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GWA 8/23/17 WORK SESSION / MEETING MATERIALS

2 messages

Bernadette Lou Sablan <l.sablan@gpagwa.com> Wed, Aug 23, 2017 at 11:33 AM
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Hi CCU Stakeholders,

Attached is the meeting material for today's GWA work Session.

Best,
Lou

Speaker Benjamin J.F. Cruz
AUG 23 2017
Time: 12:20 pm
Received By:
GL # 34-17-914

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GWAWS 8.23.17.pdf
4421K

Benjamin J.F. Cruz <senator@senatorbjcruz.com> Wed, Aug 23, 2017 at 12:46 PM
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8/23/2017	8/23/2017	Consolidated Commission on Utilities	GWA Work Session / Meeting Materials; Agenda for August 23, 2017. *emailed	34-17-914

[Quoted text hidden]

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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
11:30 a.m., August 23, 2017

AGENDA

1. **ISSUES FOR DECISION**
   - **1.2 Relative to Approval of the System Development Charge (SDC) Implementation Guidelines Update / Resolution No. 52-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: GPA Work Session: 8/24/17; CCU Meeting: 8/29/17**
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. 52-FY2017
Relative to Approval of the System Development Charge Implementation Guidelines Update

What is the project's objective and is it necessary and urgent?
The System Development Charge (SDC) Implementation Guidelines required revision to correct inconsistences in order to allow the expenditure of SDC funds without potential conflict with the Guidelines. The Update is also needed to incorporate changes from public laws passed after the original Guidelines were adopted by the January 29, 2010 PUC Decision and Order Docket No. 08-08. The PUC Order also directed GWA to provide a policy or provision whereby GWA agrees to give credits or offsets to developers regarding SDC assessments under appropriate circumstances. An SDC Financial Offset Policy is included in the Resolution for CCU approval.

Provided in support of this Resolution is the Water Line Upgrade Guidance Document, which provides a basis for rating and prioritizing water system improvement projects that may qualify for SDC funding.

Where is the project located?
Island Wide

How much will it cost?
Cost per SDC-funded project will vary based on scope.

When will it be completed?
Once started, projects will be ongoing.

What is the funding source?
System Development Charge funds.

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

RESOLUTION NO. 52-FY2017

RELATIVE TO APPROVAL OF THE SYSTEM DEVELOPMENT CHARGE IMPLEMENTATION GUIDELINES UPDATE

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

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

WHEREAS, the SDC Implementation Guidelines were adopted as an Order of the Public Utilities Commission (PUC) per the January 29, 2010 PUC Decision and Order Docket No. 08-08 GWA System Development Charge (SDC); and

WHEREAS, the current Implementation Guidelines contained inconsistences that required clarification in order to allow the expenditure of SDC funds without potential conflict with the Guidelines and as such the SDC Implementation Guideline Update was generated (See Exhibit A); and

WHEREAS, Public Laws affecting SDC payment deadlines for residential construction, as well as allowing an Affordable Housing SDC, and were passed in 2013, requiring updates to the Implementation Guidelines; and

WHEREAS, the January 29, 2010 PUC Decision and Order Docket No. 08-08 GWA System Development Charge Ordering Provision 8 directed GWA to provide a policy or provision for GWA to give credits or offsets to developers regarding SDC assessments under appropriate circumstances and as such the SDC Financial Offset Policy was created (See Exhibit B).

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

1. The SDC Implementation Guidelines Update, attached as Exhibit A, is incorporated into this resolution in its entirety.

2. The SDC Financial Offset Policy, attached as Exhibit B, is incorporated into this resolution in its entirety.

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

DULY AND REGULARLY ADOPTED AND APPROVED this 29th day of August, 2017.

Certified by: Attested by:

_____ _____

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

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

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

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

DRAFT

EXHIBIT A

GUAM WATERWORKS AUTHORITY
SYSTEM DEVELOPMENT CHARGE IMPLEMENTING GUIDELINES
Revised August 2017

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Section 1. Short Title

This document shall be known and cited as the "Guam Waterworks Authority System Development Charge Implementation Guidelines."

Section 2. Purpose and Effect

These Guidelines are intended to assure the provision of adequate public water and sanitary sewer facilities in Guam to serve new development and accommodate changes to existing buildings or facilities where density is increased by requiring each development to pay its pro rata share of the costs of such improvements necessitated by and attributable to such new development. The SDCs established by these Guidelines are additional and supplemental to, and not in substitution of, any other requirements imposed by Guam law regarding the development of land, the issuance of building permits or the issuance of certificates of occupancy. Such SDCs are intended to be consistent with and in furtherance of the policies of Guam's building and subdivision laws and regulations and existing GWA Rules and Regulations relating to the provision of public water and sanitary sewer facilities in conjunction with the development of land.

Section 3. Authority

These Guidelines are adopted by the Commission pursuant to 12 G.C.A. § 12015.5, enacted into law by Public Law 26-164, and amended by Public Law 29-133, and the Commission's inherent authority. The provisions of these Guidelines shall not be construed to limit the power of GWA to utilize other methods authorized under Guam law or pursuant to other GWA powers to accomplish the purposes set forth herein, either in substitution for or in conjunction with these Guidelines. Additional policies, not inconsistent with these Guidelines, may be developed by a Resolution of the GWA Governing Board to implement and administer the requirements hereunder.

Section 4. Definitions

The following definitions shall apply under these Guidelines:

"Affordable Housing System Development Charge" or **"AHSDC"** means the SDC made available to any person who constructs, or causes to construct, affordable homes as their primary residence or for an immediate family member where the total cost of the home and lot does not exceed $210,000, pursuant to Section 19 of these Guidelines.

"Amortized System Development Charge" or **"ASDC"** means the amortized SDC made available to all residents building a single family dwelling, regardless of income, pursuant to Section 19 of these Guidelines.

"Assessment" means the determination of the amount of the maximum SDC per service unit which can be imposed by GWA on new development pursuant to these Guidelines.

"Capital Improvement" means either a water or sanitary sewer facility to be owned and operated by or on behalf of GWA, and involving assets greater than or equal to $5,000.00 and/or will extend the life of an existing GWA asset.

"Commission" means the Guam Public Utilities Commission.

"Facilities Expansion" means either a water facility expansion or a sanitary sewer facility expansion or the construction of any new facility designed to expand the water or sewer system for future customers. Pursuant to § 12015.5, both uses above can include system repairs servicing existing customers but which also adds additional capacity to the system that can be used to accommodate new users. For the purposes of determining the capital amount recoverable from SDCs only that portion of a water or sanitary sewer facility's capital costs incurred to accommodate new users shall be eligible for inclusion in the SDC.

"Governing Board" means the Guam Consolidated Commission on Utilities or its legal successor.

"Island Water and Sewer Infrastructure Development Fund" means the fund created under 12 G.C.A. § 12015.5(c) and administered by GWA into which all SDC revenues shall be deposited. The use of all funds so deposited shall require advance approval from the Commission. A full accounting of the receipts and expenditures into and from the Fund shall be filed annually for Commission review and approval.

"Land Use Assumptions" means the projections of population and employment growth and associated changes in land uses and densities adopted by GWA, as may be amended by GWA's Governing Board from time to time, upon which the SDC Capital Improvement plan is based or as contained in any Guam Master Plan or other water or sanitary sewer improvement plan that is used by GWA for the same purpose and approved by the GWA Governing Board for such use.

"New Development" means a project involving the construction, reconstruction, redevelopment, conversion, structural alteration, relocation or enlargement of any structure or any use or extension of land which has the effect of increasing the requirements for capital improvements or facility expansions, measured by the number of service units to be generated by such activity and which requires either the approval of the Guam Land Use Commission (GLUC), adherence to Guam's subdivision laws and regulations, the issuance of a building permit or a substantial change in the demand or loading of such project through an existing connection to GWA's water or sanitary sewer system, respectively.

"Offset"' means the amount of the reduction of the applicable SDC designed to fairly reflect the value of area-related facilities provided by a developer pursuant to Guam's development regulations or requirements. An offset requires approval by the General Manager, in accordance with the SDC Financial Offset Policy.

"Offsite" means outside the boundaries of the property for which a new development is proposed.
"Plan Approval" means the point at which the applicant has complied with all conditions of approval set by the GLUC and/or the applicant has undertaken all steps to receive the approval by GWA that are a prerequisite to the issuance of a building permit (and can include conditions that are required by GWA after the building permit has been issued).

