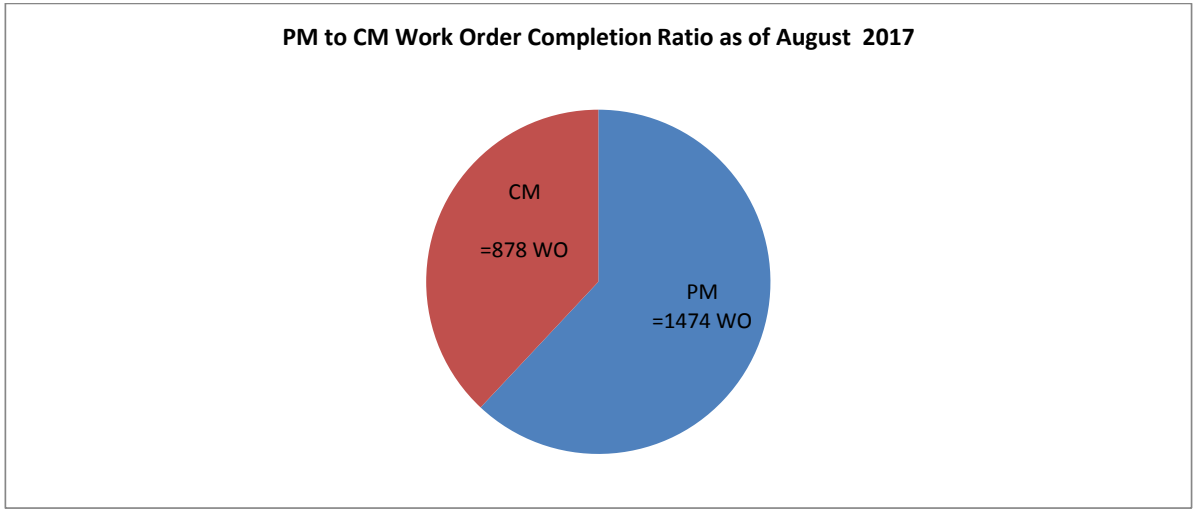
Wastewater Treatment

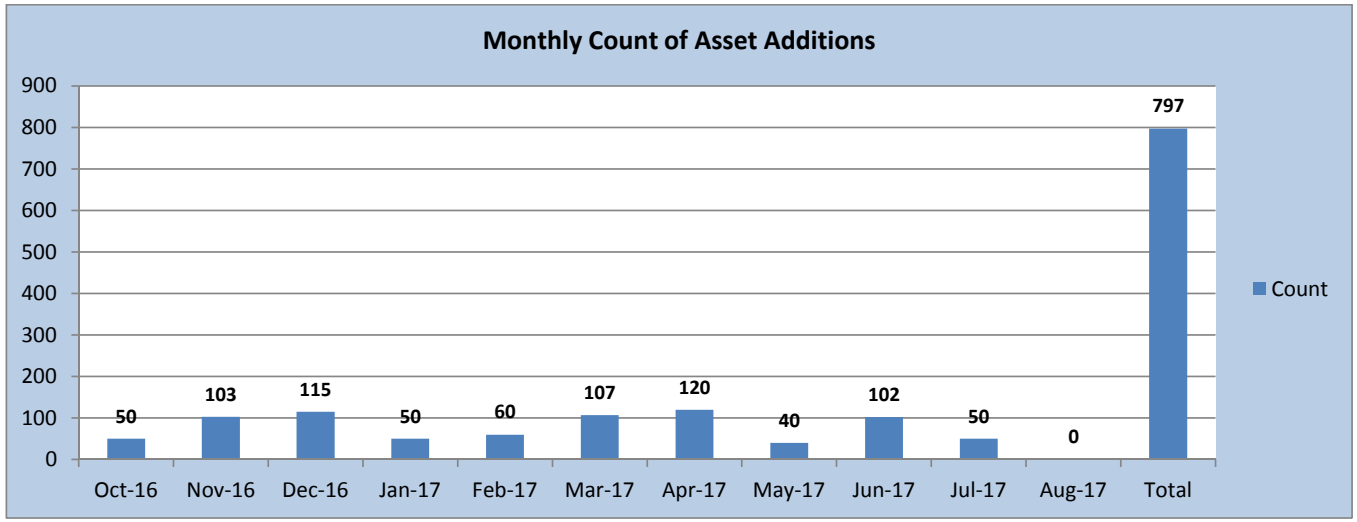
Monthly Wastewater Treatment Summary - August 2017				
WW Treatment Plants - Flows				
	Facility	**Avg. Daily Flows**	**Sludge (lbs)**	**Sludge Disp. ($)**
	Hagatna	6.57	694,420	$ 62,498
	Northern	5.77	690,200	$ 62,118
	Agat	1.16		
	Baza	0.29		
	Umatac	0.30		
	Inarajan	0.08		
		14.17	1,384,620	$ 124,616



Asset Management





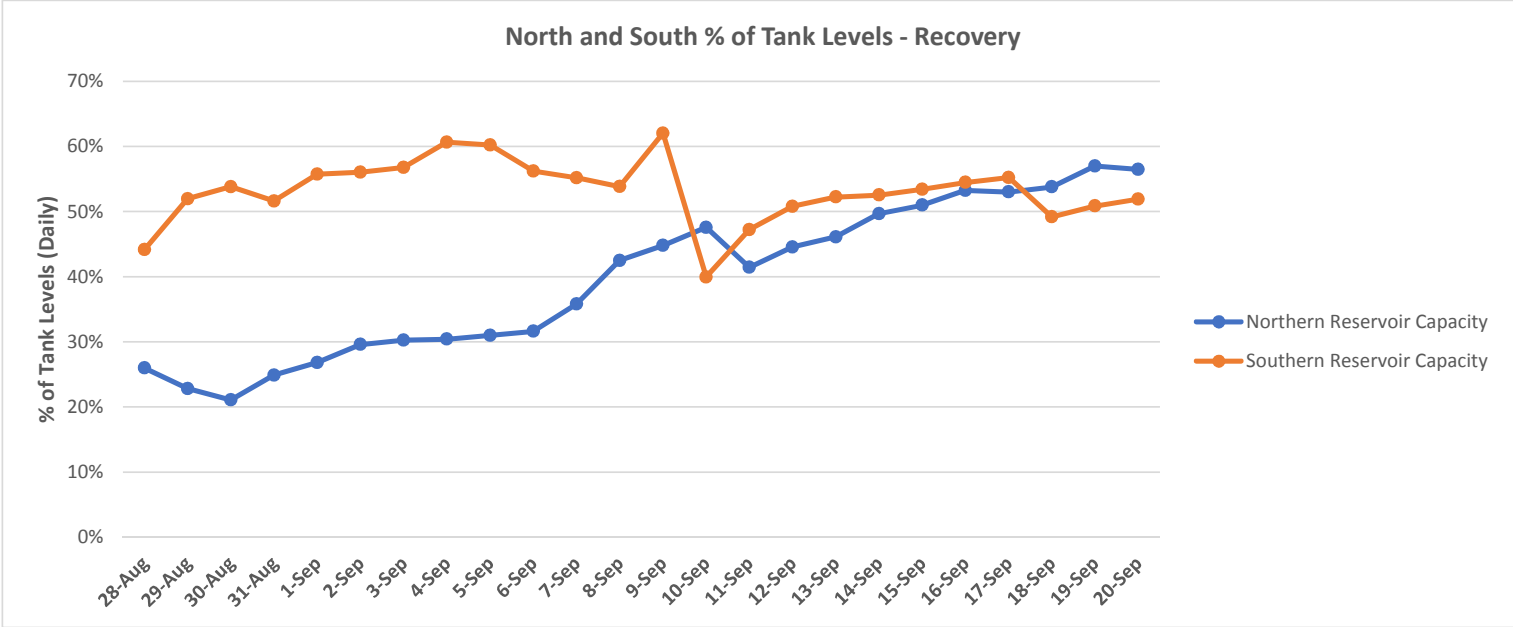


On-Going Asset Management Activities

- Ongoing routine asset condition assessment for all water and wastewater assets and update asset registry. **Goal:** once a year for critical assets and every three years for non-critical.
- Risk identification based on asset condition
- Improved PM scheduling
- Establishment of an Asset Management System based on ISO 5500 standards.

Operational Issues

- Recovery from Heavy weather events affecting production for Yigo and Barrigada/Tiyan areas – in progress
  - Completed well pullouts for the following wells (since 8-29-17):
    - M-21 @ ~200 gpm
    - Y-12 @ ~235 gpm
    - AG-2 @ ~500 gpm
    - EX-11 @ ~210 gpm
    - F-6 @ ~150 gpm
  - M-6 Pullout on-going
  - Joint GWA-GPA Deep Well Task Force has increased its efforts to improve system resilience to these events.
  - Northern Reservoir Daily Capacity increased from low of 20% at end of August to 56% as of September 21st.



- On September 9th, the Santa Rita Reservoir Access Road washed out, causing multiple main breaks and isolation of the tank.
- Actions taken:
  - Access road secure to protect employee and public safety
  - Coordination with GDOE and Mayor's Office for staging water tankers
  - Outage notices sent to media outlets
  - Engineering and Construction team deployed; geotechnical assessment conducted
  - Distribution system adjusted to feed directly from other sources – minimal impacts to service area (3-homes affected).
  - By-pass of reservoir completed by September 15th
  - Access road slope stabilization and restoration design in progress
  - Repair to be initiated / completed upon approval of design

Meter Changeout NC/LC Accounts

- As of September 16, 2017:
  - Field activities completed: 4934
  - Meter changeouts: **3406** (Crews verified 1528 meters did not require changeout)
  - Field activity reports created for completed changeouts: 1936
  - Accounts backbilled: 382 (as of 9/16/17)
- Week of 9/10/17 through 9/16/17
  - Field Changeouts: 369
  - Field activity reports pending posting: 481
  - Meter Test Facility field activity reports pending posting: 91
- Meter Inventory
  - In stock: 2715
  - Programmed: 256

Marbo (Andy-South) Wells – Status

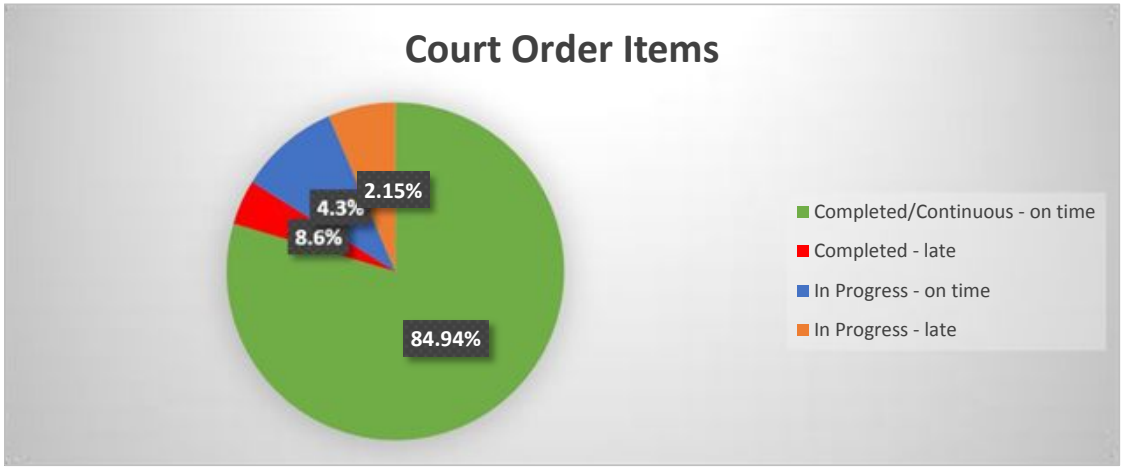
- Correspondence initiated with GSA
- Surveyor has provided sketch for parceling (under GWA review)
- Technical descriptions pending for submission to GSA

One Guam Update

- Potts Junction Service Lateral: As-builts completed; to be delivered 9-22-17.
- Santa Rosa Intertie: Draft MOU discussed in meeting with AAFB on 9-7-17; hydraulic modeling pending; grant of easement in progress
- Hydraulic model: planning briefing with B&C for model updates and future integration issues

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	79	2	8	4	97.8%



Status Information

- 2 items delayed
  - Cl Residual Monitors
  - Meters
- Final Date to complete all Court Order items is December 31, 2020.
- Overflow or Bypass events reported to USEPA:
  - Umatac By Pass 8/28/17 – 9/03/17
  - Agat Rt 2 MH overflow 9/1/17 – heavy rain
  - Umatac Pump station force main break 09/12/2017
  - Harmon Lift Station Manhole overflow due to rain 09/13/2017
  - Contractor bypass line joint leak Agat Sewer Line Refurbishment project 09/15/2017
  - Umatac by Pass 9/9/17 to present.
- The new Agat/SR WWTP is operating well and the UV system well exceeds the permit limits

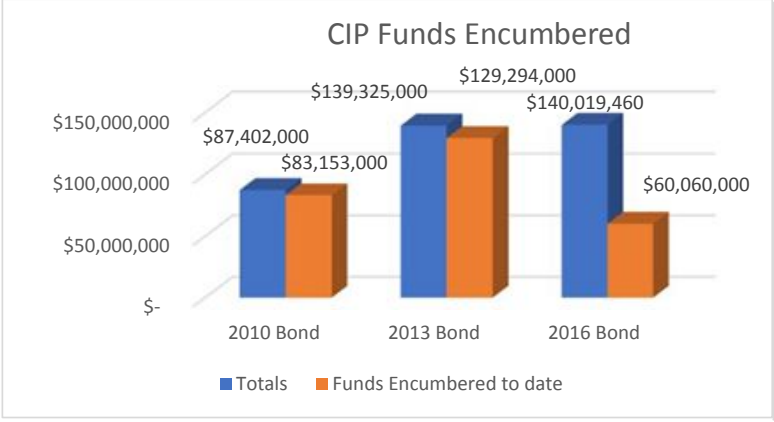
CIP Summary

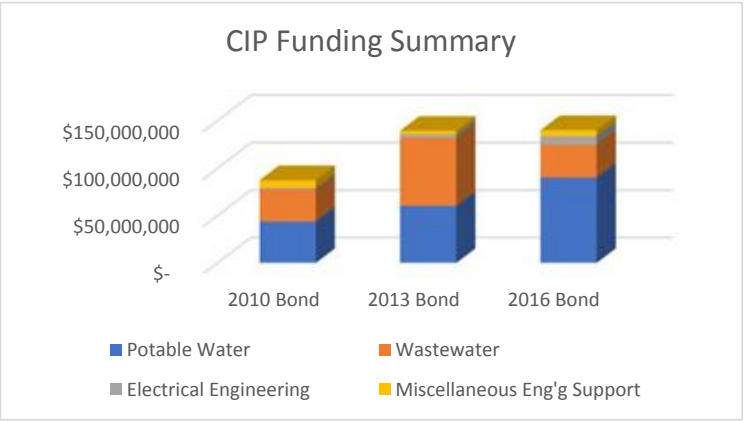
CIP Summary: Project Encumbrance

	2010 Bond		2013 Bond		2016 Bond			
	Funded	Complete	Funded	Complete	Funded	Complete	Total CIP Projects	%
Potable Water	28	17	21	7	20	0	35	49%
Wastewater	16	13	7	3	8	1	22	31%
Electrical Engineering	5	5	6	1	5	0	10	14%
Miscellaneous Eng'g Support	2	0	3	1	4	1	4	6%
Totals	51	35	37	12	37	2	71	100%
% of Total CIP by Fund Source	72%		52%		52%			

CIP Summary: Project Amounts

	2010 Bond		2013 Bond		2016 Bond			
	Funded	%	Funded	%	Funded	%	Total CIP Projects	%
Potable Water	$ 41,903,305	48%	$ 58,317,117	42%	$ 64,647,830	46%	$ 164,868,252	45%
Wastewater	$ 36,009,577	41%	$ 73,837,883	53%	$ 60,227,170	43%	$ 170,074,630	46%
Electrical Engineering	$ 1,748,118	2%	$ 3,395,000	2%	$ 8,750,000	6%	$ 13,893,118	4%
Miscellaneous Eng'g Support	$ 7,741,000	9%	$ 3,775,000	3%	$ 6,394,460	5%	$ 17,910,460	5%
Totals	$ 87,402,000	100%	$ 139,325,000	100%	$ 140,019,460	100%	$ 366,746,460	100%
Funds Encumbered to date	$ 83,153,000	95%	$ 129,294,000	93%	$ 60,060,000	43%		
% of Total CIP Funding	23.8%		38.0%		38.2%			





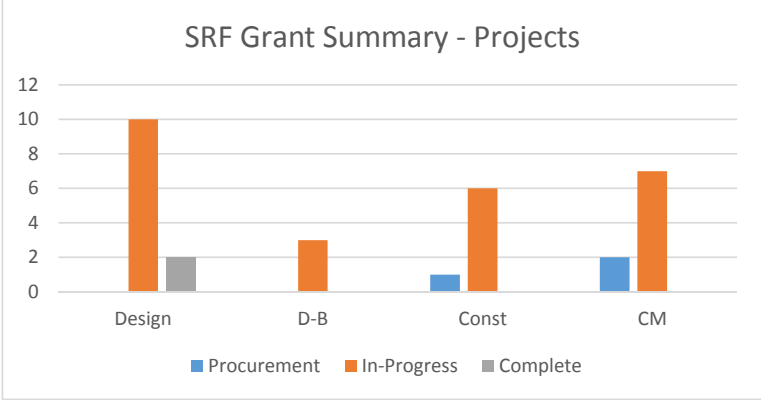
SRF Grant Summary

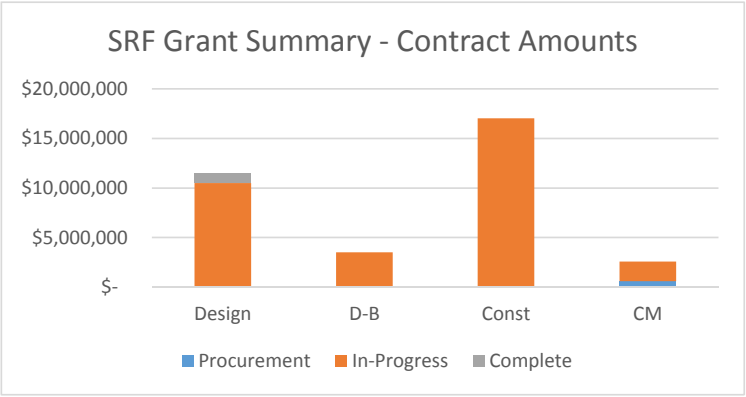
SRF Grant Summary - Projects

	Procurement	In-Progress	Complete	Totals	%
Design	0	10	2	12	39%
D-B	0	3		3	10%
Const	1	6		7	23%
CM	2	7		9	29%
Totals	3	26	2	31	
%	10%	84%	6%		

SRF Grant Summary - Contract Amounts

	Procurement	In-Progress	Complete	Totals	%
Design	$ -	$ 10,490,197	976,151	$ 11,466,348	33%
D-B	$ -	$ 3,502,453		$ 3,502,453	10%
Const	$ -	$ 17,043,244		$ 17,043,244	49%
CM	$ 584,725	$ 1,989,176		$ 2,573,901	7%
Totals	$ 584,725	$ 33,025,070	$ 976,151	$ 34,585,946	
%	2%	95%	3%		





OEA Grant Summary

- Grant application submitted for remainder of funding; OEA meeting schedule in early October
- NDWWTP Upgrades
  - Kick-off and Technical Review Meeting conducted end of August
  - Currently conducting WW sampling and characterization study
- Outfall Diffuser
  - 30% Design received August 30th – under review
  - GWA assisting with CCTV inspection of old outfall for bypass use
- Interceptor
  - Bridging Documents for Design-Build procurement received September 1st ; Under GWA review
  - Right-of-entry documents required (ALC and Navy) for completion of environmental documents
- NGLA Monitoring Wells
  - Design conference schedule for early October
  - Design in progress; GWA waiting for review set - 30% due November 2017

Action Item	Date (Target)	Date (Actual)	Status	Remarks
Project Funds Available	July-16	AUG-30-16	Completed	
Land Acquisition	Jan-17	Jan-17 (Compensation Pending)	Pending	Survey complete, appraisals complete – under review
Procure PM/CM Firm	Jan-17	Jan-17 (NTP Issued Feb 10th)	Completed	
Procure Design Firm	Jul-17		Completed	Contract issued; kickoff pending
Design -- 30/60/90/Final -- Review	Jun-18		On-target	Project design schedule under review by PM/CM
NEPA Analysis and Determination	Feb-17		Delayed	USEPA work on-going; procurement of contractor completed
Procure Construction Firm	Dec-18		On-target	
Construction Complete/Commence Operations	Nov-21		On-target	
Sewer line connection from MCB to GWA infrastructure	Jul-19		On-target	
MCB Initial Operating Capability	Jul-22		On-target	

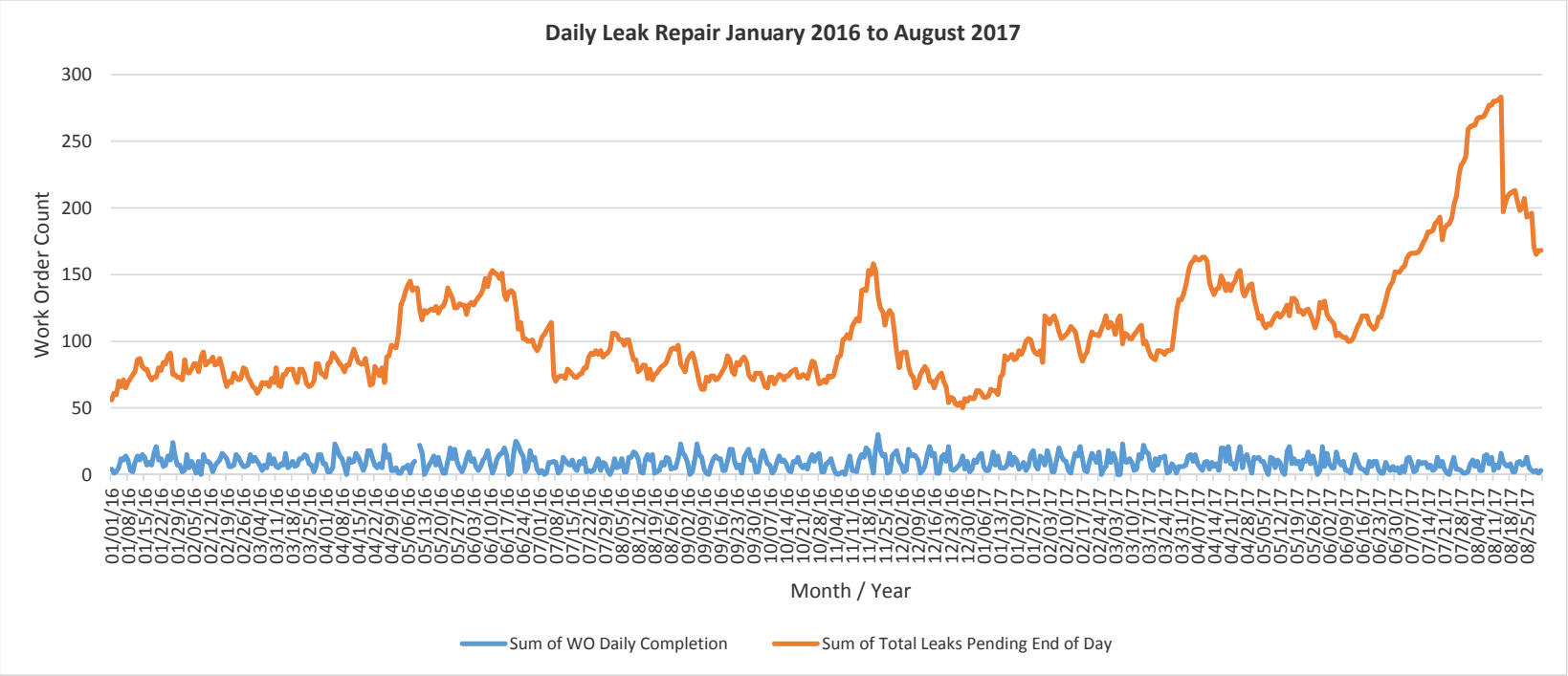
Land Acquisition Summary

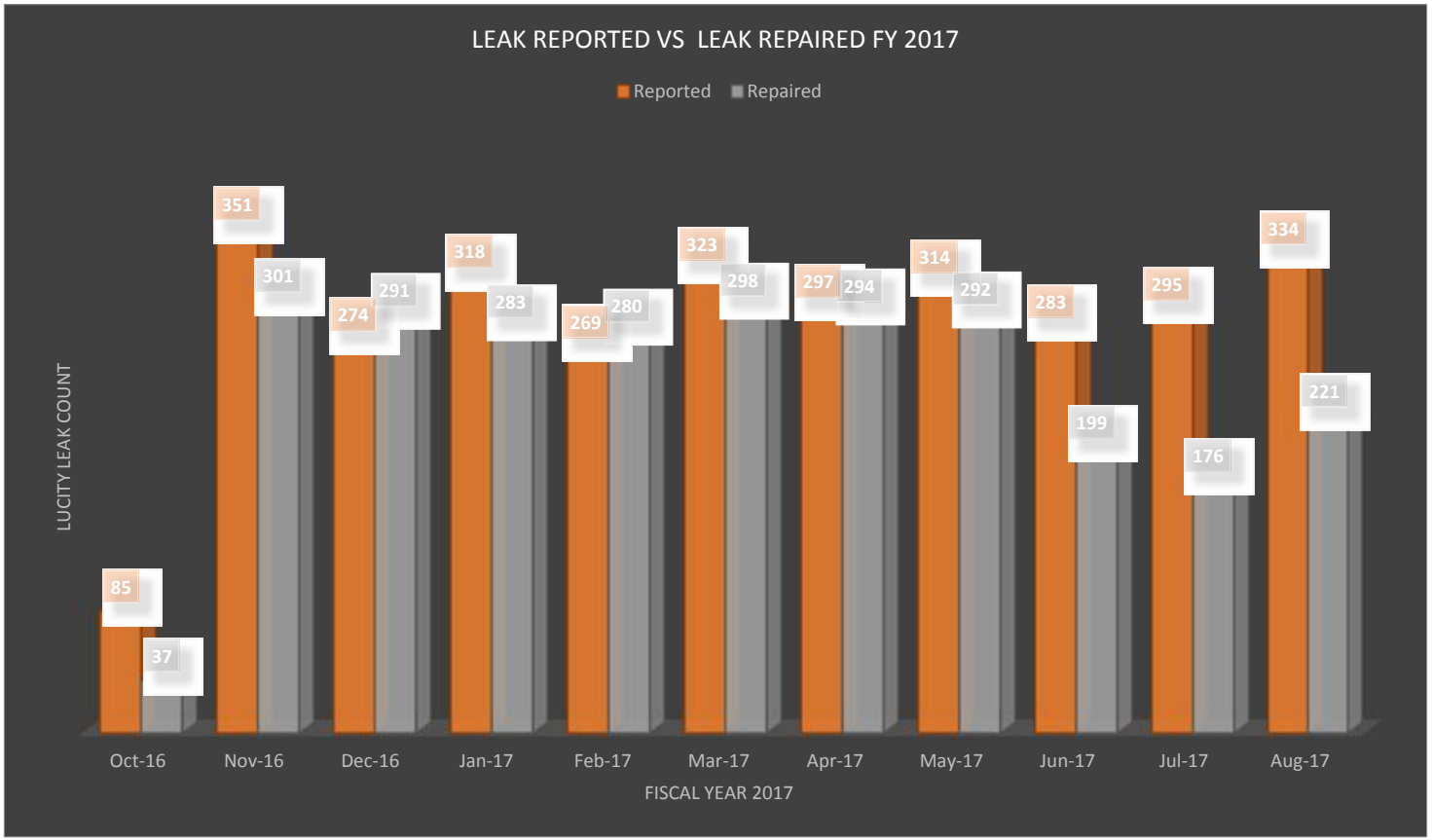
GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
	Ugum	Private	GWA reviewing change order proposal.
	Manenggon	Private	Property Ownership vested in GWA 05/02/17.
	Santa Rita	Gov't. – CLTC	Property Ownership vested in GWA 08/04/17.
	Astumbo	Gov't. - CLTC	GWA and DLM working together on Land Registration process. Abstract of Title sent to GWA for review 06/26/17. Pending technical description from DLM survey division. Follow up status sent to DLM regarding technical description document 09/18/17.
	Upper Tumon	Gov't. - CLTC	Property Ownership vested in GWA 08/03/17.
	Piti	Private	GWA consultants drafting Letter of Intent for private property owners. GWA consultants to draft Letter of Interest to Parks & Rec for possible use of portion of park area for Booster Pump Station 09/18/17.
Expansion of the Northern District Wastewater Treatment Plant (NDWWTP)	Dededo	Gov't - GALC	Lot Parceling Survey Map sent to DLM for review and comments 08/07/17. Appraisal Reports completed 08/11/17. GWA Land Agent to meet with GM this week regarding appraisal reports.
Deep Well	Y-8	Gov't. - CLTC	DCA currently working on severance property map.
	AG-12	Dept. of Agriculture/Manhita Farms	Preliminary Land Registration Survey Map forwarded to GWA for review 08/14/17. Appraisal process to begin once review and comments are forwarded to DCA.
Booster Pump Station	Brigade	Private	Escrow services opened with Security Title on 07/17/17. Follow up status sent to escrow company 09/08/17 and 09/18/17.

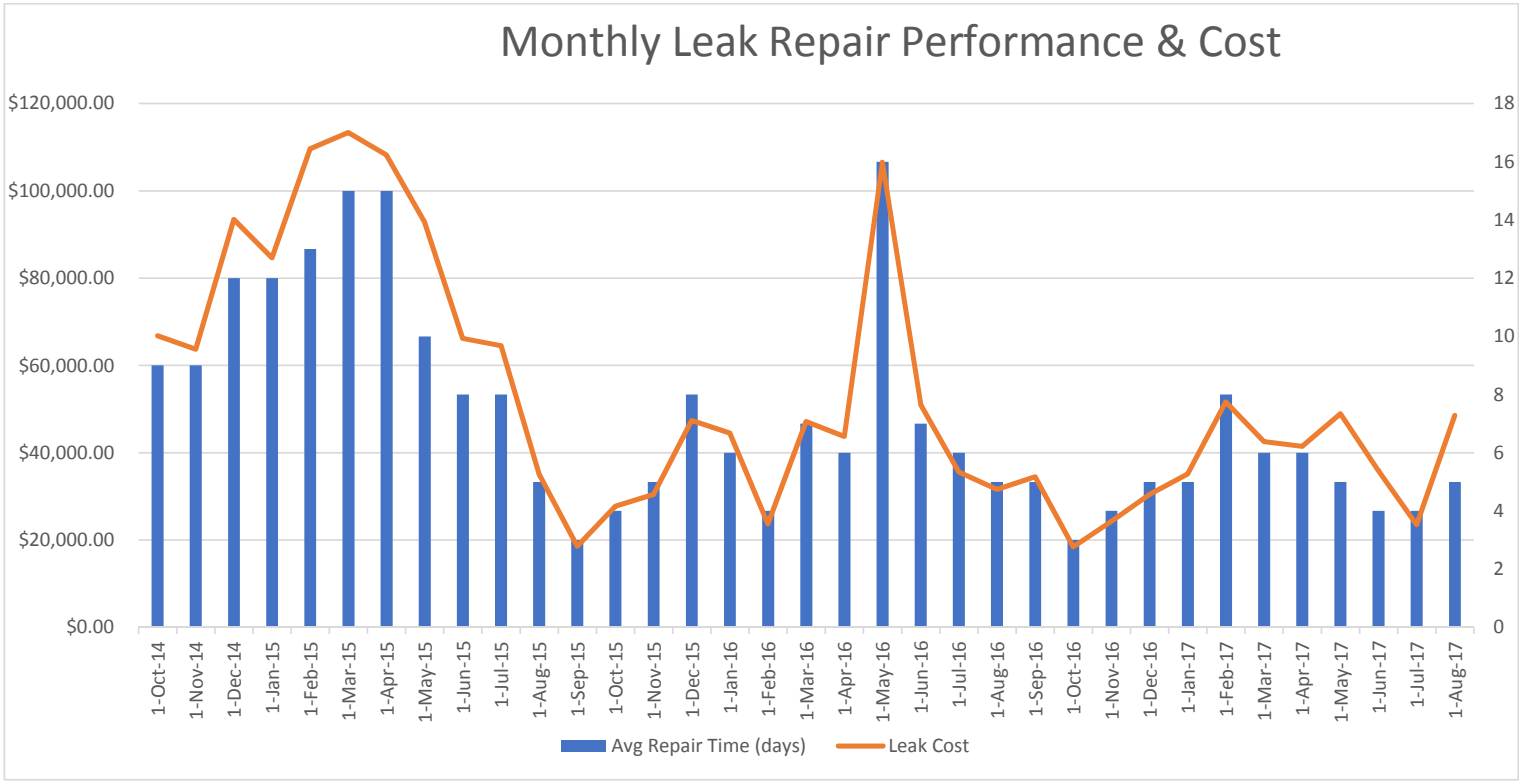
NRW – Update

- Water Audit update on-going
  - Production rates are being reviewed for accuracy and refined
  - Unmetered, Authorized uses are being quantified
  - Meter and billing inaccuracies are being reviewed and refined

Leak Repair Summary




LEAK REPORTED VS LEAK REPAIRED FY 2017
Reported
Repaired
LUCITY LEAK COUNT
85
37
351
301
274
291
318
283
269
280
323
298
297
294
314
292
283
199
295
176
334
221
Oct-16
Nov-16
Dec-16
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
FISCAL YEAR 2017



Assumptions:

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

GWA Utility Services Division
Monthly Status Report
Month ending August 31, 2017

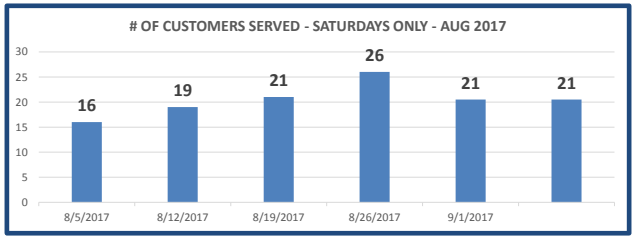
UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JULY 2017	JULY 2017 MONTHLY TOTAL	WEEK ENDING: 8/5/2017	WEEK ENDING: 8/12/2017	WEEK ENDING: 8/19/2017	WEEK ENDING: 8/26/2017	WEEK ENDING: 9/1/2017	WEEKLY AVERAGE AUG 2017	AUG 2017 MONTHLY TOTAL
Collections Unit									
I. Number of accounts cut for nonpayment:	66	264	63	82	81	45	51	64	322
II. Number of accounts restored for nonpayment:	52	209	57	59	58	57	57	58	288
III. Number of No water reports responded to:	3	11	1	5	3	0	3	2	12
IV. Number of Secure/Unsecure valve reports responded to:	2	6	4	2	4	1	0	2	11
V. Number of Verify reads responded to:	2	6	1	1	4	3	1	2	10
VI. Number of new pay plans negotiated for **active** accounts :	81	324	184	149	199	143	156	166	831
VII. Number of active pay plans negotiated and ongoing :			508	657	856	999	1155	835	
VIII. Number of **inactive** accounts with a payment arrangement:			7	7	7	7	7	0	
IX. Number of broken payment plans:	45	179	82	56	72	73	66	70	349
Customer Service Unit									
I. Service Delivery Points:									
a. GBN Public Service Building – Fadian									
i. Total Customers Assisted :	250	1000	300	264	239	256	252	262	1311
ii. Total Abandoned Requests :	22	87	28	22	23	16	29	24	118
ii. Average Wait Time:	11 minutes		9 minutes	11 minutes	9 minutes	8 minutes	6 minutes	11 minutes	
iii. Average Service Time:	13 minutes		11 minutes	11 minutes	13 minutes	13 minutes	14 minutes	13 minutes	
iv. Breakdown by request type:									
1. Apply for wat	56	224	71	61	44	73	55	61	304
2. Restore water	11	43	9	5	8	9	5	7	36
3. Terminate W	21	85	27	19	11	18	29	21	104
4. Copy of Bill	35	141	40	39	36	41	35	38	191
5. Billing Disput	65	258	79	59	72	64	69	69	343
6. Billing Disput	3	12	5	3	5	3	1	3	17
7. General Ques	32	127	39	37	40	31	36	37	183
8. Report a wate	3	10	1	5	2	0	3	2	11
9. Report water	0	1	0	0	0	1	0	0	1
10. Payment Arra	25	100	30	36	26	22	24	28	138
b. Julale Satellite Office – Hagatna									
i. Total Customers Assisted :	234	936	285	213	204	230	220	230	1152
ii. Total Abandoned Requests :	13	50	29	27	9	18	13	19	96
ii. Average Wait Time:	7 minutes		10 minutes	10 minutes	7 minutes	10 minutes	8 minutes	7 minutes	
iii. Average Service Time:	12 minutes		14 minutes	13 minutes	12 minutes	12 minutes	11 minutes	12 minutes	
iv. Breakdown by request type:									
1. Apply for wat	56	223	54	52	43	60	49	52	258
2. Restore water	10	38	11	10	14	12	4	10	51
3. Terminate W	19	77	56	15	7	15	22	23	115
4. Copy of Bill	42	168	56	33	30	44	34	39	197
5. Billing Disput	52	209	65	51	58	54	56	57	284
6. Billing Disput	2	9	4	2	3	4	2	3	15
7. General Ques	24	96	30	26	19	20	24	24	119
8. Report a wate	0	1	0	0	0	2	0	0	2
9. Report water	0	1	0	0	0	0	0	0	0
10. Payment Arra	29	116	41	25	30	19	29	29	144

GWA Utility Services Division
Monthly Status Report
Month ending August 31, 2017

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JULY 2017	JULY 2017 MONTHLY TOTAL	WEEK ENDING: 8/5/2017	WEEK ENDING: 8/12/2017	WEEK ENDING: 8/19/2017	WEEK ENDING: 8/26/2017	WEEK ENDING: 9/1/2017	WEEKLY AVERAGE AUG 2017	AUG 2017 MONTHLY TOTAL
c. Upper Tumon Satellite Office – Upper Tumon									
i. Total Customers Assisted :	296	1184	343	285	266	273	315	296	1482
ii. Total Abandoned Requests :	32	129	12	16	8	6	10	10	52
ii. Average Wait Time:	12 minutes		11 minutes	22 minutes	10 minutes	11 minutes	12 minutes	12 minutes	
iii. Average Service Time:	11 minutes		10 minutes	9 minutes	11 minutes	14 minutes	11 minutes	11 minutes	
iv. Breakdown by request type:									
1. Apply for wat	63	250	84	58	50	71	74	67	337
2. Restore water	14	54	4	7	9	12	10	8	42
3. Terminate W	29	117	19	20	21	17	31	22	108
4. Copy of Bill	62	247	66	54	49	53	50	54	272
5. Billing Disput	62	246	96	70	63	65	65	72	359
6. Billing Disput	4	16	2	5	1	1	2	2	11
7. General Ques	29	117	32	41	32	30	43	36	178
8. Report a wat	2	9	3	2	3	3	2	3	13
9. Report water	0	0	0	0	0	0	0	0	0
10. Payment Arra	32	129	37	27	38	22	38	32	162
II. Customer Call Center									
a. Calls Recieved :	259	1035	277	288	545	504	722	467	2336
b. Calls Immediately Answered :	214	855	115	76	120	101	96	102	508
c. Calls Abandoned	45	180	45	57	117	112	146	95	477
d. Calls Handled by Voice mail:	131	525	117	155	308	291	478	270	1349
e. Ratepayers called back after voice mail message placed:									
f. Average duration of calls answered:	9 minutes		12 minutes	14 minutes	15 minutes	16 minutes	14 minutes	14 minutes	
III. Customer Emails:									
a. Emails Recieved :									
i. customers@guamwaterworks.org	43	171	46	44	50	45	52	47	237
Breakdown by request type (email):									
1. Apply for water	2	7	6	3	4	2	1	3	16
2. Terminate Water	3	10	2	4	0	1	2	2	9
3. Copy of Bill	2	7	3	3	3	2	0	2	11
4. Billing Dispute & follow up	9	36	9	12	9	13	5	10	48
5. General Questions & Other	17	68	21	11	20	17	0	14	69
6. Report a water leak	4	15	1	4	6	5	0	3	16
7. Report water theft	0	0	0	0	0	0	4	1	4
8. Online services inquiry	7	28	3	7	8	4	1	5	23
ii. realtors@guamwaterworks.org	2	7	1	0	0	1	17	4	19
b. Emails Replied (both):	33	130	33	55	33	41	21	37	183

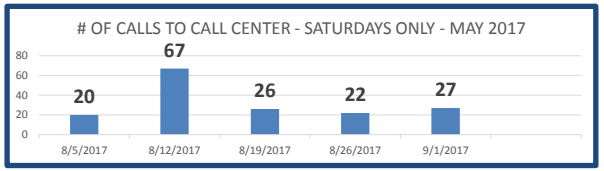
GWA Utility Services Division
Monthly Status Report
Month ending August 31, 2017

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JULY 2017	JULY 2017 MONTHLY TOTAL	WEEK ENDING: 8/5/2017	WEEK ENDING: 8/12/2017	WEEK ENDING: 8/19/2017	WEEK ENDING: 8/26/2017	WEEK ENDING: 9/1/2017	WEEKLY AVERAGE AUG 2017	AUG 2017 MONTHLY TOTAL
			8/5/2017	8/12/2017	8/19/2017	8/26/2017	9/1/2017		
IV. Saturday Services: 9AM TO 1PM ONLY	27		16	19	21	26	21	21	
a. VISITS: Breakdown by request type:									
1. Apply for water	6		5	5	4	3	4	4	
2. Restore water cut for non pa	1		0	0	1	0	0	0	
3. Terminate Water	2		0	0	0	1	0	0	
4. Copy of Bill	8		1	2	7	7	4	4	
5. Billing Dispute	7		2	7	5	4	5	5	
6. Billing Dispute follow up	0		0	0	0	0	0	0	
7. General Questions & Other	1		7	1	2	1	3	3	
8. Report a water leak	0		0	0	0	0	0	0	
9. Report water theft	0		0	0	0	0	0	0	
10. Payment Arrangement	3		1	4	2	10	4	4	



b. CALLS TO CALL CENTER (Saturday services only):

8/5/2017	8/12/2017	8/19/2017	8/26/2017	9/1/2017
20	67	26	22	27



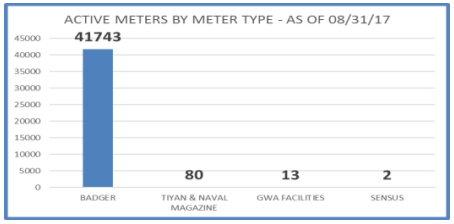
GWA Utility Services Division
Monthly Status Report
Month ending August 31, 2017

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JULY 2017	JULY 2017 MONTHLY TOTAL	WEEK ENDING: 8/5/2017	WEEK ENDING: 8/12/2017	WEEK ENDING: 8/19/2017	WEEK ENDING: 8/26/2017	WEEK ENDING: 9/1/2017	WEEKLY AVERAGE AUG 2017	AUG 2017 MONTHLY TOTAL
Dispute Resolution & Document Control									
I. Dispute Resolution:									
a. Number of disputed accounts resolved:	11	44	19	15	20	28	8	18	90
b. Number of disputed accounts under review:	179	716	179	179	179	179	179	179	895
II. Document Control:									
a. Number of field activities posted :	512	2049	546	442	394	434	453	454	2269
b. Number of field activities pending:	382	1527	228	392	392	594	562	434	2168
Disconnect/Reconnect Unit									
I. Number of field activities received:	282	1129	352	310	264	285	310	304	1521
II. Number of field activities completed:	282	1127	356	319	258	280	304	303	1517
III.Number of field activities pending field action:	2	6	3	4	6	5	6	5	24
Meter Reading Unit									
I. Number of meters read:									
a. Electronically Read Meters:	9284	37137	11850	6351	12163	10440	9079	9977	49883
b. Manually Read Meters:	27	109	102	76	104	82	38	80	402
II. Unread meters (Meters scheduled to be read but not read):	100	401	2	1	0	3	4	2	10
III. Number of data logs received:	44	175	43	41	52	44	57	47	237
IV. Number of data logs retrieved:	28	111	38	36	59	45	61	48	239
V. Number of data logs pending field action:	10	39	5	5	6	7	5	6	28
VI. Number of estimated readings (for the week):	40	161	84	17	17	36	18	34	172
a. Reasons for Estimations:									
i. Cant locate meter:	4	15	7	2	2	0	0	2	11
ii. Temporary Obstruction	0	1	17	5	3	4	1	6	30
iii. Vicious Dog	1	4	1	0	1	1	0	1	3
iv. Flooded meter	1	5	0	2	1	1	0	1	4
iiv. Corrective action requested (database corrections nee	34	134	0	3	0	0	0	1	3
iiiv. Possible changed out meter:	34	134	25	5	6	31	8	15	75
ix. Other:	29	115	1	1	0	1	0	1	3
VII. Electronic Read Percentage: (for the week):	99%	99%	98%	98%	98%	98%	98%	99%	99%
Revenue Protection Unit									
I. Number of Inactive Still Consuming Reports rec'd & investigated:	0	1	0	0	0	1	0	0	1
II.Number of Illegal Connection reports rec'd & investigated:	1	3	0	4	0	0	1	1	5

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report (as of Aug 31 2017):

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



GUAM WATERWORKS AUTHORITY

Engineering Monthly Report
September 2017

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

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A. Summary Table of 2010, 2013 and 2016 Bond

Potable Water

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
PW 05-01	Ground Water Disinfection	$ 500,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	$ -	N/A	N/A	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A
PW-05-05	"A Series Well Transmission Line	$ 518,143.96	100.00%	0.00%	$ 400,000.00	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	14.96%	85.04%	$ -	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	0.00%	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	79.08%	20.92%	$ 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	0.00%	100.00%
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%	26.80%	$ -	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	99.06%	0.94%	$ 28,350,000.00	6.68%	93.32%
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	8.51%	91.49%	$ 1,220,000.00	0.00%	100.00%
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	0.00%	100.00%
PW 12-07	Assessment of Maloloj Elevated & Yigo Elevated	$ 200,000.00	100.00%	0.00%	$ 485,117.00	100.00%	0.00%	$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	$ 50,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	$ -	N/A	N/A	$ -	N/A	N/A	$ 2,000,000.00	0.00%	100.00%
		$ 41,903,304.66			$ 58,317,117.00			$ 64,647,830.00		

Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastew ater System Planning	$ 1,500,000.00	100.00%	0.00%	$ 651,000.00	100.00%	0.00%	$ 349,000.00	89.68%	10.32%
WW 05-05	Wastew ater Vehicles	$ 235,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-01	Lift station upgrades	$ -	N/A	N/A	$ 946,000.00	84.08%	0.06%	$ 2,404,000.00	12.21%	87.79%
WW 09-06	Wastew ater Collection System Repl/ Rehabilitation	$ 1,105,000.00	99.93%	0.07%	$ 780,000.00	97.55%	2.45%	$ 2,920,000.00	0.00%	100.00%
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	14.91%	85.09%
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	93.12%	0.74%
WW 12-08	Wastew ater System GIS & Mapping	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-09	Wastew ater Facility Back Up Pow er	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 12-10	Wastew ater System Asset Inventory	$ -	N/A	N/A	$ -	N/A	N/A	$ -	N/A	N/A
WW 17-01	Wastew ater Sew er System Expansion									
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	$ 1,000,000.00	0.00%	100.00%						
		$ 36,009,577.00			$ 73,837,883.00			$ 60,227,170.00		

Electrical Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
EE 05-02	SCADA Pilot Project	$ 61,950.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
EE 09-01	Wastew ater Pumping Station Electrical Upgrade	$ -	N/A	N/A	$ 620,000.00	16.13%	83.87%	$ 100,000.00	0.00%	100.00%
EE 09-02	Electrical Upgrade - Water Wells	$ 354,226.63	100.00%	0.00%	$ 1,500,000.00	100.00%	0.00%	$ 650,000.00	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	36.76%	63.24%
EE 09-09	SCADA Improvements - Phase 4	$ -	N/A	N/A	$ -	N/A	N/A	$ 6,500,000.00	0.00%	100.00%
		$ 1,748,118.34			$ 3,395,000.00			$ 8,750,000.00		

Miscellaneous Engineering Support

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
MC 05-01	Laboratory Modernization	$ -	N/A	N/A	$ 1,173,000.00	100.00%	0.00%	$ 1,127,000.00	100.00%	0.00%
MC 05-02	Land Survey	$ 500,000.00	99.94%	0.06%	$ 2,000.00	0.00%	100.00%	$ 1,998,000.00	63.09%	36.91%
MC 09-01	General Plant Improvements	$ 7,241,000.00	99.58%	0.42%	$ 2,600,000.00	99.48%	0.52%	$ 2,769,460.00	53.31%	46.69%
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	80	**	$83.153	95.14%	12.47
2013	$139.325	43	**	$129.294	92.80%	36.08
2015	$140.019	13		$60.030	42.87%	55.41
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of August 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:

(Type of Procurement) (Relevant CIP NO. or Funding Source)	**(Project Title)**	
(Percentage complete for procurement)	**Activities/Notes:** (see percentage key above)	**Consultant** (listed when selected)
Project Description	Summary of project description	

BID PACKAGE PW 09-02	**New Well Construction**	
<50% Complete	**Activities/Notes:** GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-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.	