"Political Subdivision" means a separate legal entity created by the Territory of Guam to fulfill specific governmental functions. It includes municipalities, villages, or special districts such as school, park, airport, sanitation, utility, or similar districts.

"Recoupment" means the imposition of an SDC to reimburse GWA for capital improvements which GWA has previously put in place that has sufficient capacity to serve new development and new capital improvements for the purpose of serving new development.

"Sanitary Sewer Facility" means an improvement for providing sanitary sewer service, including but not limited to land or easements, treatment and pre-treatment facilities, lift stations or force mains. Sanitary sewer facility excludes sanitary sewer lines or mains which are constructed by developers, the costs of which are reimbursed from pro rata charges paid by subsequent users of the facilities. Sanitary sewer facilities exclude site-related facilities.

"Sanitary Sewer Facility Expansion" means the expansion of the capacity of any existing sanitary sewer facility for the purpose of serving new development, and may, under certain circumstances, include the repair, maintenance, modernization or expansion of an existing sanitary sewer facility to serve existing development as long as such expansion adds additional capacity to serve future users to the system or accommodate existing users who are expanding the demand upon the system.

"SDC Capital Improvements Plan" means either a water or sanitary sewer improvements plan formulated by GWA adopted or revised pursuant to this Article, including but not limited to, the GWA five-year Capital Improvements Plan, the GWA Master Plan as it may be amended from time to time by GWA's Governing Board, and any capital improvement plan approved by the Governing Board. The SDC Capital Improvements Plan refers to the aggregation of capital improvements or facility expansions and the associated costs programmed for all service areas for a particular category of capital improvements or facility expansions which may be financed in whole, or in part, through SDCs.

"Service Area" means either the area currently served by GWA or the area which GWA has agreed to serve as evidenced by the signature of an authorized representative from GWA on a building permit.

"Service Unit" means the applicable standard units of measure shown on the conversion table in the SDC Capital Improvements Plan as defined herein which can be converted either to three-fourths inch (3/4") water meter equivalents, as the context indicates, which serves as the standardized measure of consumption, use or generation attributable to the new unit of development.

"Site-Related Facility" means an improvement or facility which is for the primary use or benefit of a new development and/or which is for the primary purpose of safe and adequate provision of water or sanitary sewer facilities to serve the new development, and which is not included in the SDC Capital Improvement Plan and for which the developer or property owner is solely responsible under subdivision laws or other applicable regulations (including GWA's).

"Subdivision" means an improved land divided or proposed to be divided into two or more divisions of land for the purpose of sale, lease, rental, transfer or title to or interest in any or all of such divisions, including resubdivisions, as approved by the Territorial Land Use Commission pursuant to GAR, Title 28, Chapter 2, Article 1 § 2102(61).

"System Development Charge," means a one-time impact fee or charge assessed by GWA on each user who is for the first time connecting property into GWA water or wastewater system, or to each builder if the density of development on the existing connection is increased pursuant to these Guidelines in order to fund or recoup the costs of capital improvements or facility expansions necessitated by and attributable to new development. SDCs **do not include** the dedication of rights-of-way or easements for such facilities nor the construction of improvements by the developer thereon. SDCs also do not include line extension costs or other agreed upon privately funded costs that are required under GWA rules or regulations or Guam law to accommodate development regardless of type.

"Temporary Use" means any connection made by any person or entity for an activity not required to obtain a building permit that lasts for any period less than six (6) months. The uses contemplated herein includes but are not limited to, village fiestas, carnivals, public events or private uses where the activity has been sanctioned by the Government of Guam.

"Water Facility" means an improvement for providing water service, including but not limited to land or easements, water treatment facilities, water supply facilities or water distribution lines. Water facility excludes water lines or mains which are constructed by developers, the costs of which are reimbursed from pro rata charges paid by subsequent users of the facilities. Water facility excludes site-related facilities.

"Water Facility Expansion" means the expansion of the capacity of any existing water facility for the purpose of serving new development, and may, under certain circumstances, include the repair, maintenance, modernization or expansion of an existing water facility to serve existing development as long as such expansion adds additional capacity to serve future users to the system or accommodate existing users who are expanding the demand upon the system.

Section 5. Applicability

The provisions of these Guidelines apply to all "new development" as defined in Section 4 above aside from Temporary uses.

Section 6. SDCs as Condition of Development Approval

No application for new development shall be approved by GWA without assessment of SDCs pursuant to these Guidelines, and no building permit shall be issued unless the applicant has paid the SDCs with the exception of single family dwellings which the SDC may be paid prior to initial occupancy pursuant to Public Law 32-075. With respect to new development eligible for the ASDC, a building permit may be issued if the applicant has paid the initial charge required under Section 19 of these Guidelines.

Section 7. Adoption of GWA's Capital Improvements Plans

The current GWA Capital Improvements Plan, as currently stated in the GWA Master Plan, was adopted by GWA's Governing Board on March 13, 2007, via Resolution No. 11 - FY2007. The current Plan will be updated and amended and new improvement plans adopted by GWA as it deems necessary, to include projects slated for SDC funding.

Section 8. Approval of the SDCs

The water and wastewater SDCs set forth in Schedule I were adopted by the Consolidated Commission on Utilities on October 13, 2009 via CCU Resolution No. 01 - FY2010 as provided under 12 G.C.A. § 12015.5(b).

Section 9. Service Area

GWA's service area is where GWA currently serves its customers or where it has agreed to serve future customers as evidenced by the signature of an authorized GWA official on a building permit.

Section 10. SDC Calculations

The American Water Works Association has established guidelines for the development of SDCs for water service in their M-1 manual on Water Fees and Related Charges. There are two generally accepted methodologies that are suggested; (1) the equity method, also known as the "buy-in" method; and (2) the "incremental" method. GWA's Governing Board has chosen to implement a "hybrid" of these two methods for several reasons, including but not limited to the following:

(1) The method results in a reasonable and equitable fee to new water customers; and

(2) The method achieves the financial objectives of the Board.

The equity or "buy-in" method achieves equity between new and existing customers in the investment of ratepayer capital into the water and wastewater systems. This approach assesses new customers a charge to approximate the average equity of the existing customers. With the equity method the new and existing customers share equally in the costs of current system and in new facilities.

The "incremental" method is similarly designed to achieve equity between new and existing customers by requiring that new customers pay for the additional capital investments needed to serve new customers. The "hybrid" method integrates into one SDC the capital due from new customers to fund new capital investment for growth while achieving equity between new and existing customers for their use of existing water and wastewater facilities. Under all methods, customers are assessed SDCs based on the size and number of units needed to serve the customer's demand. Larger meters have the capacity to use more system assets; thus, a higher charge is necessary to establish equity between large and small users of the system. An equivalent unit of service is used to determine the fee for each meter size. Meter sizes are expressed in terms of equivalent meters, based on the relative capacity of the various meter sizes. Larger meters are, assessed the SDC based on a ratio of the larger meter's capacity to the equivalent unit's capacity. An equivalent unit is defined as a ¾" water meter service

The SDCs due for the new development shall be collected prior to or at the time of issuance of the building permit or prior to or at the time of connection to the GWA's water or sanitary sewer system if no building permit is required.

Following the filing and acceptance of an application for a building permit or the request for connection to GWA's water or sanitary sewer system, GWA shall compute the SDCs due for the new development in the following manner:

1. The amount of each SDC due shall be determined based on the number of meters required by the new development or expanded by the SDC using Schedule I below.

2. If appropriate, and as condition precedent to connection to GWA's water or sanitary sewer line, GWA may adjust the assessment if the developer has expanded the required number of service units beyond that contained in the original assessment from GWA, such that a meter size upgrade is required.

Section 11. <u>Assessment of SDCs</u>

A. The approval of any new development shall include, as a condition, the assessment of the SDCs applicable to such development. Assessment shall occur at the time application is made for the building permit or utility connection based upon the engineering plans submitted to GWA for approval, provided that a new

assessment may be undertaken by GWA, if for any reason, the plans are modified in any manner which causes GWA to change the size and/or quantity of the meter(s). All assessments under this provision shall be pursuant to Schedule I below.

B. Following the lapse or expiration of a building permit approval for a particular development, a new assessment shall be made prior to the final approval of a new development on the same tract of land. However, no further assessment shall be charged if there are no changes to the design requiring an increase in meter size and/or quantity for the development, provided that a refund to the SDC has not been made.