RFP PW 09-02	**New Well Construction (Construction Management)**	
<50% Complete	**Activities/Notes:** SOW being developed	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of up to three (3) new production wells for GWA. GWA plans to increase source water production to improve system redundancy that allows for operating the water production wells more effectively. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

RFP WW 11-04	**Umatac Merizo WWTP Design Build Improvements Construction Management**	
100% Complete	**Activities/Notes:** Contract fully executed September 5th and NTP issued September 6th.	
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.	

RFP PW 12-04, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management**	
90% Complete	**Activities/Notes:** Due to refinement of construction bid package GWA continuing negotiation of scope and fee with highest ranked proposer.	
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.	

BID PACKAGE PW 12-04, PW 12-06 AND PW 09-11	**Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction**	
70% Complete	**Activities/Notes:** IFB advertised September 6th with bids due October 6th.	
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.	

RFP MC 05-02	**Land Survey Phase II**	
100% Complete	**Activities/Notes:** Contract fully executed August 24th and NTP issued August 28th .	
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	

BID PACKAGE PW 14-01	**Fire Hydrant Replacement Phase I**	
<50% Complete	**Activities/Notes:** Bid package being prepared.	
Project Description:	The work performed under this project consist of replacing all know dry barrel fire hydrants down to the lateral as well as any defective wet barrel fire hydrant. Where necessary the gate valve for the fire hydrant may also be replaced.	

RFP WW 09-01	**Yigo SPS Flood Protection and Rehabilitation Design**	
50% Complete	**Activities/Notes:** SOW being finalized by engineering. Work to obtain PO to advertise.	
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.	

RFP PW 09-11	**Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management**	
90% Complete	**Activities/Notes:** GWA negotiating scope and fee with highest rank firm.	
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.	

BOX KEY FOR PROJECT:

(Type of Project) (Relevant CIP NO.)	**(Project Title)** **(Contractor or consultant)**	**Start Date:** (month and year)
(Percentage complete for project)	**Activities/Notes:** (brief description of activity)	**Completion Date:** (month and year)
(Court Order Paragraph No.)	(Project type)	
Project Description	Project Description Narrative	

C. CIP Water Section

INSPECTION CIP PW 05-02	**Inspection & Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)**	**Start Date:** April 2010
80% Complete	**Activities/Notes:** 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.	**Completion Date:** Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

DESIGN CIP PW 05-12	**Brigade II BPS Upgrade** **(EM Chen)**	**Start Date:** April 2012
100% complete (Basis of Design) 0% (Design)	**Activities/Notes:** GWA still awaiting conveyance deed from escrow company. Design not started until property fully acquired.	**Completion Date:** Due to property acquisition issues GWA anticipate February 2018
N/A	Engineering design services	
Project Description:	The design project is intended to assess system water supply feed from the north as well as Ugum WTP and the water demands downstream from the Brigade BPS so as to reconfigure the piping into the BPS and resize the pumps to me system head requirements.	

DESIGN / BUILD CIP PW 12-04	**Reservoirs 2005 Improvements,** **Chaot & Agana Heights Reservoirs** **(GSI Construction)**	**Start Date:** April 2013
99% Complete	**Activities/Notes:** Contractor dealing with warranty issues related to flow meters at reservoirs and wells sites. SCADA off site work to be closed at end of month.	**Completion Date:** Due to delays from contractor new anticipate completion is

		September 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.	

DESIGN CIP PW 12-05	**Yigo and Astumbo 2MG Tank Design Project (Lyons)**	**Start Date:** September 2013
99% complete	**Activities/Notes:** Design complete. Design firm to provide RFI support during the bid phase.	**Completion Date:** January 2016
CO 9 (b)(4)	Engineering design services	
Project Description:	Develop the construction documents for two (2) 2.0 million-gallon (MG) nominal capacity concrete reservoirs in the Yigo service zones and one (1) 2.0 MG reservoir in the Astumbo service area. The design services will consist of preparation of plans, specifications, and estimates (PS&E), including Basis of Design, design calculations, construction schedule, topographical survey, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD (latest version), and relevant permits. Other services will include construction bid support service, meetings, and response to request for interpretation/information during construction. The consultant is required to incorporate and modify existing GWA concrete reservoir specifications to meet the project objective.	

CONSTRUCTION CIP PW 05-11	**Chlorine Residual Analyzer (Asanuma)**	**Start Date:** Oct. 17, 2014
100% complete	**Activities/Notes:** Substantial completion letter issued August 16, 2017. Punch list items complete. GWA waiting for final billing.	**Completion Date:** Anticipate July 2017
CO 22	Construction services	
Project Description:	The project intent is to install at all GWA production wells Chlorine residual analyzers, including all appurtenance, to ensure the production wells have controls built in to the facility that will shut of a well when chlorine residuals are detected to be low.	

DESIGN PW 09-11	**Northern and Southern Guam Reservoir Design** **(TG Engineers)**	**Start Date:** May 2015
60% Complete	**Activities/Notes:** Santa Rosa – 100% design in hand. Santa Rita – 100% design in hand. Inarajan – Land procurement second site related to new BPS's still on-going. Sinifa – 100% design in hand. Ugum – GWA still in discussion with re-evaluation and discussion with property owner of alternative property on-going.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	

Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.

DESIGN PW 12-04	**Central Guam Reservoirs Design (GHD Inc.)**	**Start Date:** May 2015
65% Complete	**Activities/Notes:** Chaot #2 – Off-site improvements included in IFB that was advertised 09/06/17 with bid due 10/06/17. Tumon #2 – Design included in IFB that was advertised 09/06/17 with bid due 10/06/17. Hyundai - Design included in IFB that was advertised 09/06/17 with bid due 10/06/17. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon – Geotech work on going. Tumon #1 – GWA working on land issues.	**Completion Date:** Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti and Tumon #1.	

CONSTRUCTION PW 09-03	**Line Replacement Phase IV (Giant Construction)**	**Start Date:** 02/14/16
60% Complete	**Activities/Notes:** 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.	**Completion Date:** 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.	

DESIGN PW 05-15	**Asan Spring Rehabilitation Design (HDR)**	**Start Date:** August 24, 2016
10% Complete	**Activities/Notes:** GWA receive approval from Parks Service start design field investigation work.	**Completion Date:** Due to delays from the Park Services related to property access the anticipated completion of the design is February 2018.
	Engineering design services	
Project Description:	- Perform site visits and condition assessment for site conditions to determine demolition and rehabilitation requirement, process equipment condition, structural condition, and electrical system. Site condition assessment shall include all disciplines to execute the project. - Review and validate the current property boundary information to confirm the available space for the project development. - Perform an environmental impact study and prepare all required permits as needed. - Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed. - Coordinate with Guam Historic Resources Division State Historic Preservation Office (SHPO) on historical resources study. Prepare all necessary reports and documents as required by SHPO. - Coordinate with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on vegetation clearance. Prepare all necessary reports and documents required by DAWR. - Identify the existing and projected service area, period of design. - Identify and recommend conceptual water treatment system. - Perform a Class 4 engineering cost estimate according to the American Association of Cost Engineers (AACE) International Cost Estimate Classification System for construction fee. Cost must include all disciplines, permit, construction and administration that are necessary to execute the project. All costs will be in current dollars and escalated to the estimated midpoint of construction.	

CONSTRUCTION PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction (Pernix)**	**Start Date:** 12/1/16
35% Complete	**Activities/Notes:** Yigo #1 core wall #1 and #2 complete. Yigo #2 lean concrete work for tank complete, and yard work on-going. Austombo #1 lean concrete work for tank complete, and yard work on-going.	**Completion Date:** 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.	

CONSTRUCTION MANAGEMENT PW 09-11, PW 12-05	**Yigo/Astumbo Tank Construction Management (GHD)**	**Start Date:** December 2016
35% complete	**Activities/Notes:** Processing submittals and on-site inspection	**Completion Date:** 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

DESIGN WW 11-08	**Agat-Santa Rita WWTP Replacement (DCA)**	**Start Date:** October 2014
99% Complete	**Activities/Notes:** Design complete. Services during construction on-going through Nov 2017.	**Completion Date:** Nov. 2015 (design); April 2017 (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	

INSPECTION 2010 BOND WW 12-05 2010 BOND WW 05-04 2013 BOND WW 05-04	**SSES Central Sewer System (HDR)**	**Start Date:** November 2014
98% Complete	**Activities/Notes:** Draft final report submitted. GWA final review on-going	**Completion Date:** Anticipate June 2017
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.	

CONSTRUCTION MANAGEMENT WW 11-08	**Agat Santa Rita WWTP CM (GHD)**	**Start Date:** November 2014
100% (PH 1) 100% Complete (PH 2, Part 1) 50% Complete (PH 2, Part 2)	**Activities/Notes:** Change Order to extend contract to December 2017 executed. Typical CM inspections on-going.	**Completion Date:** December 2017
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.	

MONITOR WW 11-04	**Toguan River Flow Monitoring for Umatac WWTP (UOG WERI)**	**Start Date:** November 2014
100% Complete	**Activities/Notes:** Project closed.	**Completion Date:** SOW completed June 2017 however project close out

		awaiting billing.
CO 15	Data collection services	
Project Description:	WERI will: (a) Collect available information about the watershed's current condition from previous studies as well as field visitations; (b) Set up equipment to monitor rainfall, stream flow and stream level and (c) Develop stage-to-flow relationships (Stage-Flow Curves) and flow-rainfall relations for the two selected sites in the Toguan River. WERI will also develop a water monitoring project to establish baseline information on hydrological conditions for the Toguan River mixing zone study in three phases.	

CONSTRUCTION WW 11-08	**Agat Santa Rita WWTP Phase II (Sumitomo Construction)**	**Start Date:** January 2016
Part 1 of Phase II-100% Complete Part 2 of Phase II-50% complete	**Activities/Notes:** Work on second ditch, second clarifier, off site water line and equalization basin on-going.	**Completion Date:** Phase A: 12/31/16 Phase B: 12/31/17
CO 11	Construction services	
Project Description:	This project includes construction of the head works, clarifier, oxidation ditches and UV disinfection and administration facilities. Rehabilitation work at the existing WWTP will also occur to ensure the wastewater can be pumped to the new plant. The new plant will also tie into the Tipalao SPS.	

DESIGN WW 09-08, WW11-03	**Baza Gardens Cross Island Sewer Design (DCA)**	**Start Date:** 02/05/16
100% Phase I 100% Phase II 100% Phase III	**Activities/Notes:** DCA providing engineering design services during construction.	**Completion Date:** 12/31/16
CO 11	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification for a sewer conveyance from the Baza Garden WWTP to the new Agat Santa-Rite WWTP. The design will take into account growth in the Baza Gardens/Talofofo areas as wells as new connection along the Route 17 route.	

DESIGN WW 11-04	**Toguan River Sample Collection for Umatac WWTP (EA Engineering and Science)**	**Start Date:** 03/16/16
99% Complete	**Activities/Notes:** GWA received draft final of mixing zone study. Comments expected from GWA, USEPA and GEPA.	**Completion Date:** Anticipate completion 09/30/17
	Engineering services	
Project Description:	The scientific/engineering firm will perform surface water sampling, wastewater treatment plant discharge monitoring and site observation at Toguan River and Umatac-Merizo Wastewater Treatment Plant (UMWWTP). The goal of this sampling and monitoring effort is to better understand the characteristics of the effluent and the receiving water,	

	which will be used to determine the necessary plant upgrades

MONITOR WW 11-04	**Toguan River Flow Analysis for Umatac WWTP (UOG WERI)**	**Start Date:** 03/16/16
100% Complete	**Activities/Notes:** Project closed.	**Completion Date:** Anticipate completion 09/30/17
CO 15	Data collection services	
Project Description:	WERI will: conduct laboratory analysis of the water samples collected by consultant hired to collect samples at designated location along the Toguan River.	

DESIGN WW 09-06	**Bayside SPS Improvements Design (EMPSCO)**	**Start Date:** July 29, 2016
99% Complete	**Activities/Notes:** Design consultant continuing to work on Army Corp of Engineers permit. GWA received 100% design and under review.	**Completion Date:** Due to issue with ACOE anticipate October 2017 for design only.
	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification to upgrade the Bayside Sewer Pump Station given the facility is in major disrepair and the adjacent river is eroding away the access road to the facility which is causing maintenance challenges.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)**	**Start Date:** October 2016
16% Complete	**Activities/Notes:** Excavating wet well at new SPS. Continue force main installation along Route 17 and Route 5. Started manhole and gravity line installation along Route 17.	**Completion Date:** Phase I: 03/01/18
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

CONSTRUCTION MANAGEMENT WW 09-08 WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)**	**Start Date:** December 5, 2016
16% (PH 1) 18% (PH 2) 5% (PH 3)	**Activities/Notes:** Field inspection and project coordination on-gong.	**Completion Date:** April 2018
	Construction Management services	

Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)**	**Start Date:** March 2017
18% Complete	**Activities/Notes:** Excavating wet well at new SPS. Continue force main installation along Route 17.	**Completion Date:** Phase II: 03/16/18
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	

CONSTRUCTION WW 09-08, WW 11-03	**Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)**	**Start Date:** June 2017
5% Complete	**Activities/Notes:** Transmitted submittals for review. Construction permit still with GEPA.	**Completion Date:** Phase III: 03/16/18
	Construction services	
Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.	

CONSTRUCTION WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (CoreTech)**	**Start Date:** June 2017
5% Complete	**Activities/Notes:** Initial design work on-going. Coordination with operation for field survey on-going.	**Completion Date:** December 31, 2018
	Construction services	
Project Description:	The project is intended to improve the aeration basin, construct a new sewer pump station, regrade the overland field, construct a new effluent storage tank and disinfection facility. The overland percolation basin will undergo regarding work to ensure appropriate distribution of effluent through the whole basin.	

CONSTRUCTION MANAGEMENT WW 11-04	**Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)**	**Start Date:** September 7, 2017
5%	**Activities/Notes:** Establishing communication links with project management team and contractor.	**Completion Date:** December 31, 2018
	Construction Management services	

Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.

DESIGN OEA GRANT	**Design Services for the Upgrade of the Northern District WWTP (DCA)**	**Start Date:** August 8, 2017
5% Complete	**Activities/Notes:** Preliminary survey work on-going.	**Completion Date:** 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

DESIGN EE 09-08	**SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)**	**Start Date:** June 2015
98% complete	**Activities/Notes:** 100% design submitted for under review.	**Completion Date:** Anticipate March 2017 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.	

DESIGN MC 05-01	**New GWA Lab Design Project (Laguana Architects)**	**Start Date:** June 2015
100% complete	**Activities/Notes:** Design complete however services continue into construction phase.	**Completion Date:** 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.

CONSTRUCTION MC 05-01	**New GWA Lab Construction (Mega United Construction)**	**Start Date:** NTP issued August 18, 2016
90% Complete	**Activities/Notes:** Contractor continuing work on interior finishes.	**Completion Date:** Change Order moved complete to October 2017
	Construction services	
Project Description:	The project will involve construction of a new building at the GWA Upper Tumon compound to house the laboratory section. The facility will include office, laboratory and storage space for the lab employees. The facility will also include a back-up generator.	

F. GIS Section

MAPPING MC 05-02	**Island Wide Survey-** **(Duenas, Camacho & Ass.)**	**Start Date:** December 2007
91% complete	**Activities/Notes:** Surveyor near complete with Task #12 which involves DW M-08. Task #13 was developed to address the registration maps for Barrigada tanks. Task #14 encumber complete contract value with goal to complete all work and spending by December 2017.	**Completion Date:** New anticipated complete is December 2017
	Survey services	
Project Description:	The contracted land surveyor is required to conduct title research, property valuation and mapping of property boundaries where GWA facilities are located but the lot is not registered under GWA's name.	

MAPPING MC 05-02	**Island Wide Survey PH II -** **(Duenas, Camacho & Ass.)**	**Start Date:** August 30, 2017
5% complete	**Activities/Notes:** Pre-survey meeting to occur 091917 to discuss action plans. GWA working to add survey work at Marbo Wells area to address issues with federal government.	**Completion Date:** December 2018
	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	

G. Permits Section

PERMITS
MONTHLY REPORT 2017

	2017							
Description	Jan	Feb	Mar	Apr	May	June/July	Aug	Sept
Building Permit	27	11	13	17	23	27	27	27
Occupancy Permit	64	10	17	5	25	28	28	30
New Installation	11	5	10	15	15	33	33	25
Sewer Application	10	5	4	3	4	3	3	7
Sewer Inspection	6	0	1	0	1	0	0	1
Private Utility Acceptance	0	0	0	0	0	0	0	0
Relocation of Water Meter	1	0	1	0	0	0	0	0
Tapping-Water	4	2	2	0	3	8	8	0
Tapping-Sewer	3	2	2	1	3	5	5	0
Clearance-Water	15	13	15	2	20	26	26	11
Clearance-Sewer	15	13	15	2	20	26	26	11
Highway Encroachment	59	3	27	6	20	12	12	25
Verification of Utilities	12	15	2	5	1	8	8	7
Fire Flow Test	1	0	0	0	0	3	3	1
Schedule Water Outage	1	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.

	Project	Project Description	Project Manager	Grant Expiration Date	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 9/18/17
Grant Number M96902611-5											
1	Northern District SSES & I/I Study	Sanitary sewer system evaluation study (SSES) and inflow and infiltration (I/I) study designed to evaluate high I/I areas within the Northern sewer basin with the goal of identifying projects to eliminate them.	J. Davis	9/30/2017	Design	1	10/10/2014	2/29/2016	$ 792,980	Stanley	100% Complete.
					Construction				*The project does not involve construction.*		
					Const. Mgmt						
2	Southern SSES Rehabilitation (Agat-Santa Rita-Umatac-Merizo)	Rehabilitation of segments of sewer lines in Umatac, Merizo, Agat, and Santa Rita where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	9/30/2017	Design				*The design was previously completed under bond funding.*		
					Construction	1	10/30/2015	2/28/2017	$ 1,395,471	Reliable Builders	· CIPP quality issues found during April 2017 GWA warranty period CCTV inspection. · On 8/28, issued contractor letter from GM requiring completion of CIPP repairs by 10/31. It appears that Fina-Liner (CIPP subcontractor) will be unable to return and complete work.
					Const. Mgmt	1	11/10/2015	3/30/2017	$ 211,722	TG Engineers	GWA will close contract with CM and address warrenty issues in-house.
3A	Asan-Adelup-Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	9/30/2017	Design	2	12/11/2015	3/30/2017 for Design requirements	$ 1,702,903	HDR	· HDR submitted draft revised bid schedule, and revised plans/specs as of week 09/12/17; under review.
4A	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	9/30/2017	Design	3	11/17/2015	3/30/2017 for Design requirements	$ 316,681	SSFM	SSFM providing services during bidding process as well as construction phase. .
5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	9/30/2017	Design	4	3/24/2015	2/6/2017	$ 1,089,850	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	9/30/2017	Design	5	7/6/2015	9/30/2017	$ 2,623,300	B&C	· Volume 2 and 3 Final Drafts submitted. · Completed draft of all CIP project sheets and cost projections for financial planning. · Working on Volume 1 Final Draft · Financial Planning Workshop now scheduled for September 27.
					Construction				*The project does not involve construction.*		
					Const. Mgmt						

7A	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	9/30/2017	Design	6	5/27/2016	9/1/2017	$ 1,758,247	AECOM	· 90% design review meeting with GWA/BC held on 9/14. Bid schedule to be structured with F-03 included as an additive bid item to allow time to finish its design and expedite construction once completed (provided it is within the contract period) · Completed final site inspection of wells A-2, A-7, A-12, and D-5. A-2 has Punch List item to improve fence. · A-2: Design rate of 250 gpm (34.6 ft drawdown). Proceeding toward 100% design. · A-12: Design rate of 200 gpm (45.5 ft drawdown). Proceeding toward 100% design. · A-7: BC/GWA directed AECOM to remove A-7 design work and attempt to complete F-3 fieldwork and design. Continued issues with parts of borehole filling in, low borehole production, lack of funds. · D-5: Design rate of 125 gpm (39 feet drawdown). Proceeding toward 100% design. · F-3: Drilling on hold. Well AG-2 back on line, but reservoir not at acceptable level yet to shut down well F-3 in order to accommodate drilling work.
8A	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	9/30/2017	Design	7	6/24/2016	09/30/2017 for design only	$ 572,089	TG Engineers	· TGE submitted 90%; submitted comments to TGE on 9/1. · TGE reviewing comments and working on final plans/specs.
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	9/30/2017	Design				*The design will be incorporated into the design/build package.*		
			J. Davis		Design/Build	1	8/8/2016	9/30/2017	$ 1,505,760	ProPacific	Continue installation at all sewer pumps station: plug valves, painting, hoist support system, repair leaks in wet wells and sluce gates. CO extended completeion date.
					Const. Mgmt	2	9/9/2016	9/30/2017	$ 299,519.00	Stanley	CM work ongoing
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	9/30/2017	Design				*The design will be incorporated into the design/build package.*		
					Design	8	8/12/2016	02/30/2017	$ 183,171	AECOM	Design complete
					Construction	5	4/5/2017	9/30/2017	$ 1,444,888	Pacific Rim	Major installation work is completed. GPA continues to work on providing Network Connectivity to each site. Testing and Commissioning is on-going.
					Const. Mgmt	3	02/30/2017	9/30/2017	$ 145,186	EMSPCO	CM working with contractor on submittals.
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	9/30/2017	Design				*The design will be incorporated into the design/build package.*		
					Design/Build	2	6/24/2016	9/30/2017	$ 362,693	ProPacific	Substantal completion letter submitted to contractor. Punch list items on-going.
					Const. Mgmt				*B. Cruz is the construction manager.*		

12A	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	9/30/2017	Design	9	3/1/2016	4/22/2017	$ 794,000	AECOM	· AECOM to provided services during bididng process.
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	9/30/2017	Design				*The design was previously completed under bond funding.*		
					Construction	2	8/19/2016	10/31/2017	$ 6,149,647	Pacific Rim	· D-03: Continuing site work; first dry tap attempt failed due to snapped valve stem when attempting to isolate. Looking into cost of purchasing 316 SS saddle for wet tap from off island. Only 304 SS available on island which does not meet GWA specs. Electrical work ongoing. · D-17: Main activity is electrical work · D-18: Main activity is electrical work · D-22: Working on above ground pipe. Electrical work ongoing. · M-09: Waiting on CO7 approval. · Electrical work, PRC coordinating with GPA. Some equipment delayed by 1 week due to Hurricane Harvey. First inspections completed, but GPA is asking for new permit due to large change from original scope. May need to work with GWA to resolve. · CO#3 for CM under review (~$155K); will need to go up to CCU for approval. · CO#7 (PRC): additional gravel used (D-22), and isolation valves at D-17/18, M-09 work, additional time/scope for PRC, additional electrical work needed.
					Const. Mgmt	4	3/22/2016	10/31/2017	$ 798,503	EA	· Working with EA on Contractor invoices; Contractor invoice #12 paid; Invoice #13 submitted to Finance (9/14).
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	9/30/2017	Design				*The design was previously completed under bond funding.*		
					Construction	3	8/2/2016	7/2/2017	$ 1,189,815	ProPacific	· Current contract end date was 5/15. CM is counting days for potential LDs. · Contractor submitted letter requesting to continue CIPP work without Perma-Liner representative present on site. BC/GWA sent recommendation to GWA. Awaiting GWA response. · As of 9/8, contractor proceeded with CIPP work. BC and CM expressly informed contractor that this work is at contractor's risk. · Santa Rita Wetland area (drawing AG-101): · PPBC continually bypass pumping through the wetland area, due to collapse of CIPP liner. · PPBC started removal of collapsed liners. BC warned contractor that this is a risky operation which could cause pipe damage or collapse. Contractor must plan CIPP accordingly. · Baza Gardens area: CIPP work recently completed at 3509-3510.
					Const. Mgmt	5	7/29/2016	5/28/2017	$ 289,096	EMPSCO	· CM CO #3: With GWA Finance. Provides CM additional funds due to continued contractor delays.
15A	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	9/30/2017	Design	10	9/9/2016	7/9/2017	$ 663,629	TG Engineers	· TGE submitted draft letter on land issues for New Plaza Market; submitted to GWA on 8/30. · TGE submitted 90%; submitted comments to TGE on 9/1. · TGE reviewing comments and working on final plans/specs.