Section 12. Computation and Collection of SDCs

A. All SDCs assessed under the provisions of Section 11 of these Guidelines shall be collected by GWA prior to the issuance of any building permit.

B. The SDCs collected by GWA shall be deposited within two (2) business days into the Island Water and Sewer Infrastructure Development Fund (IWSIDF) which shall be created and administered by GWA as provided in Section 13 of these Guidelines.

C. In the case of a new assessment done for the reapplication of an expired building permit with paid SDCs, any applicable additional SDCs shall be collected.

D. Whenever the property owner of a development proposes to increase the number of service units requiring an increase in meter size and/or quantity, the additional SDCs collected for such new service units shall be assessed at the time the new application is filed in the same manner as required for an original building permit.

Section 13. Establishment of Accounts and Disbursements

A. The Chief Financial Officer for GWA shall establish an account for the IWSIDF as required under 12 G.C.A. § 12015.5(d). All SDCs collected under these Guidelines shall be deposited in said account.

B. GWA shall select the banking institution licensed on Guam that provides the best rates for deposit in relation to its fee structure and which also provides an opportunity for GWA to invest the funds into short-term guarantee investment contracts or other such investments with no penalty. The rates for such deposits shall be reviewed annually.

C. Fees to the bank to service the IWSIDF shall be agreed upon by GWA and the lending institution selected by GWA to hold such funds.

D. GWA shall ensure that the banking institution provides an annual report of on all transactions on the IWSIDF to the Commission and monthly reports to GWA.

E. Interest earned on the account shall be considered funds of the account and shall be used solely for the capital improvement projects provided for under these Guidelines.

F. Disbursement of funds shall be authorized by GWA at such times as are reasonably necessary to carry out the purposes and intent of these Guidelines, provide that such withdrawals must have been authorized by the Commission in accordance with 12 G.C.A. § 12015.5.

G. All SDCs collected by GWA shall be expended within a reasonable period of time, not to exceed ten (10) years from the date the SDCs were deposited into the account.

H. Execution of a design or construction contract by GWA shall be considered to be expenditure of funds of the account.

I. GWA shall maintain and keep financial records for all SDCs collected and for all expenditures made under these Guidelines. The records of the account for which the SDCs are deposited shall be open for public inspection and copying during ordinary business hours. GWA may assess fees for copying services in accordance with the Guam Sunshine Act of 1999.

Section 14. Use of Proceeds of SDC Accounts

The SDCs collected by GWA pursuant to these Guidelines may be used to finance or to recoup all or a portion of the costs of any capital improvement or facility expansion identified in GWA's applicable capital improvements plan, including the construction contract price, surveying and engineering fees, land acquisition costs (including land purchases, court awards and costs, attorney's fees and expert witness fees), and the fees actually paid or contracted to be paid to an independent qualified engineer or financial consultant preparing or updating the SDC capital improvements plan who is not an employee of the political subdivision. SDCs may also be used to pay the principal sum and interest and other finance costs on bonds, notes or other obligations issued by or on behalf of GWA to finance such capital improvements or facilities expansions or renovations.

Section 15. Refunds

A. Any SDC or portion thereof collected pursuant to these Guidelines, which has not been expended within the service area within ten (10) years from the date full payment was received by GWA, shall be refunded, upon application, to the record owner of the property at the time the refund is paid; or if the fee was paid by another governmental entity, to such governmental entity, together with interest

calculated from the date of collection to the date of refund at the average fee of interest earned on the deposited funds.

B. All amounts collected under these Guidelines shall be considered expended on a first-in, first out basis.

C. If a refund is due and a portion of an assessed amount has been expended, GWA shall pro-rate the refund by subtracting the amount expended from the total paid and then adding the interest earned on the unexpended amount in the same manner as in Section 2980A above.

D. If the building permit for a new development for which an SDC has been paid has expired, and a modified or new application has not been filed, GWA shall, upon written application, refund the amount of the SDCs to the applicant. If no such application is made within 5 years from the date the permit has expired, no application for refund may be made.

Section 16. Updates to Plan and Revision of SDCs

A. GWA shall update its SDC Capital Improvement Plan in accordance with a schedule set by the GWA board. Regardless of whether such plans are modified, GWA shall at a minimum present annual requests for capital expenditures from the IWSIDF pursuant to 12 G.C.A. § 12015.5(c).

B. The Governing Board, with the approval of the Commission, may amend the tables in Schedule I if it deems it necessary.

Section 17. Agreement for Capital Improvements

Owners of any new development(s) may construct or finance a capital improvement or facility expansion designated in the SDC Capital Improvements Plan or rated under the Water Line Upgrade Guidance Procedure as qualifying for SDC funding. An agreement must be entered with GWA prior to the issuance of any building permit for the development. The agreement shall meet GWA's requirements for SDC offsets, shall identify the estimated cost of the improvement or expansion, the schedule for initiation and completion of the improvement or expansion, a requirement that the improvement be designed and completed to GWA standards and such other terms and conditions as deemed necessary by GWA. GWA may require that the capital improvement or facility expansion be bonded in GWA's favor at a minimum of 100%.

If SDC offsets are included in the agreement, the total cost of the project shall not be less than the cost of the SDC based on an assessment of the development's meter quantity and size. If, upon completion of the project, the total cost does not at least equal the SDC assessment, the developer shall submit payment equal to the cost difference prior to approval of the development's occupancy permit.

Section 18. Procedures to Contest SDCs

A. Any person may file a written protest at any time prior to the issuance of a building permit. However, until the protest is resolved as provided herein, no building permit shall issue.

B. All protests shall be prepared in the form prescribed by GWA and be hand-delivered to either GWA's legal counsel or to GWA's General Manager.

C. The written protest shall contain information that GWA may reasonably require, including but not limited to, a detailed summary of the grounds upon which the person is disputing the assessment. The protest must also contain the following information:

1. General description of development, including lot number and village.
2. All approved plans for the development.
3. Appraised value of the land and off-site facilities.
4. Total estimated SDCs that the owner feels is appropriate.
5. Approvals from the GLUC if required by law.
6. Name, address, fax and phone number for owner owner's representative.

D. GWA shall provide a written response to the protest within thirty (30) days following the receipt of such protest which either rejects the protest outright (for cause, deficiency in the protest or other valid reason) or grants an adjustment to the assessed amount. No SDC shall be waived in its entirety if the construction is for "new development" as defined in these Guidelines.

E. If a party is dissatisfied with GWA's response, within 30 days from the receipt of GWA's response, they may file a Petition of Review with the Commission asking the Commission to review GWA's findings. A copy of the Petition must also be filed with GWA on the same date the Petition is filed with Commission.

Section 19. Amortized System Development Charge or ASDC

A. Pursuant to 12 GCA § 12116.5(b), eligible persons constructing or purchasing a single family dwelling intended for their personal residence and/or for immediate family members may be entitled to amortize the cost of the applicable SDCs. The schedule of Amortized System Development Charges is shown on Schedule II attached to these Guidelines. The applicable ASDC shall be added to the monthly GWA bill for the dwelling.

B. A person whose application for an ASDC is denied can file a written protest in the manner provided by Section 18 of these Guidelines, and, if dissatisfied with GWA's response to the protest, file a Petition for Review with the Commission.

C. The ASDC shall not apply to any commercial development or the construction of multi-family dwellings.

D. The ASDC is not transferable. Prior to selling or conveying title to the affected dwelling to any person who is not an immediate family member or who is not himself or herself eligible for an ASDC, a person paying an ASDC shall be required to pay the entire unpaid balance of the ASDC in full, including any accrued interest, prior to selling or conveying the title. An applicant for an ASDC must sign and acknowledge a Notice, in the form of Schedule III to these Guidelines, evidencing this requirement, as a condition to approval of the application. This statement shall be recorded by GWA. No water or wastewater account shall be transferred to a new owner or occupant of the residence until the balance of the ASDC has been paid in full.

E. Eligible persons hereunder may exercise the option to amortize SDCs but are not required to do so. The option to amortize SDCs hereunder shall not apply to any commercial development or the construction of multi-family dwellings.

F. GWA may terminate water or wastewater service for non-payment of an amortized SDC in accordance with applicable procedures.