16A	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	9/30/2017	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	9/30/2017	$ 478,000	EMPSCO	90% design submitted for Talafofo SPS's and Chalan Pago 90% Design on going.
17A	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	9/30/2017	Design		8/17/2016	9/30/2017	*The design will be included with the Talofofo Pump Station design project.*		
18A	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	9/30/2017	Design	12	8/3/2016	3/15/2017	$ 491,498	GHD	100% design under review.
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	9/30/2017	Design-Build	3	8/29/2016	9/30/2017	$ 1,634,000	Giant Const.	Four manholes installed with excavation fo rgravity line on-going. Change Order #1 executed 08/24/17.
					Const. Mgmt	6	9/16/2016	9/30/2017	$ 245,150	Am Orient	CM working with contractor on submittals.
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	9/30/2017	Design				Design cost covered under 3A above.		
					Construction	4	3/8/2017	5/31/2017	$ 2,470,658		· CO#2 for additional work at phase I and phase II processing · Work on 222' section on going; first 40' trench open. Completed laying for 40' of pipe; starting trench for next 40' and covering completed section. · Work on phase II section continues: - Made connect to downstream MH, and laid first 40' of pipe; started base and wet set first ring of new MH. - Contractor failed to complete required concrete tests before pouring base; CM working through issue. · PRC Invoice #4 still with CM review. · CO#3 (for HDR CM) still with HDR for revision; HDR currently beyond time and short on budget until CO processed. · Contractor requesting to work double shifts. BC& CM requested a detailed schedule reflecting what work to be done throughout the day and into the extra time before approval granted.
					Const. Mgmt	7	1/24/2017	5/31/2017	covered under 3A		· CM processing invoices, submittals and coorcdinating with contractor on traffic issues.
Grant Number M96902615-1											
3B	Asan-Adelup-Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	9/30/2021	Construction		10/16/2016	4/30/2018			Procurement 70%. GWA still awaiting revising bid package for HDR to rebid. Anticipate rebiding by end of September.
					Const. Mgmt		6/30/2017	12/30/2018			Procurement 90%. CM scope and fee proposal received 6/23 ($698K); due to cancealing of bid GWA will repackaging bid therefore scope and fee will need to be refined.
4B	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	9/30/2021	Construction	6	09/31/17	10/1/2018	$ 4,392,765		Procurement 100%, Contract fully executed August 25, 2017. NTP effective August 31, 2017. · Preconstruction conference held on 9/13. · Designer (SSFM) has turned over design documents to contractor.
					Const. Mgmt		6/30/2017	6/30/2018	$ 584,725		Procurement 99%, Contract being proces for fund certifcaiton and execution.

7B	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	9/30/2021	Construction		3/23/2017	4/30/2018			
					Const. Mgmt		3/23/2017	4/30/2018			
8B	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	9/30/2021	Construction		3/23/2017	3/22/2018			
					Const. Mgmt		3/23/2017	3/22/2018			
12B	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	9/30/2021	Construction		4/23/2017	10/31/2018			· Advertised IFB 8/25; Pre-bid on 9/8, and Bid opening on 9/29.
					Const. Mgmt		4/23/2017	10/31/2018			· Met with EMPSCO for scoping meeting; received fee ($667,306.64) and reviewing. Meeting to discuss to follow.
15B	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	9/30/2021	Construction		4/29/2017	4/30/2018			
					Const. Mgmt		4/29/2017	4/30/2018			
16B	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	9/30/2021	Construction		4/29/2017	4/30/2018			
					Const. Mgmt		4/29/2017	4/30/2018			
17B	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	9/30/2021	Construction		4/29/2017	4/30/2018			
					Const. Mgmt		4/29/2017	4/30/2018			
18B	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.	C. Huntington	9/30/2021	Construction		2/1/2017	9/30/2017			
					Const. Mgmt		2/1/2017	9/31/2017			

DASHBOARD

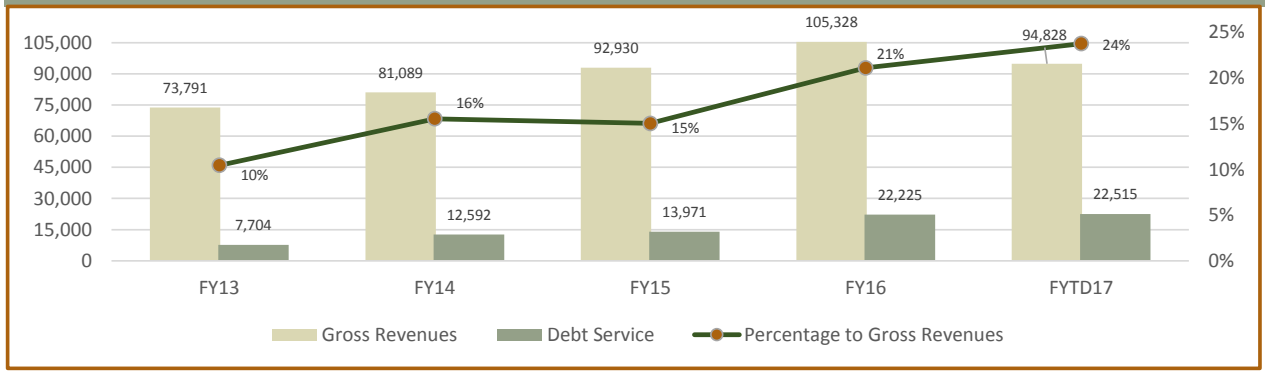
August 2017 YTD Budget vs Actual ($000)

Category	Description	Budget FY17	Actual FY17	Variance
Rate Based Revenues	Water	$64,595	$59,644	($4,951)
	Wastewater	37,170	34,673	(2,497)
	Total	101,765	94,317	(7,448)
Operations & Maintenance	Salaries & Benefits	24,025	18,225	(5,800)
	Power	11,680	11,001	(679)
	Water Purchases	7,440	6,713	(727)
	A&G	9,834	7,671	(2,163)
	Contractual	3,699	3,591	(108)
	Total	$74,389	$63,623	($10,766)

Key Financial Ratios ($000)

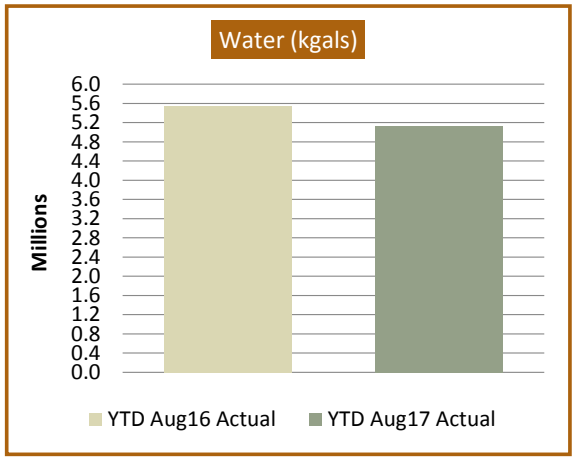
Category	FY17	FY16
Accounts Payable $$/Days	$4,136 / 51 days	$4,909 / 53 days
Accounts Receivable $$/Days	$14,926 / 50 days	$16,709 / 51 days
Days Cash On Hand	204 days	178 days
Annual Debt Service (Revenue Bonds)	$24,563	$22,225
Debt Service Coverage (Bond/PUC)	2.04 / 2.49	2.33 / 2.54

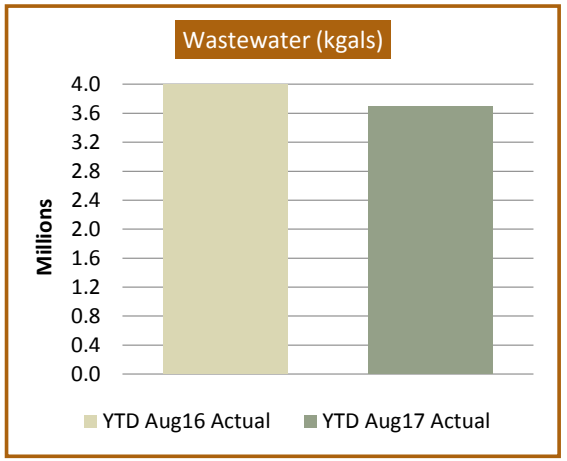
Debt as a Percent to Gross Revenue

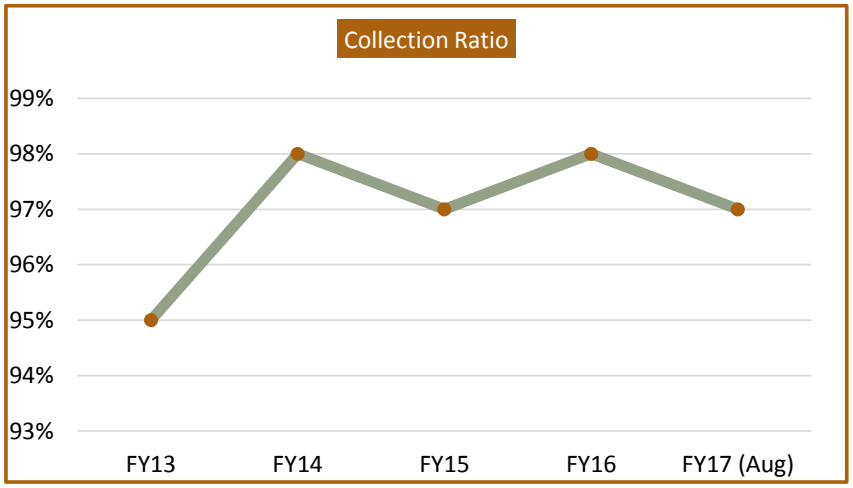


(1) Gross Revenues excludes SDC
(2) Debt Service Excludes Cap I

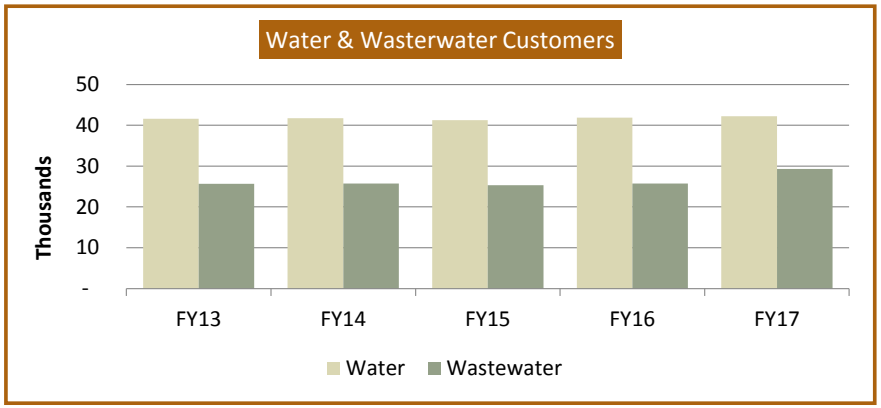
Water & Wastewater Analytics

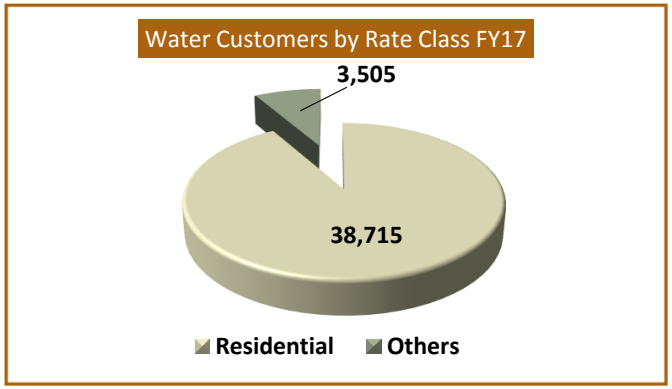


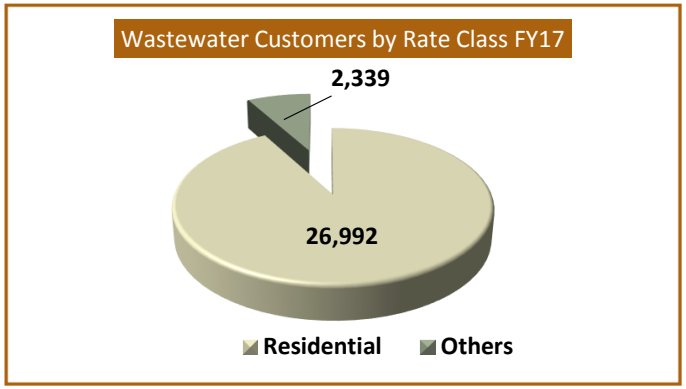


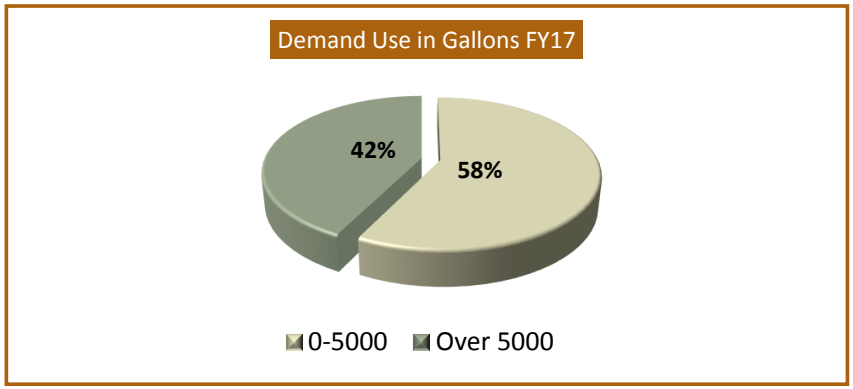


Water & Wastewater Customers





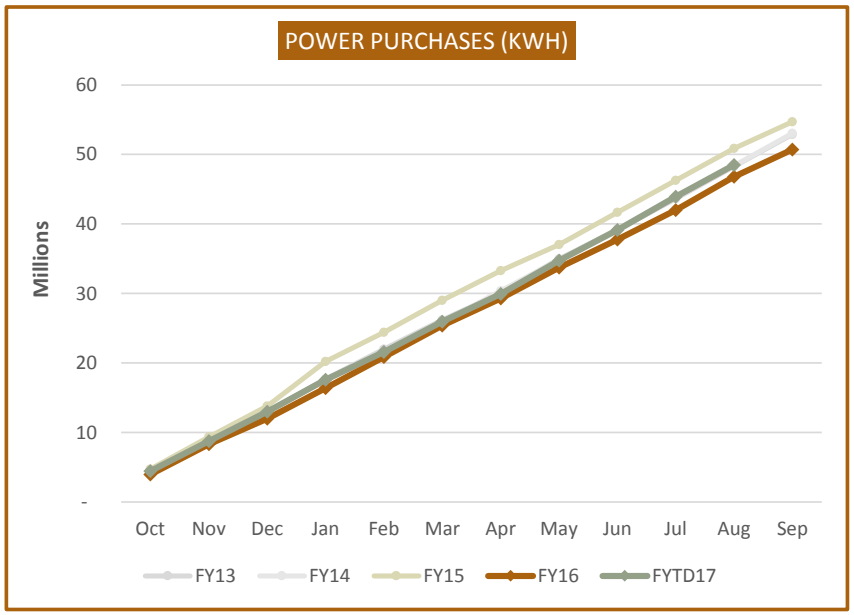


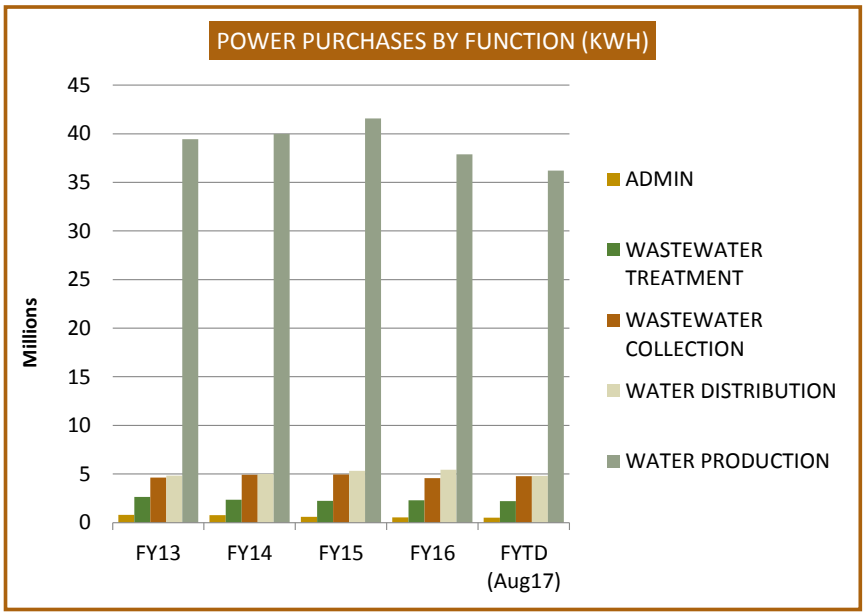


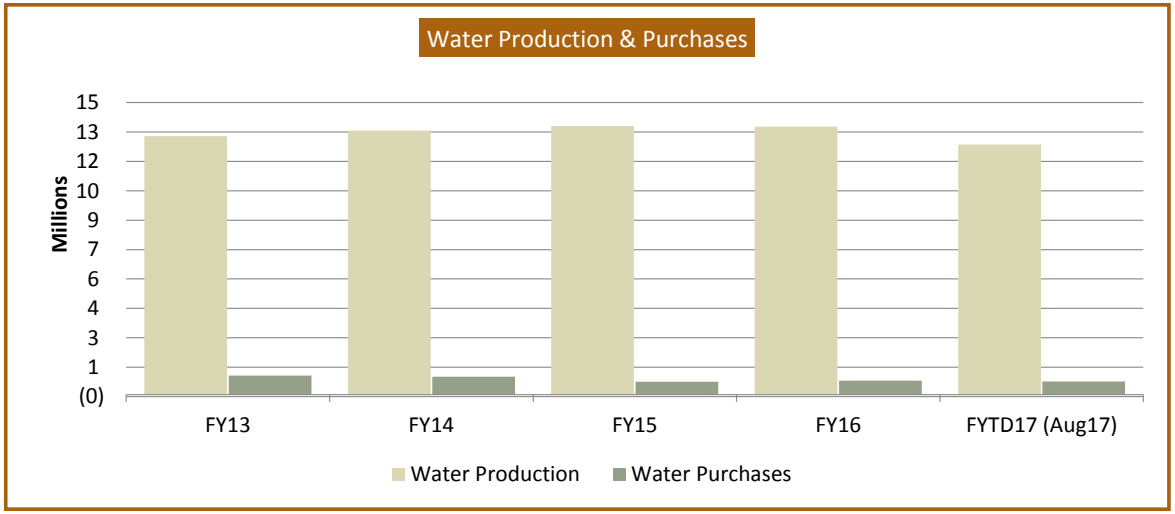
Top Ten Largest Water and Wastewater Customers – August 2017

Water			Wastewater		
Customer Name	FY17 YTD Revenues	% of Total	Customer Name	FY17 YTD Revenues	% of Total
1) MDI GUAM CORPORATION/LEOPALACE	$1,201,833	2.02%	1) AIR FORCE DOD	$3,470,820	10.01%
2) PACIFIC ISLANDS CLUB	1,086,230	1.82%	2) NAVY DOD	1,579,912	4.56%
3) HOTELS OF THE MARIANAS INC	912,395	1.53%	3) HOTELS OF THE MARIANAS INC	975,723	2.81%
4) SHERATON LAGUNA GUAM RESORT	780,543	1.31%	4) SHERATON LAGUNA GUAM RESORT	835,439	2.41%
5) HYATT	777,036	1.30%	5) HYATT	831,673	2.40%
6) HOTEL NIKKO GUAM	745,329	1.25%	6) HOTEL NIKKO GUAM	796,291	2.30%
7) PACIFIC STAR RESORT & SPA	593,793	1.00%	7) PACIFIC STAR RESORT & SPA	633,539	1.83%
8) MDI GUAM CORPORATION/WESTIN	579,846	0.97%	8) MDI GUAM CORPORATION/WESTIN	619,888	1.79%
9) OUTRIGGER GUAM RESORT	547,213	0.92%	9) OUTRIGGER GUAM RESORT	586,167	1.69%
10) GUAM REEF HOTEL INC	528,069	0.89%	10) GUAM REEF HOTEL INC	564,539	1.63%
Total	**$7,752,287**	**13.00%**	**Total**	**$10,893,991**	**31.42%**

Power, Water Purchases and Water Production

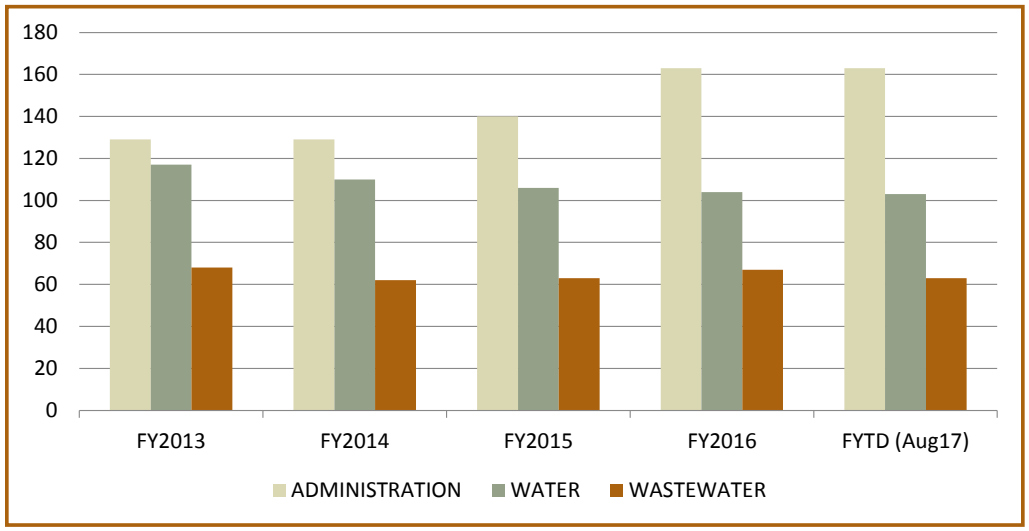






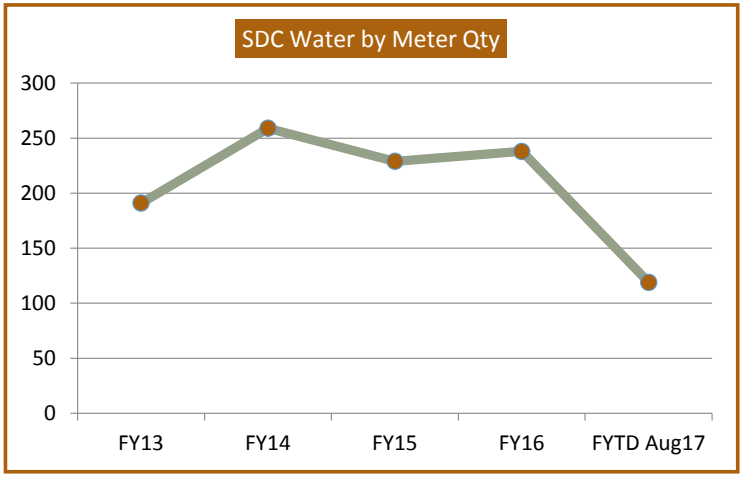
FTE by Major Division

DIVISION	FY2013	FY2014	FY2015	FY2016	FYTD (Aug17)
ADMINISTRATION	129	129	140	163	163
WATER	117	110	106	104	103
WASTEWATER	68	62	63	67	63
TOTAL NUMBER OF STAFF	314	301	309	334	329
Gross Salaries & Wages ($000)	14,929	15,532	15,805	16,442	15,361
Water Customers	41,582	41,702	41,274	42,259	42,220
Staff to Customers Ratio	0.76%	0.72%	0.75%	0.79%	0.78%

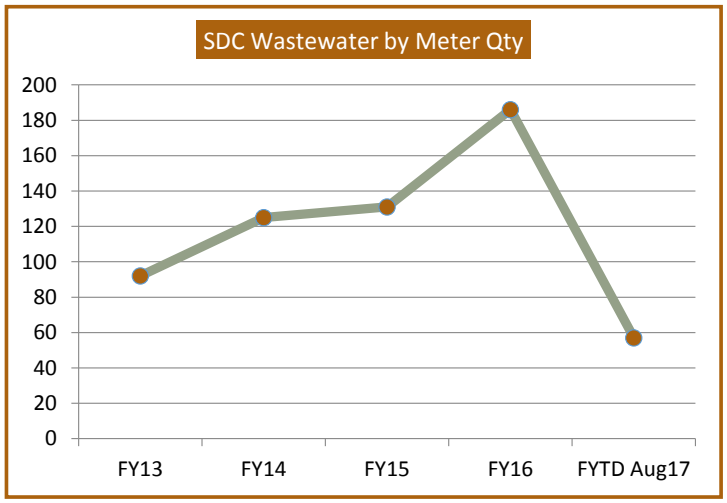


Note: FYTD17 number of employees 329 is as of August 2017

SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2013	FY 2014	FY 2015	FY 2016	FYTD (Aug17)
5/8 x 3/4	179	248	220	239	113
1	-	5	5	7	2
1 1/2	5	1	1	1	1
2	4	3	2	4	2
3	-	1	-	1	-
4	3	-	1	-	-
6	-	-	-	-	1
8	-	1	-	-	-
10	-	-	-	-	-
Total SDC by Water	191	259	229	252	119



Actual Meter Sizes (Inches)	FY 2013	FY 2014	FY 2015	FY 2016	FYTD (Aug17)
5/8 x 3/4	80	115	124	179	53
1	-	4	3	2	-
1 1/2	5	1	1	1	1
2	4	3	2	3	2
3	-	1	-	1	-
4	3	-	1	-	-
6	-	-	-	-	1
8	-	1	-	-	-
10	-	-	-	-	-
Total SDC by Wastewater	92	125	131	186	57

GUAM WATERWORKS AUTHORITY
AUGUST 31, 2017
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
August 31, 2017

SCHEDULE A

ASSETS	Unaudited August 31, 2017	Audited September 30, 2016	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	5,273,038	8,157,430	(2,884,393)
Restricted Funds (Schedule G)	64,184,790	48,436,547	15,748,243
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $11,990,079 at Aug 31, 2017 and $11,302,579 at Sep 30, 2016	14,925,917	14,562,072	363,845
Other Receivable	1,947,637	2,147,155	(199,518)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Aug 31, 2017 and Sep 30, 2016	1,521,150	2,269,775	(748,625)
Total Current Assets	87,852,531	75,572,979	12,279,552
Property, Plant and Equipment			
Utility plant in service:			
Water system	316,716,967	306,262,568	10,454,399
Wastewater system	277,869,485	259,512,407	18,357,078
Non-utility property	23,023,353	22,474,787	548,566
Total property	617,609,804	588,249,761	29,360,043
Less Accumulated Depreciation	(297,452,710)	(282,837,613)	(14,615,098)
Land	1,110,998	254,288	856,710
Construction Work in Progress	120,520,621	81,877,561	38,643,060
Property, Plant and Equipment, net	441,788,712	387,543,997	54,244,715
Other noncurrent assets			
Restricted cash (Schedule G)	238,383,415	285,277,784	(46,894,369)
Investments (Schedule G)	39,031,619	41,029,262	(1,997,644)
Other Prepaid Expenses	744,748	652,000	92,748
Total other noncurrent assets	278,159,782	326,959,047	(48,799,265)
TOTAL ASSETS	807,801,025	790,076,022	17,725,002
Deferred outflows of resources:			
Debt defeasance loss on refunding	1,711,199	1,878,602	(167,403)
Deferred outflows from pension	3,518,723	4,668,010	(1,149,288)
Total Assets and Deferred Outflows of Resources	**813,030,947**	**796,622,635**	**16,408,312**
LIABILITIES AND NET ASSETS			
Current Liabilities:			
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	4,135,747	4,909,146	(773,399)
Accrued Expense	42,126	42,126	0
Interest Payable	4,460,851	6,748,638	(2,287,787)
Accrued Payroll and Employee Benefits	2,269,860	1,692,622	577,238
Accrued Annual Leave	1,748,665	1,641,497	107,168
Current portion of employee annual leave	524,652	548,845	(24,193)
Contractors' Payable	6,427,759	3,436,908	2,990,851
Customer and Other Deposits	2,127,255	2,228,235	(100,980)
Total Current Liabilities	29,650,901	29,162,004	488,897
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	112,870,000	114,525,000	(1,655,000)
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding	72,610,000	75,995,000	(3,385,000)
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Unamortized Discount - Bond 2010	(1,874,248)	(1,948,205)	73,957
Unamortized Discount - Bond 2013	(1,343,009)	(1,389,850)	46,841
Unamortized Premium - Bond 2014	4,826,912	5,071,307	(244,396)
Unamortized Premium - Bond 2016	17,313,600	17,870,470	(556,870)
Notes Payable	5,998,196	8,578,203	(2,580,007)
Unfunded Ret Liability (GASB 67/68)	35,756,378	38,195,938	(2,439,560)
Employee Annual Leave, Less Current Portion	847,981	887,084	(39,104)
TOTAL LIABILITIES	592,596,710	602,886,951	(10,290,241)
Net Assets	**220,434,237**	**193,735,684**	**26,698,554**
Total Liabilities and Net Assets	**813,030,947**	**796,622,635**	**16,408,312**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE B**
Comparative Budget vs. Actual for the period ending August 31, 2017

	Month to Date			Variance
	Budget August-17	Encumbered August-17	Actual (Unaudited) August-17	Increase / (Decrease)
OPERATING REVENUES				
Water Revenues	5,678,548		5,138,203	(540,345)
Wastewater Revenues	3,284,461		3,161,132	(123,329)
Legislative Surcharge	288,387		266,501	(21,886)
Other Revenues	43,750		42,408	(1,342)
System Development Charge	133,333		50,234	(83,099)
Total Operating Revenues	9,428,479		8,658,477	(770,001)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	676,391		664,992	(11,399)
Power Purchases	1,121,804		1,118,703	(3,101)
Total Utility Costs	1,798,195		1,783,695	(14,499)
Salaries and Wages	1,586,470		1,519,647	(66,824)
Pension and Benefits	524,585		280,516	(244,069)
Total Salaries and Benefits	2,111,055		1,800,163	(310,892)
Capitalized Labor and Benefits	(292,554)		(200,000)	92,554
Net Salaries and Benefits	1,818,501		1,600,163	(218,338)
Administrative and General Expenses				
Sludge removal	146,395	-	146,002	(392)
Chemicals	134,222	-	128,030	(6,192)
Materials & Supplies	204,856	-	201,670	(3,186)
Transportation	31,419	-	29,679	(1,740)
Communications	14,152	-	11,761	(2,391)
Claims	6,084	-	300	(5,784)
Insurance	76,312	-	75,480	(832)
Training & Travel	9,570	-	8,633	(937)
Advertising	7,045	-	3,120	(3,924)
Miscellaneous	95,363	-	82,613	(12,750)
Total Administrative and General Expense	725,416	-	687,289	(38,128)
Regulatory Expense	21,791	-	37,133	15,342
Bad Debts Provision	62,500	-	62,496	(4)
Depreciation Expense	1,529,550	-	1,329,008	(200,542)
Contractual Expense				
Audit & Computer Maint.	78,630	-	65,838	(12,793)
Building rental	38,368	-	36,582	(1,785)
Equipment rental	114,270	-	112,460	(1,810)
Legal	639	-	600	(39)
Laboratory	28,086	-	27,112	(974)
Other	257,892	-	257,037	(855)
Total Contractual Expense	517,885	-	499,629	(18,256)
Retiree Supp. Annuities and health care costs	239,312		228,588	(10,724)
Contribution to Government of Guam	49,500		49,500	-
Total Retiree Benefits	288,812		278,088	(10,724)
Total Operating Expenses	6,762,648	-	6,277,500	(485,149)
Earnings (Loss) from Operations	2,665,830	-	2,380,978	(284,852)
Interest Income-2010/13/14/16 Series Bond	1,029		145,706	144,678
Interest Income-Other Funds	642		21,301	20,660
Interest Income-SDC	-		1,901	1,901
Interest Expense- 2010/13/14/16 Series Bond	(2,223,983)		(2,211,025)	12,959
Interest Expense- ST BOG	(46,124)		(44,322)	1,802
Federal Expenditures	-		-	-
Loss on Asset Disposal	-		-	-
AFUDC	625,000		625,000	-
Amortization of Discount, Premium and Issuance Costs	37,738		61,861	24,123
Loss on Defeasance Bond05 Refunding	(19,483)		(15,218)	4,265
Deferred outflows from pension	(66,928)		(104,481)	(37,552)
Prior Year Adjustment	-		-	-
Total non-operating revenues (expenses)	(1,692,111)	-	(1,519,277)	172,834
Net Income (Loss) before capital contributions	973,720	-	861,701	(112,019)
Capital Contributions				
Grants from US Government	250,000		1,836,566	1,586,566
Grants from GovGuam & Others	-		-	-
Other Contributions	-		-	-
Total Capital Contributions	250,000	-	1,836,566	1,586,566
Change in Net Assets	1,223,720	-	2,698,267	1,474,547
Debt Service Calculation				
Earnings From Operations	2,665,830		2,380,978	
System Development Charge	(133,333)		(50,234)	
Interest/Investment Income	642		21,301	
Depreciation	1,529,550		1,329,008	
Balance Available for Debt Service per Section 6.12	4,062,689		3,681,053	
Working Capital Reserve Available for Debt Service	632,083		932,134	
Transfer to Working Capital Debt Service Reserve	(304,167)		-	
Balance Available for Debt Service inclusive of reserves	4,390,606		4,613,187	
Debt Service				
Principal	420,000		420,000	
Interest	1,626,858		1,626,858	
Total	2,046,858		2,046,858	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.98		1.80	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.15		2.25	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE C**
Comparative for the period ending August 31, 2017 and 2016

	Month to Date		Variance
	Actual (Unaudited) August-17	Actual (Audited) August-16	Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	5,138,203	5,361,643	(223,440)
Wastewater Revenues	3,161,132	3,102,398	58,733
Legislative Surcharge	266,501	241,527	24,974
Other Revenues	42,408	43,325	(917)
System Development Charge	50,234	119,028	(68,793)
Total Operating Revenues	8,658,477	8,867,921	(209,443)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	664,992	531,170	133,822
Power Purchases	1,118,703	935,490	183,213
Total Utility Costs	1,783,695	1,466,660	317,035
Salaries and Wages	1,519,647	1,333,993	185,654
Pension and Benefits	280,516	454,904	(174,388)
Total Salaries and Benefits	1,800,163	1,788,897	11,266
Capitalized Labor and Benefits	(200,000)	(248,363)	48,363
Net Salaries and Benefits	1,600,163	1,540,534	59,629
Administrative and General Expenses			
Sludge removal	146,002	130,423	15,579
Chemicals	128,030	186,596	(58,565)
Materials & Supplies	201,670	103,711	97,959
Transportation	29,679	47,876	(18,197)
Communications	11,761	10,265	1,496
Claims	300	10,618	(10,318)
Insurance	75,480	101,111	(25,631)
Training & Travel	8,633	12,457	(3,824)
Advertising	3,120	15,907	(12,787)
Miscellaneous	82,613	68,429	14,184
Total Administrative and General Expense	687,289	687,393	(104)
Regulatory Expense	37,133	27,104	10,028
Bad Debts Provision	62,496	86,193	(23,697)
Depreciation Expense	1,329,008	1,279,008	50,000
Contractual Expense			
Audit & Computer Maint.	65,838	86,467	(20,630)
Building rental	36,582	33,279	3,304
Equipment rental	112,460	58,162	54,298
Legal	600	362	238
Laboratory	27,112	10,234	16,878
Other	257,037	154,589	102,448
Total Contractual Expense	499,629	343,094	156,535
Retiree Supp. Annuities and health care costs	228,588	230,355	(1,767)
Contribution to Government of Guam	49,500	48,667	833
Total Retiree Benefits	278,088	279,022	(934)
Total Operating Expenses	6,277,500	5,709,007	568,493
Earnings (Loss) from Operations	2,380,978	3,158,914	(777,936)
Interest Income-2010/13/14/16 Series Bond	145,706	2,083	143,624
Interest Income-Other Funds	21,301	1,281	20,020
Interest Income-SDC	1,901	1,896	5
Interest Expense- 2010/13/14/16 Series Bond	(2,211,025)	(1,994,375)	(216,650)
Interest Expense- ST BOG	(44,322)	(59,096)	14,773
Federal Expenditures	-	(88,189)	88,189
Loss on Asset Disposal	-	(4,150)	4,150
AFUDC	625,000	1,142,370	(517,370)
Amortization of Discount, Premium and Issuance Costs	61,861	(160,812)	222,672
Loss on Defeasance Bond05 Refunding	(15,218)	(19,483)	4,265
Deferred outflows from pension	(104,481)	(7,452)	(97,029)
Prior Year Adjustment	-	(51,397)	51,397
Total non-operating revenues (expenses)	(1,519,277)	(1,237,323)	(281,954)
Net Income (Loss) before capital contributions	861,701	1,921,591	(1,059,890)
Capital Contributions			
Grants from US Government	1,836,566	434,254	1,402,312
Grants from GovGuam & Others	-	23,151	(23,151)
Other Contributions	-	-	-
Total Capital Contributions	1,836,566	457,405	1,379,161
Change in Net Assets	2,698,267	2,378,996	319,270
Debt Service Calculation			
Earnings From Operations	2,380,978	3,158,914	
System Development Charge	(50,234)	(119,028)	
Interest/Investment Income	21,301	1,281	
Depreciation	1,329,008	1,279,008	
Balance Available for Debt Service per Section 6.12	3,681,053	4,320,176	
Working Capital Reserve Available for Debt Service	932,134	382,083	
Transfer to Working Capital Debt Service Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	4,613,187	4,702,259	
Debt Service			
Principal	420,000	409,167	
Interest	1,626,858	1,442,950	
Total	2,046,858	1,852,116	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.80	2.33	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.25	2.54	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited) **SCHEDULE D**
Comparative Budget vs. Actual for the period ending August 31, 2017

	Year to Date			Variance
	Budget August-17	Encumbered August-17	Actual (Unaudited) August-17	Increase / (Decrease)
OPERATING REVENUES				
Water Revenues	62,464,023		57,679,055	(4,784,968)
Wastewater Revenues	36,129,066		33,744,260	(2,384,806)
Legislative Surcharge	3,172,257		2,894,253	(278,004)
Other Revenues	481,250		510,812	29,562
System Development Charge	1,466,667		811,049	(655,618)
Total Operating Revenues	103,713,264		95,639,429	(8,073,834)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	7,440,296		6,713,406	(726,890)
Power Purchases	11,679,844		11,001,203	(678,641)
Total Utility Costs	19,120,140		17,714,609	(1,405,531)
Salaries and Wages	17,451,173		15,405,305	(2,045,868)
Pension and Benefits	6,573,430		2,819,445	(3,753,986)
Total Salaries and Benefits	24,024,603		18,224,750	(5,799,853)
Capitalized Labor and Benefits	(3,218,097)		(2,200,000)	1,018,097
Net Salaries and Benefits	20,806,506		16,024,750	(4,781,757)
Administrative and General Expenses				
Sludge removal	1,918,341	382,554	1,534,806	(981)
Chemicals	2,257,442	154,603	1,926,943	(175,896)
Materials & Supplies	1,695,876	192,404	1,500,873	(2,600)
Transportation	785,611	321,351	398,327	(65,933)
Communications	155,670	-	118,497	(37,173)
Claims	119,122	-	115,400	(3,723)
Insurance	1,488,428	-	1,011,753	(476,676)
Training & Travel	178,268	-	177,853	(415)
Advertising	102,490	-	97,717	(4,772)
Miscellaneous	1,132,596	24,147	788,844	(319,604)
Total Administrative and General Expense	9,833,845	1,075,059	7,671,013	(1,087,773)
Regulatory Expense	239,696	-	231,280	(8,416)
Bad Debts Provision	687,500	-	687,444	(56)
Depreciation Expense	16,825,050	-	14,619,088	(2,205,962)
Contractual Expense				
Audit & Computer Maint.	1,046,934	-	999,769	(47,165)
Building rental	422,044	-	402,096	(19,948)
Equipment rental	617,967	-	616,827	(1,140)
Legal	7,026	-	4,969	(2,058)
Laboratory	110,949	25,447	75,143	(10,359)
Other	1,494,209	-	1,492,391	(1,818)
Total Contractual Expense	3,699,130	25,447	3,591,195	(82,488)
Retiree Supp. Annuities and health care costs	2,632,428		2,538,758	(93,670)
Contribution to Government of Guam	544,835		544,500	(335)
Total Retiree Benefits	3,177,263	-	3,083,258	(94,005)
Total Operating Expenses	74,389,130	1,100,506	63,622,636	(9,665,988)
Earnings (Loss) from Operations	29,324,134	(1,100,506)	32,016,793	1,592,153
Interest Income-2010/13/14/16 Series Bond	11,315		633,437	622,121
Interest Income-Other Funds	7,060		97,301	90,241
Interest Income-SDC	-		19,407	19,407
Interest Expense- 2010/13/14/16 Series Bond	(24,463,818)		(24,437,900)	25,917
Interest Expense- ST BOG	(507,365)		(517,107)	(9,742)
Federal Expenditures	-		(256,661)	(256,661)
Loss on Asset Disposal	-		(20,949)	(20,949)
AFUDC	6,875,000		6,875,000	-
Amortization of Discount, Premium and Issuance Costs	415,113		680,468	265,355
Loss on Defeasance Bond05 Refunding	(214,313)		(167,403)	46,910
Deferred outflows from pension	(736,210)		(1,149,287)	(413,077)
Prior Year Adjustment	-		(566,781)	(566,781)
Total non-operating revenues (expenses)	(18,613,217)	-	(18,810,476)	(197,259)
Net Income (Loss) before capital contributions	10,710,916	(1,100,506)	13,206,317	1,394,894
Capital Contributions				
Grants from US Government	2,750,000		13,490,351	10,740,351
Grants from GovGuam & Others	-		1,886	1,886
Other Contributions	-		-	-
Total Capital Contributions	2,750,000	-	13,492,237	10,742,237
Change in Net Assets	13,460,916	(1,100,506)	26,698,553	12,137,131
Debt Service Calculation				
Earnings From Operations	29,324,134		32,016,793	
System Development Charge	(1,466,667)		(811,049)	
Interest/Investment Income	7,060		97,301	
Depreciation	16,825,050		14,619,088	
Balance Available for Debt Service per Section 6.12	44,689,577		45,922,133	
Working Capital Reserve Available for Debt Service	6,952,917		10,253,476	
Transfer to Working Capital Debt Service Reserve	(3,345,833)		-	
Balance Available for Debt Service inclusive of reserves	48,296,661		56,175,608	
Debt Service				
Principal	4,620,000		4,620,000	
Interest	17,895,443		17,895,443	
Total	22,515,443		22,515,443	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.98		2.04	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.15		2.49	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings (Unaudited)
Comparative for the period ending August 31, 2017 and 2016

SCHEDULE E

	Year to Date ACTUAL (Unaudited) August-17	ACTUAL (Audited) August-16	Variance Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	57,679,055	58,978,071	(1,299,016)
Wastewater Revenues	33,744,260	34,126,382	(382,122)
Legislative Surcharge	2,894,253	2,656,798	237,455
Other Revenues	510,812	476,574	34,238
System Development Charge	811,049	1,309,304	(498,255)
Total Operating Revenues	95,639,429	97,547,129	(1,907,700)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	6,713,406	5,842,865	870,541
Power Purchases	11,001,203	10,290,394	710,809
Total Utility Costs	17,714,609	16,133,259	1,581,350
Salaries and Wages	15,405,305	14,673,921	731,384
Pension and Benefits	2,819,445	5,003,947	(2,184,502)
Total Salaries and Benefits	18,224,750	19,677,868	(1,453,118)
Capitalized Labor and Benefits	(2,200,000)	(2,731,995)	531,995
Net Salaries and Benefits	16,024,750	16,945,873	(921,123)
Administrative and General Expenses			
Sludge removal	1,534,806	1,434,656	100,150
Chemicals	1,926,943	2,052,551	(125,608)
Materials & Supplies	1,500,873	1,140,824	360,049
Transportation	398,327	526,634	(128,307)
Communications	118,497	112,913	5,584
Claims	115,400	116,795	(1,395)
Insurance	1,011,753	1,112,216	(100,464)
Training & Travel	177,853	137,024	40,829
Advertising	97,717	174,982	(77,265)
Miscellaneous	788,844	752,722	36,122
Total Administrative and General Expense	7,671,013	7,561,318	109,695
Regulatory Expense	231,280	298,148	(66,868)
Bad Debts Provision	687,444	948,118	(260,674)
Depreciation Expense	14,619,088	14,069,093	549,995
Contractual Expense			
Audit & Computer Maint.	999,769	951,142	48,627
Building rental	402,096	366,065	36,031
Equipment rental	616,827	639,781	(22,953)
Legal	4,969	3,986	983
Laboratory	75,143	112,576	(37,433)
Other	1,492,391	1,700,481	(208,090)
Total Contractual Expense	3,591,195	3,774,029	(182,834)
Retiree Supp. Annuities and health care costs	2,538,758	2,533,907	4,851
Contribution to Government of Guam	544,500	535,333	9,167
Total Retiree Benefits	3,083,258	3,069,241	14,017
Total Operating Expenses	63,622,636	62,799,077	823,559
Earnings (Loss) from Operations	32,016,793	34,748,052	(2,731,259)
Interest Income-2010/13/14/16 Series Bond	633,437	22,908	610,528
Interest Income-Other Funds	97,301	14,096	83,205
Interest Income-SDC	19,407	20,851	(1,444)
Interest Expense- 2010/13/14/16 Series Bond	(24,437,900)	(21,938,125)	(2,499,775)
Interest Expense- ST BOG	(517,107)	(650,051)	132,944
Federal Expenditures	(256,661)	(970,074)	713,413
Loss on Asset Disposal	(20,949)	(45,646)	24,698
AFUDC	6,875,000	12,566,071	(5,691,071)
Amortization of Discount, Premium and Issuance Costs	680,468	(1,768,928)	2,449,396
Loss on Defeasance Bond05 Refunding	(167,403)	(214,313)	46,910
Deferred outflows from pension	(1,149,287)	(81,969)	(1,067,319)
Prior Year Adjustment	(566,781)	(565,370)	(1,411)
Total non-operating revenues (expenses)	(18,810,476)	(13,610,549)	(5,199,927)
Net Income (Loss) before capital contributions	13,206,317	21,137,503	(7,931,186)
Capital Contributions			
Grants from US Government	13,490,351	4,776,791	8,713,560
Grants from GovGuam & Others	1,886	254,666	(252,780)
Other Contributions	-	-	-
Total Capital Contributions	13,492,237	5,031,457	8,460,780
Change in Net Assets	26,698,553	26,168,960	529,594
Debt Service Calculation			
Earnings From Operations	32,016,793	34,748,052	
System Development Charge	(811,049)	(1,309,304)	
Interest/Investment Income	97,301	14,096	
Depreciation	14,619,088	14,069,093	
Balance Available for Debt Service per Section 6.12	45,922,133	47,521,937	
Working Capital Reserve Available for Debt Service	10,253,476	4,202,917	
Transfer to Working Capital Debt Service Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	56,175,608	51,724,853	
Debt Service			
Principal	4,620,000	4,500,833	
Interest	17,895,443	15,872,445	
Total	22,515,443	20,373,279	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	2.04	2.33	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.49	2.54	