Section 20. Affordable Housing System Development Charge or AHSDC

A. Pursuant to 12 GCA § 12116.5(i), any person who constructs, or causes to construct, a home where said structure will be the primary residence for themselves or an immediate family member or with the intent to sell, shall be charged 1.01% for water connections and 1.65% for sewer connections of the actual cost to construct the home and purchase the land in the event the actual total cost is Two Hundred Ten Thousand Dollars ($210,000) or less.

B. GWA shall require reasonable proof to be provided showing that the home will in fact be a primary residence, pursuant to 12 GCA § 12116.5(i)

C. The AHSDC shall not apply to those persons who construct, or cause to be constructed, homes that do not meet the requirements of the Guam Building Code, nor shall the charge apply to persons renovating existing structures.

D. A person whose application for an AHSDC is denied can file a written protest in the manner provided by Section 18 of these Guidelines, and, if dissatisfied with GWA's response to the protest, file a Petition for Review with the Commission.

E. The ASDC shall not apply to any commercial development or the construction of multi-family dwellings.

F. At least once every five years, the Guam Waterworks Authority shall review the Median Household Income for Guam, as published by the HUD Median Income

Statistic, and shall then adjust the total cost threshold requirement of the AHSDC, set at $210,000, accordingly.

13

SCHEDULE I

SCHEDULE OF WATER SYSTEM DEVELOPMENT CHARGES ADOPTED BY THE GUAM PUBLIC UTILITIES COMMISSION

Actual Meter Size (inches)	SDC By Water Meter Size
5/8 x 3/4	$2,126
3/4	$3,190
1	$5,316
1 1/2	$10,632
2	$17,011
3	$34,022
4	$53,160
6	$106,320
8	$170,112
10	$244,536

SCHEDULE OF WASTEWATER SYSTEM DEVELOPMENT CHARGES ADOPTED BY THE GUAM PUBLIC UTILITIES COMMISSION

Actual Meter Size (inches)	SDC By Water Meter Size
5/8 x 3/4	$3,474
3/4	$5,212
1	$8,686
1 1/2	$17,372
2	$27,795
3	$55,590
4	$86,860
6	$173,720
8	$277,952
10	$399,556

14

SCHEDULE II

AMORTIZED SYSTEM DEVELOPMENT CHARGES

WATER:

INITIAL CHARGE--$500

MONTHLY CHARGE FOR 96 MONTHS (8 YEARS)--$22.58

WASTEWATER:

INITIAL CHARGE--$500

MONTHLY CHARGE FOR 96 MONTHS (8 YEARS)--$41.29

INTEREST AT THE RATE OF 7.5 PERCENT OVER THE EIGHT-YEAR AMORTIZATION PERIOD SHALL BE INCLUDED IN THE MONTHLY AMORTIZED SYSTEM DEVELOPMENT CHARGES.

15

SCHEDULE III

(SPACE ABOVE LINE FOR RECORDER'S USE ONLY)

NOTICE OF OBLIGATION TO PAY AMORTIZED SYSTEM DEVELOPMENT CHARGE

Notice is hereby given that [Names of Property Owners] ("Owner") was/were eligible for the Amortized System Development Charge ("ASDC") provided for under 12 GCA 12015(b), as amended by Guam P.L. 29-133, or pursuant to Section 20 of the Guam Waterworks Authority SDC Implementation Guidelines, in connection with the construction of a single-family residence on

[Property Description] (the "Property").

The ASDC is not transferable. Pursuant to 12 GCA 120 *15(b),* and Section 20 of the Guam Waterworks Authority SDC Implementation Guidelines, prior to the sale or transfer of the title to the Property to any person other than an immediate family member or a person also eligible to receive the benefit of the ASDC, the entire remaining balance of the ASDC, including any accrued and unpaid interest, must be paid in full.

Date: _____

GUAM WATERWORKS AUTHORITY

BY: _____
NAME: _____
ITS: _____

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ACKNOWLEDGED AND AGREED TO:

[OWNER/OWNERS)

_____

_____

ACKNOWLEDGEMENTS

GUAM, U.S.A.)
) **ss:**
CITY OF HAGATNA)

ON THIS _____ day of _____, 2009, before me, a notary public in and for Guam, personally appeared _____ known or identified to me to be the _____ of GUAM WATERWORKS AUTHORITY, a Government of Guam agency, whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same on behalf of said corporation, in such capacity, being fully authorized to do so, and for the uses and purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

_____
(official signature and seal of notary)

17

GUAM, U.S.A.)
) **ss:**
CITY OF HAGATNA)

ON THIS _____ day of _____, 2009, before me, a notary public in and for Guam, personally appeared _____ known or identified to me to be the _____ of GUAM WATERWORKS AUTHORITY, a Government of Guam agency, whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same on behalf of said corporation, in such capacity, being fully authorized to do so, and for the uses and purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

_____
(official signature and seal of notary)

GUAM, U.S.A.)
) **ss:**
CITY OF HAGATNA)

ON THIS _____ day of _____, 2009, before me, a notary public in and for Guam, personally appeared _____ known or identified to me to be the _____ of GUAM WATERWORKS AUTHORITY, a Government of Guam agency, whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same on behalf of said corporation, in such capacity, being fully authorized to do so, and for the uses and purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

_____
(official signature and seal of notary)

EXHIBIT B

GUAM WATERWORKS AUTHORITY

SYSTEM DEVELOPMENT CHARGE
FINANCIAL OFFSET POLICY
August 2017

1.0 PURPOSE

This policy shall provide the requirements and procedure for developers to request a System Development Charge (SDC) financial offset by constructing the offsite water and/or sewer system infrastructure needed to provide utility service to a proposed development without adversely impacting existing customers.

2.0 DEFINITIONS

From the SDC Implementing Guidelines:

"Offset"' means the amount of the reduction of the applicable SDC designed to fairly reflect the value of area-related facilities provided by a developer pursuant to Guam's development regulations or requirements.

"Offsite" means outside the boundaries of the property for which a new development is proposed.

"Sanitary Sewer Facility Expansion" means the expansion of the capacity of any existing sanitary sewer facility for the purpose of serving new development, and may, under certain circumstances, include the repair, maintenance, modernization or expansion of an existing sanitary sewer facility to serve existing development as long as such expansion adds additional capacity to serve future users to the system or accommodate existing users who are expanding the demand upon the system.

"System Development Charge," means a one-time impact fee or charge assessed by GWA on each user who is for the first time connecting property into GWA water or wastewater system, or to each builder if the density of development on the existing connection is increased pursuant to these Guidelines in order to fund or recoup the costs of capital improvements or facility expansions necessitated by and attributable to new development. SDCs **do not include** the dedication of rights-of-way or easements for such facilities nor the construction of improvements by the developer thereon. SDCs also do not include line extension costs or other agreed upon privately funded costs that are required under GWA rules or regulations or Guam law to accommodate development regardless of type.

"Water Facility Expansion" means the expansion of the capacity of any existing water facility for the purpose of serving new development, and may, under certain circumstances, include the repair, maintenance, modernization or expansion of an existing water facility to serve existing development as long as such expansion adds additional capacity to serve future users to the system or accommodate existing users who are expanding the demand upon the system.

3.0 COVERAGE

A. The following improvements or activities do not qualify for SDC offset, per the SDC definition:
   i. the dedication of rights-of-way or easements,
   ii. the construction of improvements by the developer thereon (on private property), and
   iii. line extension costs or other agreed upon privately funded costs that are required under GWA rules or regulations or Guam law to accommodate development regardless of type.

B. The offsite improvement must meet the definition of Sanitary Sewer Facility Expansion or Water Facility Expansion, in Section 2.0.

C. The financial offset shall include costs associated with asset construction including, but not limited to design, permitting, construction, materials, and testing. Upon GWA's acceptance of the assets, GWA shall be responsible for operation and maintenance costs.

4.0 GUIDELINES

A. The developer shall submit engineering plans and an estimate of the total project cost with the financial offset request. If the estimated cost is less than the SDC assessment (in accordance with Exhibit C, Schedule I of the GWA SDC Implementing Guidelines) then the developer will be required to pay the difference to GWA prior to approval of the building permit application.

B. Upon completion of the project, the developer shall submit actual costs. If the actual cost does not at least equal the SDC assessment, the developer shall pay the difference to GWA prior to GWA's approval of the development's occupancy permit.

   If the actual cost exceeds the estimated cost and an SDC payment was made prior to approval of the building permit application, GWA shall refund the SDC payment (in part or whole) such that the actual cost

C. An agreement between GWA and the developer shall be signed to clearly identify the scope of offsite improvements prior to GWA's approval of a building permit.