SCHEDULE F

Bond Compliance

		($$$) Per Indenture	As of 08/31/17 ($$$) Bond 2010/2013/2014/2016
• Operation and Maintenance Fund-BOG	*Equivalent to 55 days of the annual O&M budget less depreciation*	$10.5M	$10.5M
• Bond Reserve Fund - US Bank	*Fully funded- Principal and Interest (Bond Series 2010, 2013, 2014 Refunding and 2016)*	$34.9M	$34.9M
• Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust	*Equivalent to 1/4 of the annual O&M budget & CIP budget to be funded in 5 years ($2M/year)*	$17.4M	$17.4M
• Capital Improvement Fund	*Balance remaining in the Revenue Fund after the foregoing deposits*	$3.9K	$4.5K
• Capitalized Interest Fund			$1.8M

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY 2017

SCHEDULE G

Description	Unaudited August 31, 2017	Audited September 30, 2016	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	0
Petty Cash	5,000	5,000	0
BOG - General Fund	5,235,998	8,126,177	(2,890,179)
BOG - PRN Payroll	30,039	24,253	5,786
Sub-total Unrestricted	5,273,038	8,157,430	(2,884,393)
RESTRICTED			
BOG - Credit Card-Sweep	-	-	0
BOG - On Line Payment	-	-	0
BOG - Sweep Account	-	76	(76)
Bank of Hawaii	82,481	121,322	(38,841)
ANZ Bank	978	229	749
First Hawaiian Bank	11,043	47,741	(36,698)
Bank Pacific	11,434	14,194	(2,759)
Community First FCU	4,338	4,638	(300)
BOG - Customer Refunds	1,832,361	1,431,631	400,730
Bank Pacific - Surcharge	188,861	166,763	22,099
Bank Pacific - Escrow Deposit	665,955	845,734	(179,779)
BOG Emergency Reserve Fund	6,121	6,114	7
BOG - Revenue Trust	328,988	595,751	(266,763)
BOG Revenue Trust Fund	7,246,992	8,182,472	(935,480)
BOG Capital Improvement Fund-Bond	4,500	3,933	567
BOG Capital Improvement Revenue Fund	3,740,208	-	3,740,208
BOG-O & M Reserve	13,029,350	4,050,319	8,979,031
BOG-Debt Service Reserve	11,211,546	11,185,610	25,936
BOG-CAPEX Reserve	11,636,447	8,710,383	2,926,064
BOG Sewer Hookup Revolving Fund	63,525	62,132	1,393
BOG Short Term Loan DSF	-	-	0
BOG Subord. Sec. Fund	1,125,118	859,233	265,885
BOG Operation and Maintenance Fund	3,083,482	3,083,482	0
	54,273,729	39,371,755	14,901,974
BOG - SDC Deposit	1,911,061	1,064,792	846,269
BOG - SDC CDs	8,000,000	8,000,000	0
Total Restricted	64,184,790	48,436,547	15,748,243
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	0
BOG Series 10 Construction Fund	9,403,468	11,725,749	(2,322,281)
BOG Series 13 Construction Fund	75,551,537	107,622,618	(32,071,080)
BOG Series 13 CAP I Fund	-	-	0
BOG Series 14 Refunding Construction Fund	812,805	820,529	(7,724)
BOG Series 16 Construction Fund	133,410,367	138,748,131	(5,337,764)
BOG Series 16 Cap Int Fund	1,782,025	8,937,545	(7,155,520)
BOG Series 16 COI Fund	-	-	0
Total Restricted - Held by Trustee	238,383,415	285,277,784	(46,894,369)
USB Series 2010 Debt Service Fund	1,347,531	2,016,414	(668,883)
USB Series 2010 Debt Service Reserve Fund	7,566,460	7,566,460	0
USB Series 2013 Debt Service Fund	1,558,552	2,333,083	(774,531)
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	0
USB Series 2014 Refunding Debt Service Fund	1,198,640	1,791,266	(592,626)
USB Series 2014 Refunding Debt Service Reserve Func	7,737,571	7,707,628	29,943
USB Series 2016 Debt Service Fund	130	-	130
USB Series 2016 Debt Service Reserve Fund	7,591,047	7,582,725	8,322
Total Investments	39,031,619	41,029,262	(1,997,644)
Total Restricted and Unrestricted Cash	346,872,861	382,901,023	(36,028,162)

SCHEDULE H

Guam Waterworks Authority **Statement of Cash Flows (Unaudited)** **FY 2017**	**YTD** **Aug-17**
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	93,763,656
Cash payments to suppliers/contractors for goods and services	(29,275,331)
Cash payments to employees for services	(18,613,226)
Net cash provided by operating activities	45,875,099
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	13,347,144
Acquisition of utility plant	(58,997,953)
Repayment of Long Term Debt	(8,935,484)
Interest expense	(27,643,383)
Net cash provided by (used in) capital and related financing activities	(82,229,676)
Cash flows from investing activities:	
Transfers from (to) restricted fund	32,739,447
Interest income received	730,737
Net cash provided by investing activities	33,470,184
Net increase (decrease) in cash	(2,884,393)
Unrestricted cash at beginning of the period	8,157,430
Unrestricted cash at end of period	5,273,038
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	32,371,917
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	14,619,088
Other Expense/income	
(Increase) decrease in assets:	
Accounts receivable	(275,895)
Materials and supplies inventory	745,991
Other Assets	(43,248)
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	(772,611)
Accrued payroll	(669,163)
Customer deposits	(100,980)
Net cash provided by operating activities	45,875,099

Guam Waterworks Authority
Accounts Receivable - Government
As of August 31, 2017

SCHEDULE I

Customer Name	No of Accounts	AGING Current Balance	31-60 days	61-90 days	91-120 days	Over 120 days	Outstanding Bal.
GUAM POWER AUTHORITY	25	124,616	104,975	32,099	64,134	67,269	393,093
GUAM INT'L AIRPORT AUTHORITY	4	28,532	44,012	29,386	24,840	125,995	252,765
PORT AUTHORITY OF GUAM	2	35,716	37,035	27,742	-	-	100,493
UNIVERSITY OF GUAM	2	6,956	-	-	-	-	6,956
GUAM MEMORIAL HOSPITAL AUTHORITY	2	2,269	-	-	-	-	2,269
GUAM HOUSING & URBAN RENEWAL AUTHORITY	8	1,801	-	-	-	92	1,893
GUAM HOUSING CORPORATION	1	29	-	-	-	-	29
AUTONOMOUS AGENCIES	**44**	**199,918**	**186,022**	**89,227**	**88,974**	**193,356**	**757,497**
DEPT OF EDUCATION	51	289,390	136,534	51,951	8,336	161,799	648,011
DEPT OF CORRECTIONS	8	127,213	108,061	-	-	-	235,274
DEPT OF PARKS & RECREATION	21	50,866	36,425	21,614	6,274	114,852	230,031
DEPT OF PUBLIC HEALTH & SOCIAL SERVICES	7	3,126	941	1,555	333	103,380	109,334
MAYORS' COUNCIL OF GUAM	46	17,085	334	7,886	-	-	25,304
DEPT OF CHAMORRO AFFAIRS	7	8,126	15,826	-	-	-	23,952
GUAM POLICE DEPARTMENT	5	9,937	8,747	-	-	-	18,684
GUAM FIRE DEPARTMENT	11	9,423	2,457	-	-	-	11,880
DEPT OF AGRICULTURE	7	5,894	-	-	-	-	5,894
DEPT OF PUBLIC WORKS	11	3,314	-	-	-	-	3,314
OFFICE OF THE GOVERNOR	2	2,714	-	-	-	-	2,714
SANCTUARY INC	1	1,642	-	-	-	-	1,642
DIVISION OF SENIOR CITIZENS, DPH&SS	2	1,283	197	154	-	-	1,634
DEPT OF ADMINISTRATION	2	430	1,103	-	-	-	1,533
DEPT OF YOUTH AFFAIRS	4	1,387	-	-	-	-	1,387
DEPT OF MENTAL HEALTH AND SUBTANCE	1	1,339	-	-	-	-	1,339
GHURA-AGAFU GUMAS PARK	1	33	119	278	34	292	755
GUAM VETERANS AFFAIRS OFFICE	2	434	-	-	-	-	434
GUAM ENVIROMENTAL PROTECTION AGENCY	2	208	-	-	-	-	208
GUAM PUBLIC LIBRARY	4	159	-	-	-	-	159
GUAM LEGISLATURE	2	134	-	-	-	-	134
THE OFFICE OF THE DEDEDO MAYOR	1	92	-	-	-	-	92
MERIZO MAYOR	1	89	-	-	-	-	89
GUAM SOLID WASTE AUTHORITY	1	23	-	-	-	-	23
LINE AGENCIES	**200**	**534,341**	**310,743**	**83,438**	**14,976**	**380,324**	**1,323,822**
TOTAL August 31, 2017	**244**	**734,259**	**496,765**	**172,665**	**103,950**	**573,680**	**2,081,319**
TOTAL September 30, 2016	**243**	**1,516,081**	**325,256**	**94,308**	**95,259**	**717,692**	**2,748,597**
% INCREASE/ (DECREASE)	**0%**	**-52%**	**53%**	**83%**	**9%**	**-20%**	**-24%**

GUAM WATERWORKS AUTHORITY
2010 Series Bond Project Status
As of Aug. 31, 2017

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 08/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 08/31/17
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	$ 83,395	$ 202,199	$ 285,595	$ 1,414,405	$ 1,616,605
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	$ 683,214	$ 91,788	$ 775,002	$ 124,998	$ 216,786
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	$ 855,242	$ 584,234	$ 1,439,476	$ 560,524	$ 1,144,758
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 Asessment 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 malojloj Elevetad & Yigo Elevated		$ 200,000	$ 200,000	$ -	$ 200,000	$ -	$ -
Public Water System Asser Inventory/Condition Assesment		$ 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	$ 268,150	$ 48,850	$ 317,000	$ 984,947	$ 1,033,797
Facilities Plan/Design for Umatac Merizo WWTP		$ 900,000	$ 646,050	$ 24,740	$ 670,791	$ 229,209	$ 253,950
Agat/Santa Rita STP Replacement	$ 2,968,000	$ 2,218,000	$ 2,215,591	$ 387	$ 2,215,978	$ 2,022	$ 2,409
Northern District WWTP Primary Treatment Upgrades	$ -	$ 11,750,000	$ 11,363,439	$ 211,161	$ 11,574,600	$ 175,400	$ 386,561
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	$ 706,615	$ 93,385	$ 800,000	$ (0)	$ 93,385
I&I SSES Central		$ 850,000	$ 794,325	$ 55,675	$ 850,000	$ -	$ 55,675
I&I SSES Northern		$ -			$ -	$ -	$ -
Umatac Merizo Replacement		$ 250,000	$ 247,431	$ 2,569	$ 250,000	$ -	$ 2,569
Northern District WWTP Secondary Treatment Upgrades		$ 1,000,000					$ 1,000,000
		$ -					
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	$ 461,986	$ 37,701	$ 499,687	$ 313	$ 38,014
General Plant Improvements / Water	$ 14,370,000	$ 7,241,000	$ 7,241,000	$ 0	$ 7,241,000	$ 0	$ 0
Interest Earned							$ 53,698
Total Construction Fund (2010 Series Revenue Bond)	**$ 87,402,000**	**$ 87,402,000**	**$ 78,052,230**	**$ 3,564,224**	**$ 81,616,454**	**$ 4,785,546**	**$ 9,403,468**

1.) PUC's Docket 11-01 $29,000,000.00 dated
09/19/11authorized GWA for reallocation
2) PUC's Docket 11-01 Reallocation of $23,246,000.00 dated 07/30/12
3) PUC's Dockect Reallocation dated February 2013

GUAM WATERWORKS AUTHORITY
2013 Series Bond Project Status
As of Aug. 31, 2017

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 08/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 08/31/17
Santa Rita Springs Booster Pump Rehab Phase II	$ 100,000	$ 100,000	24,098	75,902	$ 100,000	$ -	$ 75,902
"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
Barrigada Tank Repair/Replacement	$ 6,000,000	$ 4,987,000	4,924,959	62,041	$ 4,987,000	$ 0	$ 62,041
Leak Detection	$ 100,000	$ 20,000	16,916	-	$ 16,916	$ 3,084	$ 3,084
Potable Water System Planning	$ 800,000	$ 624,000	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
Ugum Water Treatment Plant Intake	$ 1,000,000	$ 982,000	578,858	280,943	$ 859,801	$ 122,199	$ 403,142
Water Wells	$ 4,200,000	$ 4,200,000	2,274,832	750,914	$ 3,025,746	$ 1,174,254	$ 1,925,168
Water Distribution System	$ 12,000,000	$ 11,151,000	4,366,442	4,438,918	$ 8,805,360	$ 2,345,640	$ 6,784,558
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	321,651	1,074	$ 322,725	$ 108,275	$ 109,349
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	8,121,079	4,514,178	$ 12,635,257	$ 1,242,743	$ 5,756,921
Ugum Water Treatment Plant Reservoir	$ 7,000,000	$ 90,000			$ -	$ 90,000	$ 90,000
Agana Heights & Chaot Tanks	$ 4,500,000	$ 3,280,000	233,265	47,022	$ 280,287	$ 2,999,713	$ 3,046,735
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 13,500,000	$ 11,605,000	847,731	10,757,269	$ 11,605,000	$ 0	$ 10,757,270
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of maloilo Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
		$ -					
Wastewater System Planning	$ 800,000	$ 651,000	550,480	100,520	$ 651,000	$ (0)	$ 100,520
Lift Station Upgrades	$ 5,000,000	$ 946,000	561,748	363	$ 562,111	$ 383,889	$ 384,252
Wastewater Collection System Repl/Rehab	$ 6,500,000	$ 780,000	456,050	185,698	$ 641,748	$ 138,253	$ 323,950
Baza Gardens STP Replacement		$ 3,114,883	889,234	2,225,634	$ 3,114,869	$ 15	$ 2,225,649
Facilities Plan/Design for Umatac-Merizo WWTP		$ 473,000	334,938	36,761	$ 371,699	$ 101,301	$ 138,062
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	28,741,830	38,148,771	$ 66,890,601	$ 309,399	$ 38,458,170
Agana WWTP Interim Measures		$ 673,000	569,740	103,261	$ 673,000	$ (0)	$ 103,260
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	425,984	296,376	$ 722,359	$ 200,641	$ 497,017
SCADA Improvements – Phase 4	$ 500,000	$ -			$ -	$ -	$ -
		$ -					$ -
Laboratory Modernization	$ 1,500,000	$ 1,173,000	1,061,199	110,266	$ 1,171,465	$ 1,535	$ 111,801
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							$ 230,319
Total Construction Fund (2013 Series Revenue Bond)	**$ 139,325,000**	**$ 139,325,000**	**$ 64,278,787**	**$ 63,756,801**	**$ 128,035,588**	**$ 11,289,412**	**$ 75,551,537**

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

GUAM WATERWORKS AUTHORITY
2014 Series Refunded Bond Project Status
As of Aug. 31, 2017

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT	ADJUSTED PROJECT COST	EXPENDITURES AS OF 08/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 08/31/17	Construction fund balance AS OF 08/31/17
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 Reductic	$ 2,155,000	$ 1,931,659	1,931,659	$ -	$ 1,931,659	$ (0)	$ 431,000	$ (0)
				$ -		$ -		$ -
Chaot WW Pump Station/Collection System	$ 410,000	$ 399,120	399,120	$ -	$ 399,120	$ -	$ 82,000	$ -
Lift Station Upgrades	$ 230,000	$ 149,895	149,895	$ -	$ 149,895	$ 0	$ 46,000	$ 0
Collection Line Upgrades	$ 200,000	$ 62,755	62,755	$ -	$ 62,755	$ 0	$ 40,000	$ 0
"A" Well Transmission Line	$ 2,413,000	$ 3,833,175	3,790,888	$ 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 WTPlant Refurbishment ($1.724,970EPA)		$ 6,588,473	6,531,525	$ 56,949	$ 6,588,473	$ (0)		$ 56,948
Barrigada Tank Repair/Replacement	$ 3,000,000	$ 65,019	65,019	$ -	$ 65,019	$ 0	$ 600,000	$ 0
						$ -		$ -
Water Reservoir Condition Assessment		$ 1,250,000	1,207,250.62	$ 42,749	$ 1,250,000	$ 0	$ -	$ 42,749
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	565,670	$ 12,166	$ 577,836	$ 0	$ 160,000	$ 12,166
Ground Water Disinfection		$ -				$ -		$ -
GWUDI Study		$ 262,234	260,430	1,804	$ 262,234	$ -		$ 1,804
						$ -		$ -
Contingency	$ 12,276,023	$ 154	-	$ -	$ -	$ -		$ 732
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
						$ -		$ -
Vehicles	$ 1,100,000	$ 1,280,000	2,130,305	$ (850,305)	$ 1,280,000	$ -	$ 220,000	$ -
Generation Equipment	$ 700,000	$ 880,000	2,712	$ 877,288	$ 880,000	$ 0		$ 27,033
Leak Detection/Line Replacement	$ 8,200,000	$ 5,988,494	5,988,494	$ -	$ 5,988,494	$ -	$ 1,640,000	$ -
						$ -		$ -
						$ -		$ -
Automated Meter Reading	$ 12,572,063	$ 17,468,359	16,870,522	$ 537,157	$ 17,468,359.32	$ 0	$ 2,514,413	$ 597,837
Total Construction Fund (2014 Series Refu	$ 82,930,086	$ 89,711,698	88,891,990	$ 758,873.38	$ 89,711,543	$ 1	$ 13,990,813	$ 810,703
Interest Earned	$ 6,781,612	$ (0)				$ (0)		$ 2,103
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**88,891,990**	**$ 758,873.38**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 812,805**

GUAM WATERWORKS AUTHORITY
2016 Series Bond Project Status
As of Aug. 31, 2017

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 08/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 08/31/17
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
Barrigada Tank Repair/Replacement	$ 1,013,000	$ 1,013,000		-	$ -	$ 1,013,000	$ 1,013,000
Leak Detection	$ 1,180,000	$ 1,180,000		-	$ -	$ 1,180,000	$ 1,180,000
Potable Water System Planning	$ 2,276,000	$ 2,276,000	145,548	317,188.58	$ 462,736	$ 1,813,264	$ 2,130,452
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		151,539.00	$ 151,539	$ 3,464,461	$ 3,616,000
Ugum Water Treatment Plant Intake	$ 18,000	$ 18,000			$ -	$ 18,000	$ 18,000
Water Wells	$ 2,500,000	$ 2,500,000			$ -	$ 2,500,000	$ 2,500,000
Water Distribution System	$ 2,049,000	$ 49,000			$ -	$ 49,000	$ 49,000
Pressure Zone Realignment /	$ 1,141,000	$ 1,141,000			$ -	$ 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	456,038	1,893,343.00	$ 2,349,381	$ 26,000,620	$ 27,893,963
Ugum Water Treatment Plant Reservoir	$ 6,410,000	$ -			$ -	$ -	$ -
Water Audit Program & Water Loss Control Plan	$ 1,000,000	$ 1,000,000				$ 1,000,000	$ 1,000,000
Agana Heights & Chaot Tanks	$ 1,220,000	$ 1,220,000			$ -	$ 1,220,000	$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 1,895,000	$ 1,895,000			$ -	$ 1,895,000	$ 1,895,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#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	28,091	282,274.77	$ 310,366	$ 38,634	$ 320,909
Lift Station Upgrades	$ 2,404,000	$ 2,404,000	17,800	200,000.00	$ 217,800	$ 2,186,200	$ 2,386,200
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	4,371,801	24,517,904.41	$ 28,889,705	$ 510,465	$ 25,028,369
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	174,852	61,158.47	$ 236,011	$ 290,989	$ 352,148
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	309,098	348,827.64	$ 657,926	$ 2,342,074	$ 2,690,902
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	196,000	20,574,598.47	$ 20,770,598	$ 29,402	$ 20,604,000
						$ -	
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		432,705.00	$ 432,705	$ 744,295	$ 1,177,000
SCADA Improvements – Phase 4	$ 6,500,000	$ 6,500,000			$ -	$ 6,500,000	$ 6,500,000
						$ -	
Laboratory Modernization	$ 1,127,000	$ 1,127,000	849,360	277,639.85	$ 1,127,000	$ -	$ 277,640
Land Survey	$ 1,998,000	$ 1,998,000		1,246,376.27	$ 1,246,376	$ 751,624	$ 1,998,000
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	120,192	1,357,138.23	$ 1,477,330	$ 1,292,133	$ 2,649,271
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-		$ 500,000	$ 255,932
Interest Earned		$ -					$ 303,751
		$ -					
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 6,912,848**	**$ 53,632,826**	**$ 60,301,606**	**$ 79,717,857**	**$ 133,410,366**

GUAM WATERWORKS AUTHORITY
Schedule of Series 2010, 2013, 2014 Refunding and 2016 Bond Bank Accounts
As of August 31, 2017

SCHEDULE N

	8/31/2017
BANK OF GUAM	
BOG - Revenue Account	7,246,992
BOG - Operations and Maintenance Reserve	3,083,482
BOG - Operations, Maintenance, Renewal and Replacement Reserve Fund	17,423,213
BOG - Capital Improvement Fund	3,744,708
BOG - O & M Reserve	13,029,350
BOG - Debt Service Reserve	11,211,546
BOG - CAPEX Reserve	11,636,447
Total BOG Bank Account Balance	**67,375,738**
Series 2010 Bond:	
BOG - Construction Account	9,403,468
USB - Debt Service Fund	1,347,531
USB - Debt Service Reserve Fund	7,566,460
Total Series 2010 Bond Bank Balance	**18,317,459**
Series 2013 Bond:	
BOG - Construction Fund	75,551,537
BOG - Capitalized Interest Fund	-
USB - Debt Service Fund	1,558,552
USB - Debt Service Reserve Fund	12,031,688
Total Series 2013 Bond Bank Balance	**89,141,777**
Series 2014 Refunding Bond:	
BOG - Construction Fund	812,805
USB - Debt Service Fund	1,198,640
USB - Debt Service Reserve Fund	7,737,571
Total Series 2014 Refunding Bond Bank Balance	**9,749,016**
Series 2016 Bond:	
BOG - Construction Account	133,410,367
BOG - Capitalized Interest Fund	1,782,025
BOG - Cost of Issuance Fund	-
USB - Debt Service Fund	130
USB - Debt Service Reserve Fund	7,591,047
Total Series 2016 Bond Bank Balance	**142,783,569**

GUAM WATERWORKS AUTHORITY

SUPPLEMENTAL FINANCIAL INFORMATION

September 20, 2017

GUAM WATERWORKS AUTHORITY
COMPARATIVE SCHEDULE

	ANNUALIZED FY2017		PROJECTION FY2018	
	Based on Actual Eleven Months Ending August	As filed with PUC June 1	Without rate increase
Basic & Non-Lifeline Increase	3.50%	4.00%	0.00%
Lifeline Increase	3.50%	0.00%	0.00%
Legislative Surcharge	3.70%	3.75%	3.75%
Customer Growth	0.00%	0.00%	0.00%
OPERATING REVENUES			
Water Revenues	$ 62,922,606	$ 68,917,921	$ 66,476,494
Wastewater Revenues	36,811,920	38,739,088	37,587,949
Legislative Surcharge	3,157,366	3,502,752	3,368,031
Other Revenues	557,249	691,656	691,656
System Development Charge	884,781	553,630	553,630
Total Operating Revenues	**$ 104,333,923**	**$ 112,405,047**	**$ 108,677,759**
O & M EXPENSES			
Power Purchases	$ 12,001,312	$ 12,695,963	$ 12,695,963
Water Purchases	7,323,716	8,653,358	8,653,358
Salaries and Benefits	19,881,545	24,015,371	24,015,371
Administrative and General Expenses	8,365,505	11,916,710	11,916,710
Regulatory Expense	241,525	265,036	265,036
Bad Debt Expense	749,939	685,231	685,231
Depreciation Expense	15,948,096	18,338,096	18,338,096
Contractual Expense	3,928,447	4,478,895	4,478,895
Retiree Supplemental Annuities/Health care costs	3,363,554	3,474,100	3,474,100
Total Operating Expenses	**$ 71,803,640**	**$ 84,522,759**	**$ 84,522,759**
Earnings (Loss) from Operations	**32,530,283**	**27,882,288**	**24,155,000**
Other (Expenses)Revenue			
Interest Income-Bond 2010,2013, 2014 Refunding & 2016	691,022	188,719	691,022
Interest Income-Other Funds	106,146	35,217	106,146
Interest Income-SDC	21,171	28,971	21,171
Interest Expense-Bonds 2010,2013,2014 Refunding and 2016	(26,687,801)	(31,507,047)	(31,507,047)
Interest Expense-BOG	(564,117)	(399,458)	(399,458)
Prior Year Adjustment	(618,307)	-	-
Grant Funded Expenditures	(279,994)	(615,986)	(615,986)
AFUDC	7,500,000	7,500,000	7,500,000
Amortization of Discount, Premium and Issuance Costs	742,328	(742,330)	(742,330)
Grants & other contributions	14,718,804	10,477,298	10,477,298
Loss on Defeasance Bond05 Refunding	(182,621)	(182,621)	(182,621)
Deferred outflows from pension	(1,253,768)	(1,263,367)	(1,263,367)
Loss on Asset Disposal/Invty writedown	(22,853)	-	-
Net Income (Loss)	**26,700,294**	**11,401,684**	**8,239,829**
INCREASE (DECREASE) in Capital	**$ 26,700,294**	**$ 11,401,684**	**$ 8,239,829**
BOND DEBT SERVICE			
Principal	$ 5,040,000	**$ 5,200,000**	$ 5,200,000
Interest	19,522,301	24,760,826	24,760,826
Total	**$ 24,562,301**	**$ 29,960,826**	**$ 29,960,826**
DEBT SERVICE COVERAGE CALCULATION - Section 6.12			
Earnings (Loss) from Operations	**$ 32,530,283**	**$ 27,882,288**	**$ 24,155,000**
Investment Income-Other Funds & Recoveries	106,146	35,217	106,146
Supplemental Annuities/COLA	594,000	594,000	594,000
System Development Charge	(884,781)	(553,630)	(553,630)
Depreciation	15,948,096	18,338,096	18,338,096
Balance Available for Debt Service - Section 6.12	**$ 48,293,745**	**$ 46,295,971**	**$ 42,639,613**
Debt Service Coverage (1.25X) - Section 6.12	1.97	1.55	1.42
DEBT SERVICE COVERAGE CALCULATION - PUC			
Balance Available for Debt Service	**$ 48,293,745**	**$ 46,295,971**	**$ 42,639,613**
Transfer - Reserve for O & M Reserve	$ -	(3,200,000)	(3,200,000)
Transfer - Reserve for Debt Service	(0)	(1,800,000)	(1,800,000)
Available for Debt Service -Reserves For Debt Service	11,187,181	11,187,181	11,187,181
Balance Available for Debt Service - PUC	**$ 59,480,925**	**$ 52,483,152**	**$ 48,826,794**
Debt Service Coverage (1.75X) - PUC	2.42	1.75	1.63
CASH FLOW STATEMENT			
Net Income (Loss)	**$ 26,700,294**	**$ 11,401,684**	**$ 8,239,829**
Interest Income-Bond 2010,2013, 2014 Refunding & 2016	(691,022)	-	(691,022)
Interest Income-Other Funds	(106,146)	-	(106,146)
Interest Income-SDC	(21,171)	-	(21,171)
Depreciation & Amortization	15,205,768	19,080,426	19,080,426
AFUDC	(7,500,000)	(7,500,000)	(7,500,000)
Principal Payments - Bonds	(5,040,000)	(5,200,000)	(5,200,000)
Working Capital Change (Increase)Decrease	(4,223,840)	(1,905,018)	(1,445,490)
Principal Payments- BOG ST-$30M	(2,863,988)	(3,018,019)	(3,018,019)
Deposit to Debt Service Reserve	-	(6,405,162)	(6,405,162)
Deposit to Capitalized Interest Reserve	-	(9,949,500)	(9,949,500)
Gross Bond Proceeds	-	90,450,000	90,450,000
Cost of Issuance	-	(1,809,000)	(1,809,000)
Deposit to Bond Construction Fund	-	(72,286,338)	(72,286,338)
Revenue Funded CAPEX	(4,249,714)	-	-
Transfer to Trust	-	-	-
Bond Reserve Requirement(OMRRRF)		-	-
System Development Charge	(884,781)	(553,630)	(553,630)
Loss on Defeasance Bond05 Refunding & Amortization costs	182,621	182,621	182,621
Deferred outflows from pension	1,253,768	1,263,367	1,263,367
Prior Year Adjustment & Loss on Asset Disposal/Invty writedown	(641,160)	0	0
Working Capital Reserve for CAPEX	(5,404,323)	(11,000,000)	(11,000,000)
Working Capital Reserve for O & M	(8,954,687)	(3,200,000)	(3,200,000)
Working Capital Reserve for Debt Service	-	(1,800,000)	(1,800,000)
Grant Funded Expenditures	615,986	615,986	615,986
Grants	(14,718,804)	(10,477,298)	(10,477,298)
Transfer from Capitalized Interest Fund	7,165,500	6,746,221	6,746,221
Cash Surplus (Deficit)	(4,175,698)	(5,363,660)	(8,884,326)
Beginning Balance-	9,777,260	5,680,349	5,601,562
Ending Balance	**$ 5,601,562**	**$ 316,689**	**$ (3,282,765)**

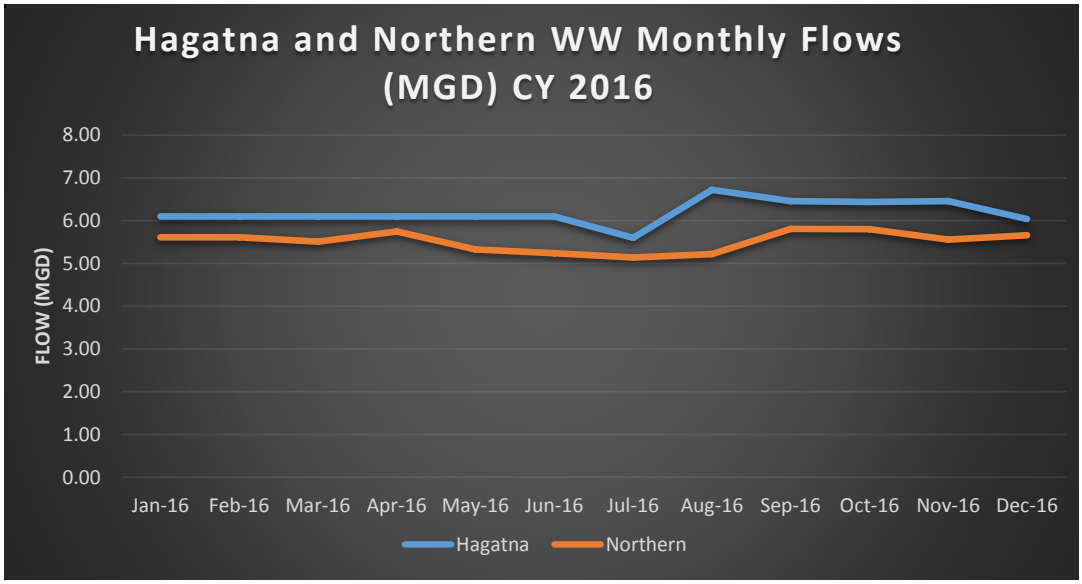
(1) Refunding is assuming a delivery date of October 2017

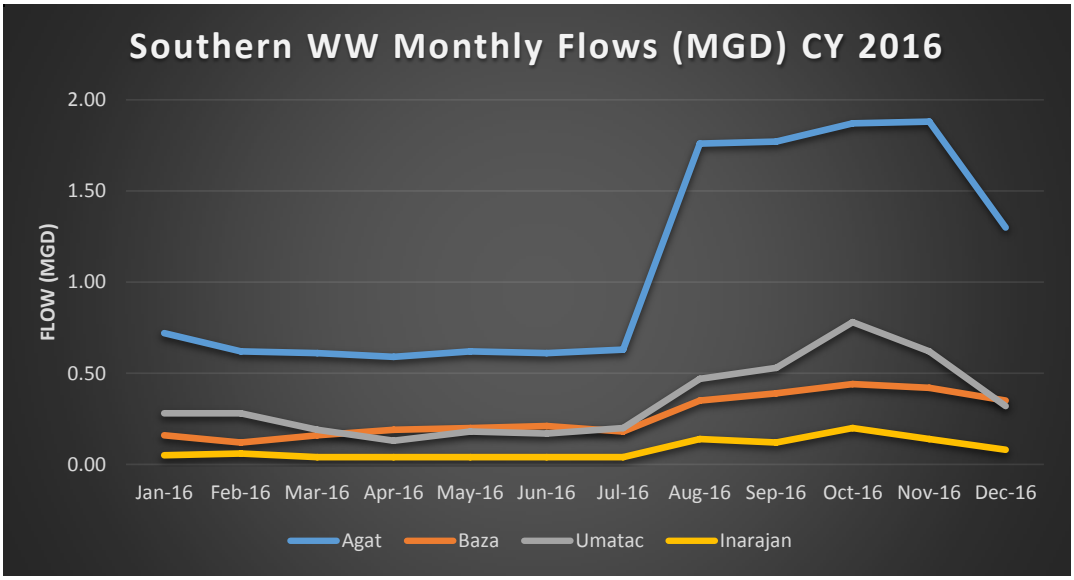
Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

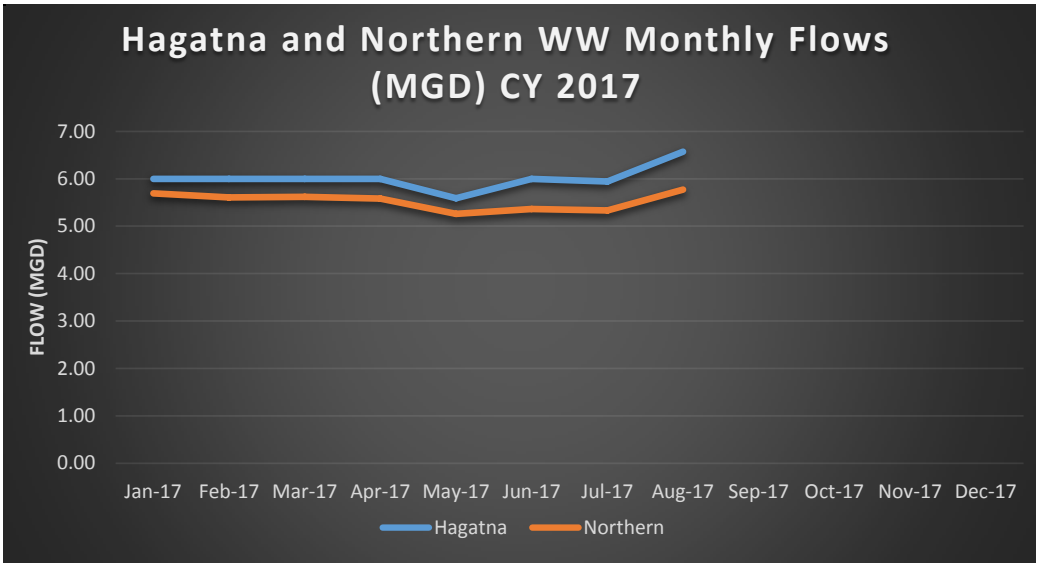
2016	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-16	6.10	5.61	0.72	0.16	0.28	0.05
Feb-16	6.10	5.61	0.62	0.12	0.28	0.06
Mar-16	6.10	5.51	0.61	0.16	0.19	0.04
Apr-16	6.10	5.75	0.59	0.19	0.13	0.04
May-16	6.10	5.33	0.62	0.20	0.18	0.04
Jun-16	6.10	5.24	0.61	0.21	0.17	0.04
Jul-16	5.60	5.14	0.63	0.18	0.20	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
2016 Average MGD	**6.19**	**5.52**	**1.08**	**0.26**	**0.35**	**0.08**
2016 Total MGY	2,261	2,015	395	96	126	30

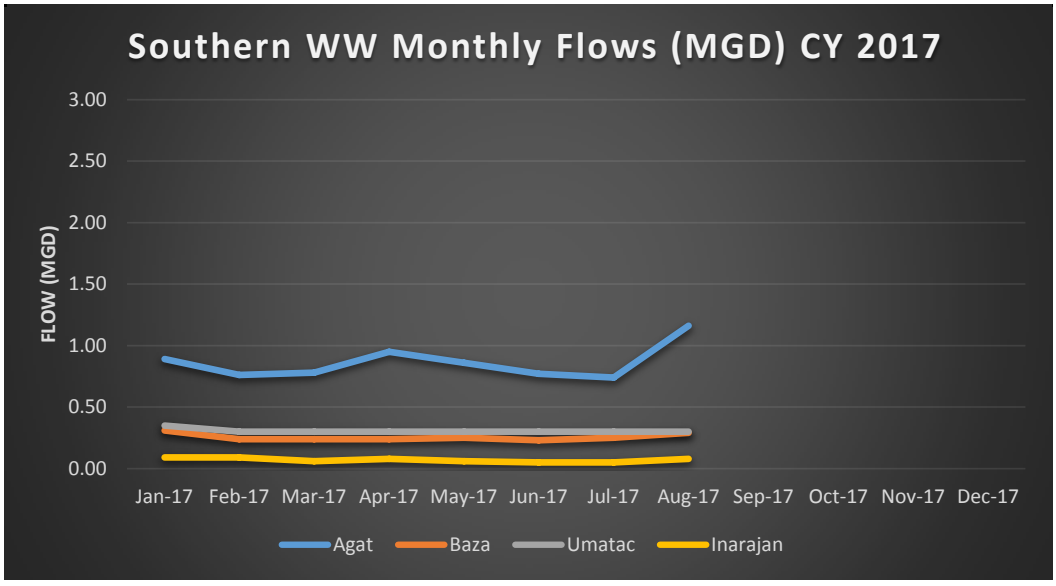
2017	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-17	6.00	5.69	0.89	0.31	0.35	0.09
Feb-17	6.00	5.61	0.76	0.24	0.30	0.09
Mar-17	6.00	5.62	0.78	0.24	0.30	0.06
Apr-17	6.00	5.58	0.95	0.24	0.30	0.08
May-17	5.59	5.26	0.86	0.25	0.30	0.06
Jun-17	6.00	5.36	0.77	0.23	0.30	0.05
Jul-17	5.94	5.33	0.74	0.25	0.30	0.05
Aug-17	6.57	5.77	1.16	0.29	0.30	0.08
Sep-17						
Oct-17						
Nov-17						
Dec-17						
2017 Average MGD	**6.01**	**5.53**	**0.86**	**0.26**	**0.31**	**0.07**
2017 Total MGY	2,195	2,018	315	94	112	26

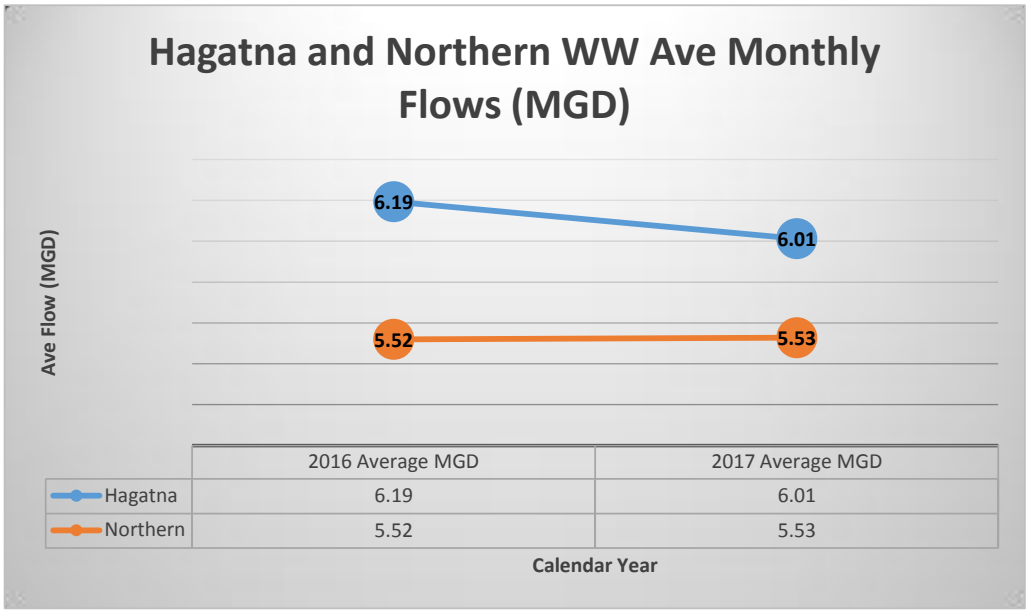
GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 9/14/2017

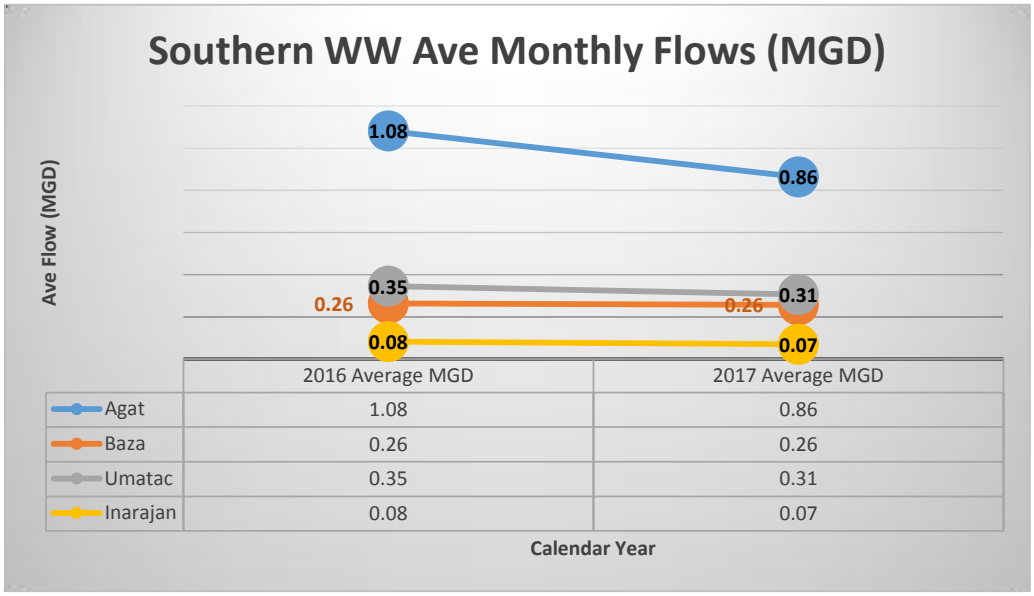

Hagatna and Northern WW Monthly Flows (MGD) CY 2016
FLOW (MGD)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16
Hagatna
Northern

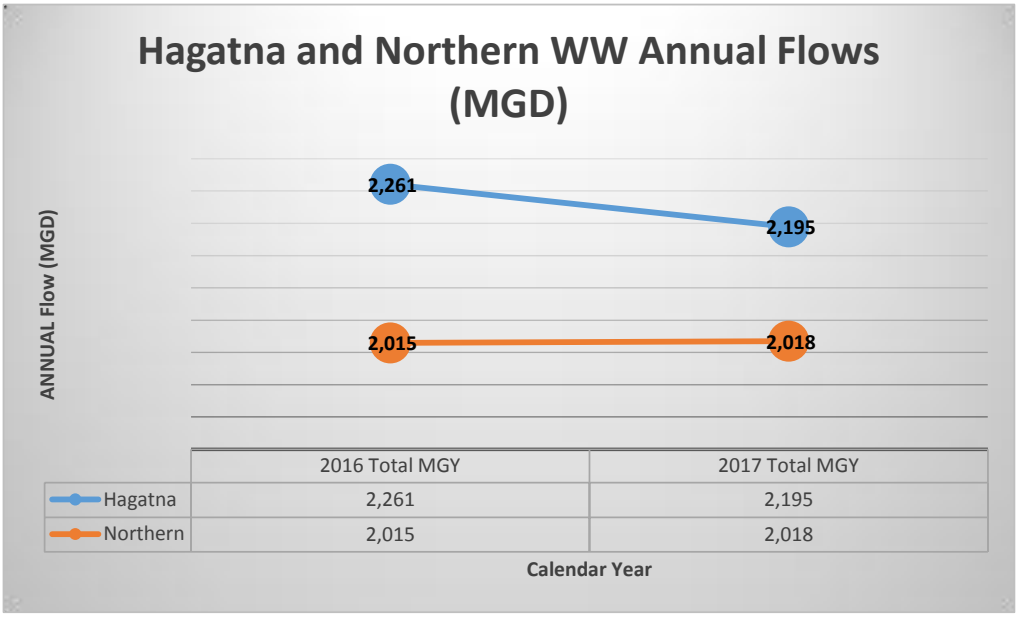

Southern WW Monthly Flows (MGD) CY 2016
FLOW (MGD)
2.00
1.50
1.00
0.50
0.00
Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16
Agat
Baza
Umatac
Inarajan