D. The developer shall be responsible for
   i. all Federal and Government of Guam permitting requirements
   ii. all payments for the improvement construction including permitting, materials, and contractor fees.

E. GWA may require the developer to provide a 100% bond for the project, per SDC Implementing Guidelines Section 17.

F. All offsite improvements shall meet GWA design, material, construction, testing and inspection requirements. GWA may require the developer to employ a construction manager who shall, upon completion of construction, submit a construction report to GWA.

G. The offsite improvement construction shall be completed and the assets accepted by GWA prior to GWA's approval of the development's occupancy permit.

H. In the case of phased development, the agreement shall identify offsite improvements required to be completed, placed into service, and accepted by GWA prior to occupancy permit approval for each phase of the development.

GOVERNMENT OF GUAM
KUMISION SETTEFIKASION PARA I MANMANIDUKA
GUAM COMMISSION FOR EDUCATOR CERTIFICATION
UOG Station-SOE, Mangilao, Guam 96923
Tel: (671) 735-2554-7 FAX: (671) 735-2569 www.gcec.guam.gov
(Public Law 31-50 effective 5/23/2011)

APPLICATION FOR GUAM PROFESSIONAL CERTIFICATION

REQUIRED DOCUMENTS CHECKLIST (Please view our website for specific requirements)

1 Copy of current Guam Professional Certificate;
2 Evidence of current **SATISFACTORY** performance evaluation; and
3 a) Initial: Official transcript(s) from a regionally accredited US college / University.
b) Renewal: Official transcript showing required credits and/or documentation of professional activities.

Graduates of Foreign Institutions: Course-by-Course Evaluation of degree by an approved educational credentials evaluation service (www.naces.org)

TYPE OF REQUEST / CONTACT INFORMATION

TYPE OF REQUEST:

[ ] Initial	[ ] Initial	[ ] Renewal	[ ] Replacer	[ ] Extension Request
☐ Temporary	☐ Professional	☐ Temporary	Specify:	
☐ Basic	☐ Master	☐ Regular	[ ] Endorsement:	
☐ Initial			Specify:	

Name: _____ Maiden/Other: _____
Last First Middle

Contact Numbers: (Hm) _____ (Wk) _____ (Cell) _____

Social Security Number: _____ DOB: _____ Email: _____

CERTIFICATION REQUEST

1	Preschool	10	Music 6-12	19	Chamorro language & Culture
2	Early Childhood Pre k-2	11	Physical Education 6-12	20	ESL
3	Elementary K-5	12	Health 6-12	21	Career & Technical Education
4	Art 6-12	13	Science 6-12	22	School Counselor
5	Business Education 6-12	14	Social Studies 6-12	23	School Librarian
6	Home Economics 6-12	15	Spanish 6-12	24	Reading Specialist
7	Industrial Arts 6-12	16	Japanese 6-12	25	School Administrator
8	Language Arts 6-12	17	Reading K-12	26	Other:
9	Math 6-12	18	Special Education Pre K-12		

****THIS BOX IS FOR OFFICIAL USE ONLY ****

PROFESSIONAL INFORMATION

CHARACTER TESTAMENT

You must answer either "YES" OR "NO" to each of the following questions: any other response will result in your application being considered incomplete. All "YES" answers must be fully explained in writing on a separate piece of paper and the explanations must be signed and dated by you. You must also include certified true copies of all legal documents, including court records.

1. Have you ever left any educational or school-related employment, voluntarily or involuntarily, while the subject of an inquiry, review or investigation or alleged misconduct? Have you ever left educational or school-related employment when you had reason to believe an investigation for misconduct was underway or imminent?	
2. Are you currently the subject of an inquiry, review or investigation for alleged misconduct or alleged violation of professional standards of conduct by either an employer or a licensure agency?	
3. Have you ever been placed on leave by your employer for any alleged misconduct?	
4. Have you ever had adverse action taken on your educator certificate, license or charter school registration? Have you ever been placed on probationary status for alleged misconduct while holding an educator certificate, license, registration or credential?	
5. Have you ever been denied any educator certificate for which you applied or granted an educator certificate, license or credential on a conditional or probationary basis for any alleged misconduct?	
6. Have you ever surrendered an educator certificate of any kind before its expiration?	
7. Have you ever been convicted or been granted a diversion or conditional discharge by any court for any: (a) Felony; or (b) Misdemeanor; or (c) Major traffic violation including but not limited to: driving under the influence or intoxicants or drugs; reckless driving; fleeing from or attempting to elude a police officer; driving while your license was suspended, revoked or used in violation of any license restriction; or failure to perform the duties or witness at an accident?	
8. Have you ever been arrested or cited for any offense listed in section (7) above which is still pending in the courts? This includes any diversion, conditional discharge or postponed adjudication that has not been dismissed by the courts at the time this application is signed.	
9. Have you ever had any civil judgment or other court order, including but not limited to a restraining order, entered against you resulting from allegations of abuse, assault, battery, harassment, intimidation, neglect, cyber misconduct, stalking or other threatening behavior toward other persons?	
10. Have you committed any misconduct listed above under a different name? Please provide misconduct details and name(s) used.	

Your SIGNATURE and the DATE: Under penalty of false swearing, I declare that the information in this application is true, correct, and complete. Providing false information is grounds for GCEC to deny my application or revoke my educator certificate. I also grant GCEC permission to check civil and criminal records to verify any statements made on this application.

_____ _____

Applicant's Signature *Date*

_____

Printed Name

EXHIBIT B

GUAM WATERWORKS AUTHORITY

SYSTEM DEVELOPMENT CHARGE
FINANCIAL OFFSET POLICY
August 2017

1.0 PURPOSE

This policy shall provide the requirements and procedure for developers to request a System Development Charge (SDC) financial offset by constructing the offsite water and/or sewer system infrastructure needed to provide utility service to a proposed development without adversely impacting existing customers.

2.0 DEFINITIONS

From the SDC Implementing Guidelines:

"Offset"' means the amount of the reduction of the applicable SDC designed to fairly reflect the value of area-related facilities provided by a developer pursuant to Guam's development regulations or requirements.

"Offsite" means outside the boundaries of the property for which a new development is proposed.

"Sanitary Sewer Facility Expansion" means the expansion of the capacity of any existing sanitary sewer facility for the purpose of serving new development, and may, under certain circumstances, include the repair, maintenance, modernization or expansion of an existing sanitary sewer facility to serve existing development as long as such expansion adds additional capacity to serve future users to the system or accommodate existing users who are expanding the demand upon the system.

"System Development Charge," means a one-time impact fee or charge assessed by GWA on each user who is for the first time connecting property into GWA water or wastewater system, or to each builder if the density of development on the existing connection is increased pursuant to these Guidelines in order to fund or recoup the costs of capital improvements or facility expansions necessitated by and attributable to new development. SDCs **do not include** the dedication of rights-of-way or easements for such facilities nor the construction of improvements by the developer thereon. SDCs also do not include line extension costs or other agreed upon privately funded costs that are required under GWA rules or regulations or Guam law to accommodate development regardless of type.

"Water Facility Expansion" means the expansion of the capacity of any existing water facility for the purpose of serving new development, and may, under certain circumstances, include the repair, maintenance, modernization or expansion of an existing water facility to serve existing development as long as such expansion adds additional capacity to serve future users to the system or accommodate existing users who are expanding the demand upon the system.

3.0 COVERAGE

A. The following improvements or activities do not qualify for SDC offset, per the SDC definition:
   i. the dedication of rights-of-way or easements,
   ii. the construction of improvements by the developer thereon (on private property), and
   iii. line extension costs or other agreed upon privately funded costs that are required under GWA rules or regulations or Guam law to accommodate development regardless of type.

B. The offsite improvement must meet the definition of Sanitary Sewer Facility Expansion or Water Facility Expansion, in Section 2.0.

C. The financial offset shall include costs associated with asset construction including, but not limited to design, permitting, construction, materials, and testing. Upon GWA's acceptance of the assets, GWA shall be responsible for operation and maintenance costs.

4.0 GUIDELINES

A. The developer shall submit engineering plans and an estimate of the total project cost with the financial offset request. If the estimated cost is less than the SDC assessment (in accordance with Exhibit C, Schedule I of the GWA SDC Implementing Guidelines) then the developer will be required to pay the difference to GWA prior to approval of the building permit application.

B. Upon completion of the project, the developer shall submit actual costs. If the actual cost does not at least equal the SDC assessment, the developer shall pay the difference to GWA prior to GWA's approval of the development's occupancy permit.

   If the actual cost exceeds the estimated cost and an SDC payment was made prior to approval of the building permit application, GWA shall refund the SDC payment (in part or whole) such that the actual cost

C. An agreement between GWA and the developer shall be signed to clearly identify the scope of offsite improvements prior to GWA's approval of a building permit.

D. The developer shall be responsible for
   i. all Federal and Government of Guam permitting requirements
   ii. all payments for the improvement construction including permitting, materials, and contractor fees.

E. GWA may require the developer to provide a 100% bond for the project, per SDC Implementing Guidelines Section 17.

F. All offsite improvements shall meet GWA design, material, construction, testing and inspection requirements. GWA may require the developer to employ a construction manager who shall, upon completion of construction, submit a construction report to GWA.

G. The offsite improvement construction shall be completed and the assets accepted by GWA prior to GWA's approval of the development's occupancy permit.

H. In the case of phased development, the agreement shall identify offsite improvements required to be completed, placed into service, and accepted by GWA prior to occupancy permit approval for each phase of the development.

2011 Court Order Performance Report Card / Dashboard as of 07/28/2017

GUAM WATERWORKS AUTHORITY

Court Order Performance Report Card

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

Legend in detail section below.

Fill Color	Meaning
Lime green	Done/Completed
Yellow	On Schedule
Blue	Behind Schedule
Violet	Completed Behind Schedule
Yellow Green	Ongoing and Continuous

2011 Court Order Performance Report Card / Dashboard as of 07/28/2017

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	Status
Northern District WWTP Primary Treatment Upgrades.	2	1	Interim Primary Treatment Improvements Complete	09/30/2012	@EPA	**Done** Construction completed 12/13/2012
	3(a)	2	Interim Effluent to meet Table 1	09/30/2012 monitoring started	@EPA	**Done** Table 1 compliance beginning January 9, 2013.
	3(a)(1)	3	PE Review (Application for 7.5 MGD pending)	3 months after compliance with 3(a)	@EPA	3(a)(1) Application to increase to 7.5 MGD Submitted 07/26/2016
	3(a)(2)	4	(Application for 9 MGD)	3 months after compliance with 3(a)(1)	TBD	
	3(c)	5	Effluent monitoring (calendar-year quarter)	**Completed**	@EPA	**Done. Full year completed 01/08/2012**
	4(a)	6	Sludge & Biosolids Management Plan	12/31/2011	@EPA	**Done.** Biosolids to Landfill EPA Approval 08/17/2014
	4(a)	7	Adequate stabilization and dewatering	9/30/2012	@EPA	**Done.** By Design-Build contract.
	4(b)	8	Biosolids Management, Quarterly Report	Quarterly Report	@EPA	Routine Monitoring Report, **Repeats Quarterly**
	4(c)	9	Biosolids Management, repair & replace facilities	09/30/2012	@EPA	**Done** Construction Complete 12/13/2012. Biosolids to Landfill
	4(d)	10	Biosolids Management, implement plan	9/30/2012	@EPA	**Done** - Biosolids to Landfill
Agaña WWTP Interim Measures.	5	11	Primary Treatment Plant Upgrades	06/30/2013	@EPA	**Done.** CEPT is operational and in final tune-up stages.
	5(a)	12	Scope and schedule	09/30/2011	@EPA	
	5(b)	13	Septage Handling Complete	06/30/2013	@EPA	**Done.** Septage Receiving is completed at the NDWWTP (location option) reported 06/26/2013.
	5(b) 1	14	Septage handling design contract signed	12/31/2011	@EPA	
	5(b) 2	15	Septage handling construction notice to proceed	06/30/2012	@EPA	
	5(c)	16	Grit and FOG Complete	06/30/2013	@EPA	Phase III CEPT is in operations.)
	5(c) 1	17	Grit and FOG design contract signed	12/31/2011	@EPA	**Done** Grit and FOG reported 06/06/2013
	5(c) 2	18	Grit and FOG construction notice to proceed	06/30/2012	@EPA	**Done** Submitted 11/17/2011
	5(d)	19	Repair Solids handling	11/17/2011	@EPA	**Done** O & M Plan reported 05/31/2012
	5(e)	20	O & M Plan	05/31/2013	@EPA	
	5(f)	21	Effluent monitoring (calendar-year quarter)	**Completed**	@EPA	**Done. Full year completed 01/08/2012**
	6	22	Prevent Effluent Back Surge	06/30/2013	@EPA	**Done** Old outfall decommissioned (plugged) 06/25/2013 **Done** Old outfall
	6	23	Effluent Back Surge Plan	12/30/2011	@EPA	decommissioned (plugged) 06/25/2013
I&I SSES	7	24	Collection System SSES and I/I evaluation	**Done**.	@EPA	**Done**.
SSES Work Plan	8	25	Work Plan	180 days	@EPA	**Done** Reported 08/13/2012
	8(a)	26	Flow and rainfall data	N/A	@EPA	**Done** Reported 04/25/2013
	8(b)	27	I/I Southern	540 days	@EPA	**Done** Reported 04/25/2013
	8(c)	28	I/I Central	900 days	@EPA	**Done** Reported 04/28/2014
	8(d)	29	SSES Southern	540 days	@EPA	**Done** Reported 04/30/2013 – update 04/29.2016
	8(e)	30	SSES Central	900 days 09/15/2015 EPA Disap. Ltr.	@EPA	**Done** – Completed June 2, 2017
	8(e) 2	31	SSES Central Report	09/15/2015 EPA Disapproval Letter	@EPA	**Done** – Completed June 2, 2017
Agat / Santa Rita,	9(a)	32	By Pass Report	60 days	@EPA	**Done** Reported 01/04/2012
	9(b)	33	Flow Meter	180 days	@EPA	**Done** Reported 07/26/2012
	9(c)1,2,3	34	Report evaluating near term measures	180 days response sent 09/29/2014	@EPA	**Done** Reported 05/07/2012 GWA response 09/292014.
	9(d)	35	Implement near term measures d - Disinfection	03/23/2016	@EPA	**EPA specifications of 9(c), 9(d) and 9(f) on 09/24/2015.**
	9(e)	36	Implement near term measures e – sludge mgmt.	03/23/2016	@EPA	
	9(f)	37	Implement near term measures f – 75% Bypass Red.	03/23/2016	@EPA	
	10	38	System Evaluation	12/31/2013 response sent 09/29/2014	@EPA	CO **Done** Reported 12/28/2013 GWA response 09/29/2014.- update 04/29/2016
	11	39	System Upgrades	03/14/2017 Plant became operational.	@EPA	New Agat WWTP on line 03/14/2017
	11(a)	40	System Upgrades design	06/30/2014-NTP 10/13/2014	@EPA	CCU approval 08/26/2014. NTP was issued on 10/13/2014
	11(b)	41	System Upgrades notice to proceed	06/30/2015-NTP 10/02/2015	@EPA	NTP Ph.1 issued 10/02/2015 - NTP Ph.2 due 01/04/2016
Baza Gardens	12(a)	42	Interim Measures Evaluation (Independent PE)	180 days	@EPA	**Done** Reported 05/07/2012, PMO task
	12(b)	43	Interim Measures Complete	540 days	@EPA	**Done** Reported 05/01/2013 PMO task
	12(c)	44	Evaluation Bio Solids Report	180 days	@EPA	**Done**-EPA Approval 08/28/2014
	12(d)	45	Complete Bio Solids	360 days	@EPA	**Done** Reported 03/21/2013
	13	46	System Evaluation	04/30/2014	@EPA	**Done** Reported 04/30/2014 GWA response 10/02/2014
	14	47	System Upgrades	04/31/2018	@EPA	Critical path, need to complete I&I/SSES
	14(a)	48	System Upgrades, Design Starts	10/31/2015 NTP DCA 02/05/2016	@EPA	Linked to new Agat WWTP NTP DCA 02/05/2016
	14(b)	49	System Upgrades, Construction Starts	10/31/2016	@EPA	Linked to new Agat WWTP