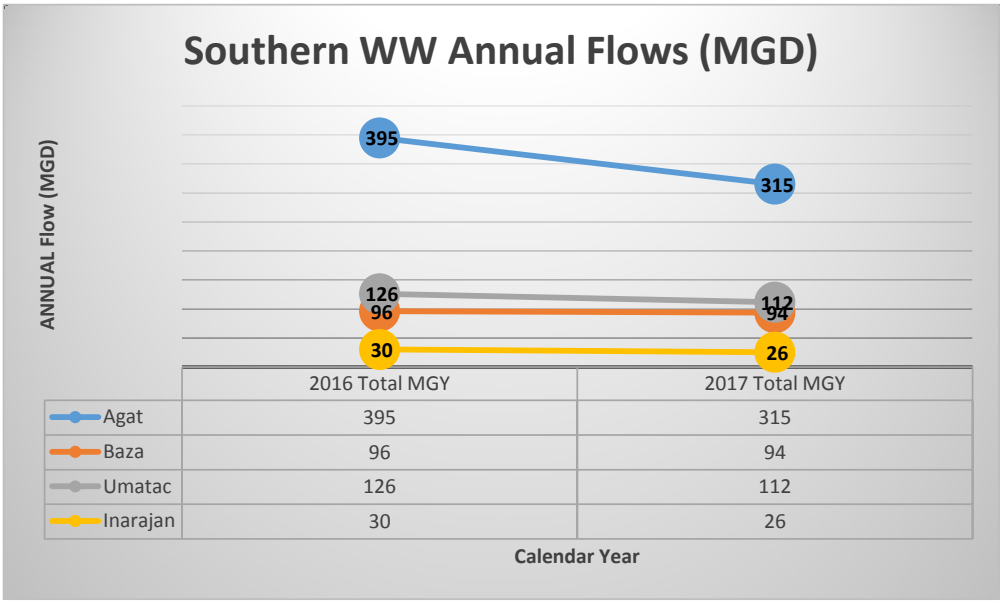

Hagatna and Northern WW Monthly Flows (MGD) CY 2017
FLOW (MGD)
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Jan-17 Feb-17 Mar-17 Apr-17 May-17 Jun-17 Jul-17 Aug-17 Sep-17 Oct-17 Nov-17 Dec-17
Hagatna
Northern


Southern WW Monthly Flows (MGD) CY 2017
FLOW (MGD)
3.00
2.50
2.00
1.50
1.00
0.50
0.00
Jan-17 Feb-17 Mar-17 Apr-17 May-17 Jun-17 Jul-17 Aug-17 Sep-17 Oct-17 Nov-17 Dec-17
Agat
Baza
Umatac
Inarajan


Hagatna and Northern WW Ave Monthly Flows (MGD)
Ave Flow (MGD)
6.19
6.01
5.52
5.53
2016 Average MGD
2017 Average MGD
Hagatna
6.19
6.01
Northern
5.52
5.53
Calendar Year

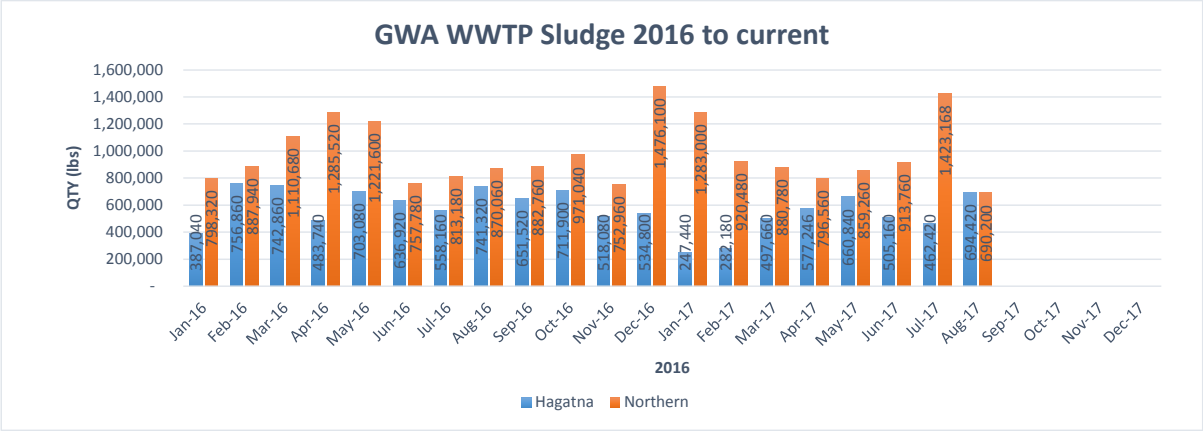

Southern WW Ave Monthly Flows (MGD)
Ave Flow (MGD)
1.08
0.86
0.35
0.31
0.26
0.26
0.08
0.07
2016 Average MGD
2017 Average MGD
Agat
1.08
0.86
Baza
0.26
0.26
Umatac
0.35
0.31
Inarajan
0.08
0.07
Calendar Year

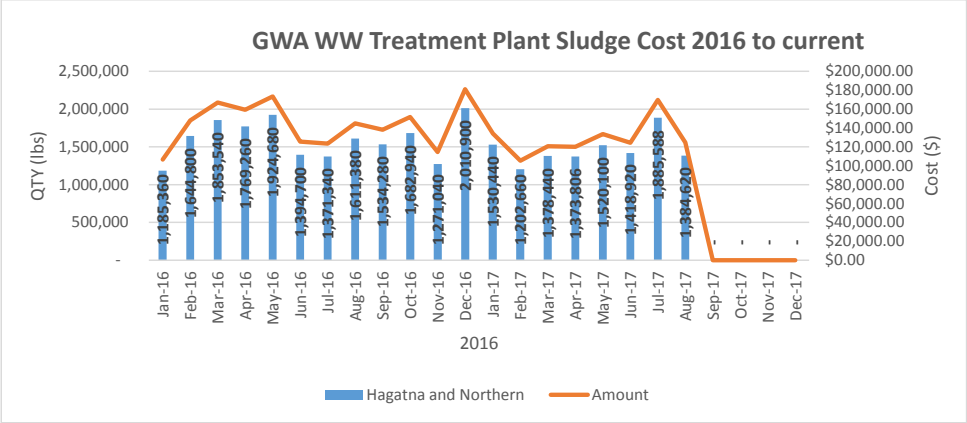

Hagatna and Northern WW Annual Flows (MGD)
ANNUAL Flow (MGD)
2,261
2,195
2,015
2,018
2016 Total MGY
2017 Total MGY
Hagatna
2,261
2,195
Northern
2,015
2,018
Calendar Year


Southern WW Annual Flows (MGD)
ANNUAL Flow (MGD)
395
315
126
112
96
94
30
26
2016 Total MGY
2017 Total MGY
Agat
395
315
Baza
96
94
Umatac
126
112
Inarajan
30
26
Calendar Year

	Hagatna		Northern		Hagatna and Northern	
2016	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	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	$180,981.00
Grand Total	**7,426,280**	**$ 668,365.20**	**11,827,940**	**$ 1,064,514.60**	**19,254,220**	**$ 1,732,879.80**

	Hagatna		Northern		Hagatna and Northern	
2017	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	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		$0.00		$0.00	-	$0.00
Oct-17		$0.00		$0.00	-	$0.00
Nov-17		$0.00		$0.00	-	$0.00
Dec-17		$0.00		$0.00	-	$0.00
Grand Total	**3927366**	**$346,703.25**	**7767208**	**$685,368.16**	**11694574**	**$1,032,071.40**


GWA WWTP Sludge 2016 to current
QTY (lbs)
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
387,040
798,320
756,860
887,940
742,860
1,110,680
483,740
1,285,520
703,080
1,221,600
636,920
757,780
559,160
813,180
741,320
870,060
651,520
882,760
711,900
971,040
518,080
752,960
534,800
1,476,100
247,440
1,283,000
282,180
920,480
497,660
880,780
577,246
796,560
660,840
859,260
505,160
913,760
462,420
1,423,168
694,420
690,200
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16
Dec-16
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
2016
Hagatna
Northern


GWA WW Treatment Plant Sludge Cost 2016 to current
QTY (lbs)
2,500,000
2,000,000
1,500,000
1,000,000
500,000
-
Cost ($)
$200,000.00
$180,000.00
$160,000.00
$140,000.00
$120,000.00
$100,000.00
$80,000.00
$60,000.00
$40,000.00
$20,000.00
$0.00
1,185,360
1,644,800
1,853,540
1,769,260
1,924,680
1,394,700
1,371,340
1,611,380
1,534,280
1,682,940
1,271,040
2,010,900
1,530,440
1,202,660
1,378,440
1,373,806
1,520,100
1,418,920
1,885,588
1,384,620
-
-
-
-
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16
Dec-16
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
2016
Hagatna and Northern
Amount

GUAM WATERWORKS AUTHORITY

GWA WASTEWATER TREATMENT O&M REPORT

September, 2017

General Utility Improvements & Significant Events:

HAGÅTÑA WWTP

Pending repair on one centrifuge (backup power supply & PLC) and two mixers for coagulation/flocculation tank.

NORTHERN DISTRICT WWTP

Repairs pending on mechanical barscreen, septage receiving mixer and sludge tank mixer. Upgrade to secondary treatment project is presently underway with completion expected 2021.

AGAT WWTP

Normal operations

The plants monthly flow average continues to be excessive and over design capacity. One sludge drying bed cleaned out and sludge disposed at Layon landfill. Gaan PS pumps, valves and electrical controls replacement underway.

AGAT SANTA RITA WWTP

Construction of new facility is underway, phase 1 completed including clarifier, oxidation ditch and UV disinfection. Final completion expected April 2018.

BAZA GARDENS WWTP

Normal operations

Design completed and bidding process completed to eliminate this facility and replace with a series of pump stations to divert flow to the new Agat Santa Rita Treatment Plant. Contractor on site starting construction, scheduled completion expected April 2018.

UMATAC WWTP

Experienced lower lagoon overflow due to heavy rain event.
Design/build upgrade of system processes underway to include flow equalization basin, new pump stations, renovation of overland flow system, and UV disinfection.

GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority

VEHICLE FLEET STATUS

9/15/2017

EQUIPMENT STATUS				
Description	**Number of Equipment**	**Number of Equipment Available**	**Number of Equipment Not Available**	**Percentage**
Backhoe	5	1	4	20%
Bobcat	1	1	0	100%
Boom Truck	2	1	1	50%
Crane	2	0	2	0%
Dump Truck	3	1	2	33%
Flat Bed	1	0	1	0%
Forklift	7	6	1	86%
Fuel Tanker	1	1	0	100%
Heavy Duty	3	1	2	33%
Light	150	108	42	72%
Mini Backhoe	4	2	2	50%
Pumper Truck	1	0	1	0%
Sludge Truck	4	2	2	50%
Tow	1	0	1	0%
Tractor	2	1	1	50%
Trailer	12	9	3	75%
Trencher	1	1	0	100%
Vaccon	1	1	0	100%
Vacuum Truck	3	2	1	67%
Water Buffalo	2	2	0	100%
Water Tanker	5	4	1	80%
Total	211	144	67	

SUMMARY						
Operational	**Operational w/Rprs Pending**	**In Shop-Accident Repairs**	**In Shop-Assessment Pending**	**In Shop-Repairs Pending**	**In Shop-Vendor Repairs**	**Recommend Survey**
1	0	0	0	2	1	1
1	0	0	0	0	0	0
1	0	0	0	1	0	0
0	0	0	0	0	1	1
1	0	0	1	1	0	0
0	0	0	0	0	0	1
6	0	0	0	0	0	1
1	0	0	0	0	0	0
1	0	0	0	0	1	1
105	3	2	5	4	8	23
2	0	0	0	2	0	0
0	0	0	0	0	1	0
1	1	0	0	2	0	0
0	0	0	0	0	0	1
1	0	0	0	0	1	0
8	1	0	0	0	1	2
1	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	1	0
2	0	0	0	0	0	0
4	0	0	0	0	0	1
139	5	2	6	12	15	32

GUAM WATERWORKS AUTHORITY

WASTEWATER COLLECTION REPORT

MONTHLY REPORT

AUGUST 2017



CCTV INSPECTIONS AND SEWER CLEANING

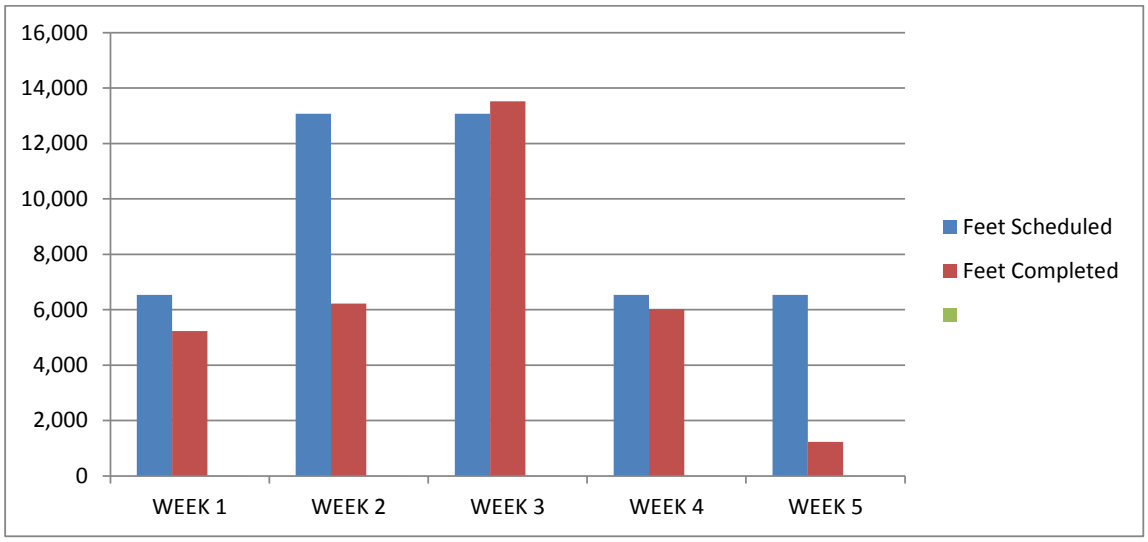
JULY 30 – AUGUST 5	Team #1	Team #2	Vendor	Total
Feet Scheduled	6535			6535
Feet Completed	5224.6			5224.6
	80%			80%

AUGUST 6 – AUGUST 12	Team #1	Team #2	Vendor	Total
Feet Scheduled	6535		6535	13070
Feet Completed	5369.6		853	6222.6
				48%

AUGUST 13- AUGUST 19	Team #1	Team #2	Vendor	Total
Feet Scheduled	6535		6535	13,070
Feet Completed	5327.2		8196.5	13,523.7
	80%		100.25%	103%

AUGUST 20–AUGUST 26	Team #1	Team #2	Vendor	Total
Feet Scheduled	6535			6535
Feet Completed	6016.9			6016.9
	92%			92%

AUGUST 27–AUGUST 31	Team #1	Team #2	Vendor	Total
Feet Scheduled	3920			3920
Feet Completed	1230			1230
	31%			**31%**



PUMPING STATION TROUBLE CALLS

JULY 30 – AUGUST 5	CREATED	COMPLETED	PENDING
NORTHERN	4	4	0
CENTRAL	4	4	0
SOUTHERN	2	2	0
TOTAL	10	10	0

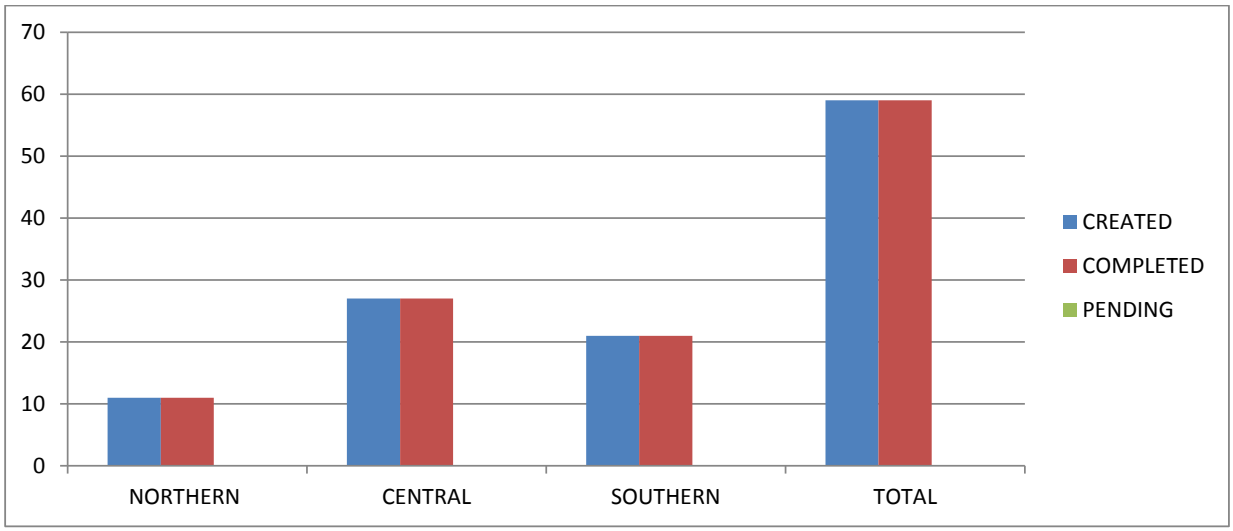
AUGUST 6 – AUGUST 12	CREATED	COMPLETED	PENDING
NORTHERN	3	3	0
CENTRAL	6	6	0
SOUTHERN	5	5	0
TOTAL	14	14	0

AUGUST 13- AUGUST 19	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	10	10	0
SOUTHERN	4	4	0
TOTAL	16	16	0

AUGUST 20 – AUGUST 26	CREATED	COMPLETED	PENDING
NORTHERN	2	2	0
CENTRAL	3	3	0
SOUTHERN	8	8	0
TOTAL	13	13	0

AUGUST 27 – AUGUST 31	CREATED	COMPLETED	PENDING
NORTHERN	0	0	0
CENTRAL	4	4	0
SOUTHERN	2	2	0
TOTAL	6	6	0

	CREATED	COMPLETED	PENDING
NORTHERN	11	11	0
CENTRAL	27	27	0
SOUTHERN	21	21	0
TOTAL	59	59	0



MAINTENANCE PREVENTIVE AND CORRECTIVE CALL OUTS

JULY 30 – AUGUST 5	PREVENTIVE	CORRECTIVE
NORTHERN	1	2
CENTRAL	0	1
SOUTHERN	0	0
TOTAL	1	3

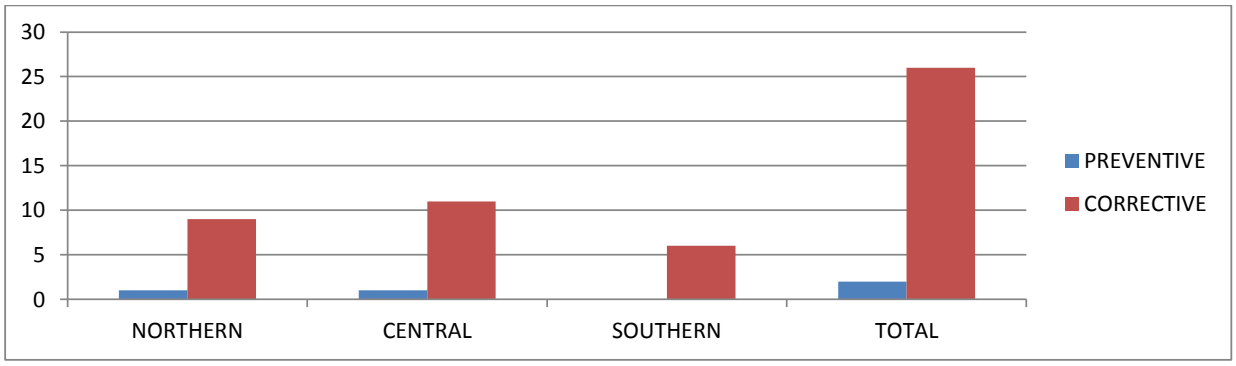
AUGUST 6 – AUGUST 12	PREVENTIVE	CORRECTIVE
NORTHERN	0	4
CENTRAL	1	3
SOUTHERN	0	0
TOTAL	1	7

AUGUST 13- AUGUST 19	PREVENTIVE	CORRECTIVE
NORTHERN	0	1
CENTRAL	0	3
SOUTHERN	0	0
TOTAL	0	4

AUGUST 20 – AUGUST 26	PREVENTIVE	CORRECTIVE
NORTHERN	0	2
CENTRAL	0	4
SOUTHERN	0	0
TOTAL	0	6

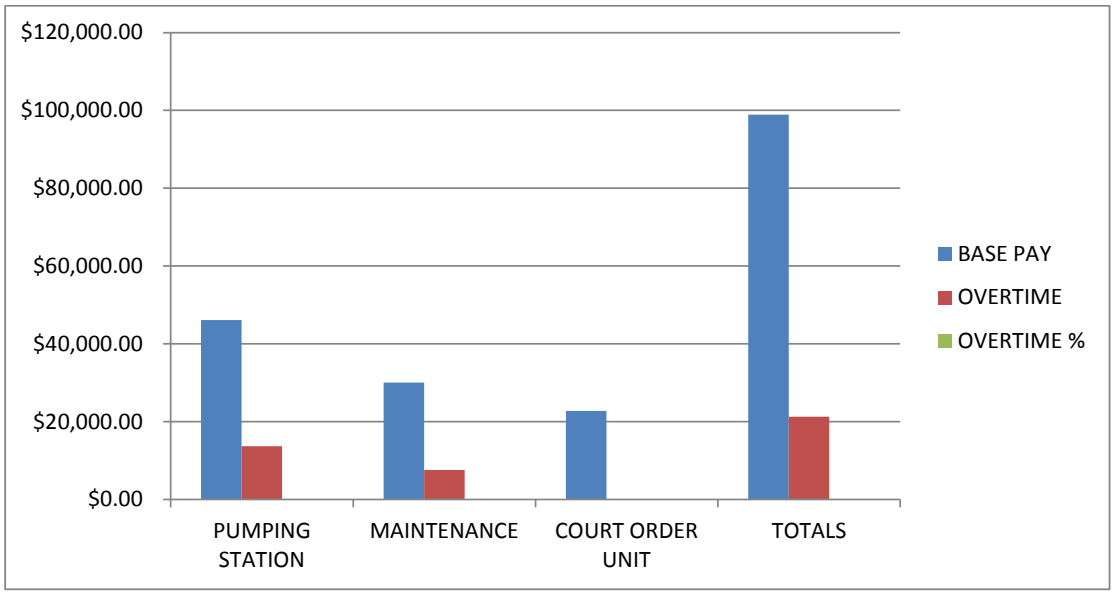
AUGUST 27 – AUGUST 31	PREVENTIVE	CORRECTIVE
NORTHERN	0	0
CENTRAL	0	0
SOUTHERN	0	6
TOTAL	0	6

TOTALS FOR AUGUST	PREVENTIVE	CORRECTIVE
NORTHERN	1	9
CENTRAL	1	11
SOUTHERN	0	6
TOTAL	2	26



BASE PAY VS OVERTIME

	BASE PAY	OVERTIME	OVERTIME %
PUMPING STATION	$46,097.60	$13,696.06	30%
MAINTENANCE	$30,070.40	$7,614.63	25%
COURT ORDER UNIT	$22,748.80	$0.00	%
TOTALS	$98,916.80	$21,310.69	



Guam Waterworks Authority	Date: 9/15/2017
	Time:

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

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

Northern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	2	100%	OP	A						
3	Santa Rosa	15	2	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	Chln. Palauan	5	2	2	100%	N/A							
7	Nimitz Hill	7.5	2	2	100%	N/A							
8	Adawag	1.5	2	2	100%	N/A							
9	Pale Kiren	1	1	1	100%	N/A							
10	Ulloa/Untalan	1	2	2	100%	OP	A						
11	Latte Heights	15	2	2	100%	OP	A						
	TOTAL = 11		**21**	**20**	**95%**								
pump availability =no of operational pumps/no of pumps*100%													

Central District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	2	67%	0P	A	Pump 2 leaking at seal, pump operational, pending materials.					
2	Brigade	60	3	3	100%	OP	A						
3	Windward Hills	200 / 75	3	2	67%	OP	A	Pump 1 leaking at seal, at vendor for repairs.					
4	Santa Rita Springs	40	2	2	100%	OP	A	Spare pump available.					
5	Santa Ana (Lower)	25	2	1	50%	N/A		Pump # 2 requires a new pump and motor. Pump arrived and at the warehouse. 11-23-16		Control valve repairs to be completed. Parts arrived 11-23-16. Pending installation.		CIP required for new unit and electrical for generator	
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**	**12**	**80%**								
pump availability =no of operational pumps/no of pumps*100%													

Southern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Malojloj Line	125 / 50	3	3	100%	OP	A						
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	Malojloj Elevated	15	2	2	100%	OP	A						
	Total=7		**15**	**15**	**100%**								
pump availability =no of operational pumps/no of pumps*100%													