2011 Court Order Performance Report Card / Dashboard as of 07/28/2017

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	Status
Umatac-Merizo	15	50	Complete Evaluation	12/31/2013	@EPA	CO 15 **Done** Reported 12/31/2013 -- Critical path, completed I&I/SSES
	16	51	System Upgrades	12/31/2018	@EPA	Design Build contract executed 06/29/2017
	16(a)	52	System Upgrades, Design Starts	06/30/2016	@EPA	Design Build contract executed 06/29/2017
	16(b)	53	System Upgrades, Notice to Proceed	06/30/2017	@EPA	NTP Issued 06/30/2017
Sewer Cleaning	17	54	Sewer Cleaning (in annual and quarterly reports)	2017-2022 Preliminary Goal set.	@EPA	2017-2022 Preliminary Goal set.
Hot Spot Plan	18	55	Hot Spot Plan	EPA Revision letter o9/08/2015	@EPA	Last Revision submitted 10/23/2015 GWA WW Ops
CCTV	19	56	CCTV (in annual and quarterly reports)	2017-2022 Preliminary Goal set.--- Entire System Every5 years	@EPA	2017-2022 Preliminary Goal set.--- Entire System Every5 years
Sewer Hook-Up	20	57	Sewer Hook-Up	In Operation	@EPA	**Done –** available on GWA web site or at GWA Customer Service
Groundwater Chlorination	21	58	Groundwater Chlorination	540 days	@EPA	**Done** Reported 04/29/2013
Chlorine Residual Monitors	22	59	Plan	180 days	@EPA	**Done** Reported 09/94/2012
	22(a)	60	High Risk Wells	540 days	@EPA	**Done** Reported 05/02/2013
	22(b)	61	Moderate Risk Wells	2 years	@EPA	**Done** Reported 07/31/2013
	22(c)	62	All Other Wells	3 years (Substantially complete)	@EPA	All but 5–10/27/2015 Site electrical upgrade in progress at 5 locations
Water Metering	23(a)	63	Plan & schedule	180 days	@EPA	**Done** Reported 05/08/2012
	23(a)	64	All connections are metered and mapped	2 years	@EPA	10/31/2016 Substantially complete-- 2 Sensus, **0** Metron left
	23(b)	65	Plan repair & maintain	180 days	@EPA	**Done** GWA Test facility operational 06/28/2013
Ugum Surface Water Treatment Plant	24	66	Construction complete	One year	@EPA	**Done** Reported 11/09/2012
	24	67	PE Inspection	60 days before start-up	@EPA	**Done** EPA Approval 08/26/2014
	25	68	PE Performance Operation Assessment	60 days before start-up	@EPA	**Done** EPA Approval 08/26/2014
	26	69	O&M Plan and Procedures	90 days before start-up	@EPA	**Done** Reported 08/10/2012 EPA Approval 08/17/2014
	27	70	Plant compliance	365 days	@EPA	**Done** Reported 02/07/2013
Sinajana Water Transmission Line	28(a)	71	Existing Construction Complete	180 days	@EPA	**Done** Reported 12/23/2011
	28(b)	72	Hydraulic Evaluation	180 days	@EPA	**Done** EPA No Further Comment 08/26/2014
	28(c)	73	Construction Complete (2 tanks)	540 days from 11/21/2013	@EPA	**GEPA Delays** Tank Constr. Completed August 2015: **In Service July 2016.**
	28(d) 1	74	Monitoring Plan	90 days prior	@EPA	**Done** Reported 09/07/2012
	28(d) 1	75	Implement- Monitoring Plan	For one year after start up	@EPA	GWA Compliance
	28(d) 2	76	Monitoring Plan	180 days prior	@EPA	**Done** EPA Approval 08/26/2014
	28(e)	77	Implement- Monitoring Plan	For one year after start up	@EPA	**Start 09/01/2015 – end 08/31/2016**
Storage Tank/Reservoir Rehabilitation and Replacement Program.	29(a) 1	78	Plan hydraulic analysis	90 days	@EPA	**Done** Reported 11/09/2012
	29(a) 2	79	Hydraulic analysis	540 days	@EPA	**Done** EPA No Further Comment 08/26/2014
	29(b) 1	80	Plan minimize service interruptions	90 days after approval	@EPA	**Done** EPA approval 08/26/2014
	29(b) 2	81	Tank inspection schedule	540 days	@EPA	**Done** EPA approval 08/26/2014
	29(b) 3	82	Complete Barrigada (1 @ 2 MG tank)	540 days	@EPA	**Done**
	29(b) 4	83	Assess additional 7 tanks	5 years (11/10/2016)	@EPA	**Done** DCA contract task
	29(b) 5	84	RRRR 7 additional tanks	5 years (11/10/2016)	@EPA	**Done** PMO executed procurement
	29(b) 6 i	85	RRRR 10 additional tanks	7 years (11/10/3018)	@EPA	**Ongoing** - Completed the hydraulic analysis
	29(b) 6 ii	86	RRRR remaining	12/31/2020	@EPA	
	29(c)	87	In Quarterly / Annual Report	Quarterly / Annual Report	@EPA	GWA Compliance **Repeats Quarterly**
Section III REPORTING REQUIREMENTS	31(a)(1)	88	Quarterly Report	Jan., April, July, Sept. Continuous	@EPA	Due by the 30th of the specified months
	31(a)(2)	89	Reports on Non Compliance	Within 30 days from determination of delay	@EPA	As determined by GWA
	31(b)	90	SSO and Bypass Report	Jan., April, July, Sept. Continuous	@EPA	Due by the 30th of the specified months
	31(c)	91	Annual Report	January each year	@EPA	Included with 31(a) each Year
Section IV NOTICES	35	92	CO contacts		@EPA	GWA Compliance report 06/29/2016
	36	93	Formal notices of change in CO contacts	Whenever specified staffing changes	@EPA	GWA Compliance report 06/29/2016

2013 NEIC Findings for GWA Wastewater Collection and Treatment System, dated 08/01/2017

Facility/function	#	Findings	GWA Response
Pump Station Inspection Observations	1	GWA's ability to respond to pump station failures and operational issues in a timely manner is a major concern. Of GWA's 73 pump stations, only 7 were equipped with telemetry and alarm systems, while the remainder had no alarm systems to alert GWA of pump system failures and other problems. (p.12)	Current SCADA Master Plan schedules Phase A by 2017: central (Master) and 207 water/wastewater sites. Phase B by 2019, SCADA at 132 additional water/wastewater sites (totaling 339). Phase C by 2020, SCADA at remaining water/wastewater sites.
Pump Station Inspection Observations	2	GWA's rover system is not a reliable means for detecting all pump station issues and spills. A review of rover travel sheets for all three wastewater districts for January through April 2012 shows numerous instances when no visit to certain pump stations was documented during a given shift. (p.12)	See also response to #1 GWA restructured Wastewater collection management to allow oversight of SOP and elevate enforcement of SOP to site supervisor. This change is intended to improve documentation and oversight of the rovers.
Pump Station Inspection Observations	3	GWA staff discovered a spill at the Yigo pump station on January 25, 2012 that was estimated to have been occurring for at least two days, following the failure of the rovers to make a documented scheduled visit to the pump station. (p.12)	See response's # 1 and #2 **COMPLETED**
Pump Station Inspection Observations	4	Seven of the 29 pump stations inspected had one or more pumps out of service for periods ranging from 1 week to more than 1 year. Three of the inspected pump stations had no backup power. (p.12)	See items 4a through 4i below.
	4a	Two of four pumps at the Route 16 (Liguan Terrace) pump station were out of service.	The new pumps are now installed and are undergoing final testing by the contractor and GWA for final acceptance by GWA. This it expected to be completed in March 2014.
	4b	No backup power was available at the Santa Ana pump station. Backup power has not been available at the pump station for at least 2 years.	Maintenance of backup generation has been transferred to the GPA task force. See also response to #1
	4c	One of two ejector pumps was out of service at the Namo pump station. The ejector pump had been out of service for approximately 6 months. In addition, no backup power was available at the Namo pump station.	Both ejector pumps are currently in service. GWA will develop a project to provide a back-up power or emergency pumping capabilities through telemetry for the SPS and use funds from 2011/2012 SRF.
	4d	No backup power was available at the Casimero pump station.	Maintenance of backup generation has been transferred to the GPA task force. See also response to #1
	4e	One of four pumps at the Agaña Main pump station was out of service. The pump had been out of service for about 1 week due to a bearing issue.	In May 2013, GWA completed the Agaña Main SPS rehabilitation project which replaced non-functioning pumps and motors, controls systems, etc. **COMPLETED**
	4f	One of three pumps at the Mamajanao pump station was out of service. The pump had been out of service for about 1 year.	In May 2013, GWA completed the Mamajanao SPS rehabilitation project which replaced non-functioning pumps and motors, controls systems, etc. **COMPLETED**
	4g	One of two pumps at the Umatac-Merizo pump station 20 was out of service. The pump had been out of service for about 1 month.	Pump Station #20 is a single pump station, not a dual station. The pump is fully functional. **COMPLETED**
	4h	One of two pumps at the Inarajan Main pump station was out of service. The pump had been out of service for about 2 months.	In May 2012 GWA completed a pump/motor change out to the non-functioning pump. Two pumps are currently operational. **COMPLETED**
	4i	One of two pumps at the Talofofo pump station was out of service. The pump had been out of service for about 1 week.	In July 2012 GWA completed a pump/motor change out to the non-functioning pump. Two pumps are currently operational. **COMPLETED**
Pump Station Inspection Observations	5	GWA lacks a robust spare parts and equipment inventory and is unable to repair certain pieces of equipment in a timely manner. (p.13)	EPA is currently funding an Asset Management Program via CDM Smith. GWA acknowledges importance of spare parts and robust equipment inventory. GWA Operations and warehouse staff are also working with Performance Management Contract (PMC) to provide a spare parts and robust equipment inventory. Full implementation is dependent on completion of the Asset Management Program.
Pump Station Inspection Observations	6	Of the 136 total Sanitary Sewer Overflows (SSO's) reported by GWA from October 2011 through September 2012, 44 SSO's were associated with pump stations. 31 of the pump station related SSO's (23 percent of the total) were attributed to pump station equipment failure or power outages. (p.13)	See items 6a through 6f below.
	6a	8 SSO's were reported at the Harmon pump station (identified as "Rojas Dr."), 7 of which were attributed to high flows exceeding the capacity of the pump station.	**COURT ORDER ISSUE** **See response to #1,** Additionally GWA is currently in negotiation with an engineering consultant to conduct an I/I & SSES study for the central system which the Harmon SPS falls under. This study will help GWA identify high areas of I&I from which GWA can address areas of high SSO's. GWA to conduct wastewater hydraulic model update to further evaluate system capacity.
	6b	5 SSO's were reported at the Astumbo No. 1 pump station (also identified as "Ch. Fago or Chalan Fago St."), all of which were attributed to equipment failures.	GWA has replaced two pump/motor and level control systems (pressure transducers). **COMPLETED**
	6c	4 SSO's were reported at the Yigo pump station (identified as "Chn. or Chalan. Nanalao"), all of which were attributed to repeated bubbler level control compressor failures.	GWA has replaced level control systems (pressure transducers). **COMPLETED**
	6d	3 SSO's were reported at the Mangilao pump station, all resulting in the overflow of sewage from a nearby baseball field restroom.	GWA has replaced one pump/motor and level control systems (pressure transducers). **COMPLETED**
	6e	3 SSO's were reported at the Mongmong Toto pump station for varying causes.	This is a telemetry issue, see response to #1
	6f	2 SSO's were reported at the Namo pump station, both attributed to equipment failures.	This is a telemetry issue, see response to #1
Infiltration and Inflow Analysis	7	During the time frame of October 2011 through September 2012, GWA reported 22 SSO's that were attributed to capacity-related issues and heavy rainfall. (p.14)	**COURT ORDER ISSUE** Item #7 is being addressed through I&I/SSES studies (underway), line cleaning and hot spots in addition to alarm system upgrades (see response to #1). GWA is planning to upgrade the wastewater hydraulic model to further evaluate system capacity.

2013 NEIC Findings for GWA Wastewater Collection and Treatment System, dated 08/01/2017

Facility/function	#	Findings	GWA Plan/Schedule to address findings
Infiltration and Inflow Analysis	8	EPA's contractor, PG Environmental, determined that GWA's collection system hydraulic model was inadequate for depicting collection system capacity limitations. (p.14)	GWA has upgraded the wastewater hydraulic model and meets the needs of GWA planning an O&M. The model continues to be refined in areas where more detail is needed. Management of the hydraulic model will remain an ongoing process as changes are made to the system.
Infiltration and Inflow Analysis	9	GWA staff identified manhole structural defects as a major source of infiltration and inflow. (p.15)	I/I&SSES studies in the southern basin has been **COMPLETED**. Underway is the Central basin SSES and I/I evaluation. The Northern basin study is in procurement. The studies include metering for I/I, manhole inspection and smoke testing to locate unknown connections to the WW collection system/
Infiltration and Inflow Analysis	10	Another source of inflow identified by GWA was the direct connection of yard drains into the sewer system, most prevalent in the Southern District. (p.15)	**COURT ORDER ISSUE** The I&I/SSES study, in the southern basin, has been **COMPLETED**. GWA will provide an action plan to address identified sources of I&I on the CO schedule of June 27, 2014
Infiltration and Inflow Analysis	11	A review of influent wastewater data for the Agat and Umatac-Merizo Sewage Treatment Plants (STP's) shows that relatively low strength influent wastewater was being discharged to those two Southern District STP's, which may be indicative of potential I/I problems. (p.15)	**COURT ORDER ISSUE** The I&I/SSES study, in the southern basin, has been **COMPLETED**. GWA will provide an action plan to address identified sources of I&I on the CO schedule of June 27, 2014
Sewer Cleaning and Televising	12	One of GWA's two combination Vactor/jet cleaning trucks was out of service for repairs at the time of the inspection. (p.16)	Both GWA Vactor/jetter cleaning trucks are operational. An additional jetter truck has been purchased and is operational. **COMPLETED**
Sewer Cleaning and Televising	13	GWA staff stated that they were on schedule for 2012 to meet the 2011 Court Order sewer cleaning requirements, but behind schedule on meeting the CCTV inspection requirements. (p.16)	GWA has met schedule for both CCTV and cleaning requirements in 2012. **COMPLETED**
Sewer Cleaning and Televising	14	GWA does not typically clean the sewer lines prior to CCTV inspections, resulting in delays when CCTV cameras become stuck in sewer lines. (p.16)	GWA's current policy requires cleaning prior to CCTV. **COMPLETED**
Sewer Cleaning and Televising	15	During the inspection, GWA's CCTV camera winch and the camera transporter malfunctioned. This was the third such equipment issue in the last 4 months. (p.17)	GWA has purchased second van and currently has five cameras and transporters. All are operational. **COMPLETED**
Sewer Cleaning and Televising	16	GWA's CCTV inspection data was being sent exclusively to Veolia at an off-island location for analysis. GWA engineers were not receiving CCTV inspection data. (p.17)	GWA Planning Section is the custodian of CCTV data; all video has since been transferred to date. **COMPLETED**
Fats, Oils, and Grease (FOG) Management Program	17	M. Roush indicated that GWA does not have a formal FOG management program and that grease trap and interceptor enforcement is handled by the Guam Public Health Department and GEPA. (p.17)	New Source Control Manager has been appointed in May, 2013 to formulate FOG management program. **COMPLETED**
Fats, Oils, and Grease (FOG) Management Program	18	From October 2011 through September 2012, GWA reported 61 SSO's as attributed partially or exclusively to grease blockages, accounting for 45 percent of the SSO's during that time frame. (p.18)	**COURT ORDER ISSUE** See also response to # 17, in addition GWA has taken on the scheduled cleaning of identified hot spots as specified in CO Section II A, Paragraph 18 Reported on 08/13/2012
Fats, Oils, and Grease (FOG) Management Program	19	GWA staff indicated that large amounts of grease are being discharged to the STP's, specifically mentioning that grease is causing effluent issues at the Hagåtña STP. (p.18)	**COURT ORDER ISSUE** See ALSO response # 17. Currently the Agaña WWTP upgrade to Advanced Primary Treatment is complete and the facility is in CO compliance with CEPT implementation. In addition an interim measures project has addressed removal of grease at the treatment plant.
Overflow Locations	20	GWA staff identified known recurring SSO locations. (p.18)	See below. See also CO § II [A] ¶17 and ¶18.
	20a	From October 2011 through September 2012, GWA reported 7 weather related SSO's from a manhole in Route 4, downstream of the New Chaot pump station.	GWA completed the Chaot SPS rehabilitation project which installed a new pump/motor and controls to stabilize flow pumped into the collection system instead of surging it. In addition GWA will be conducting I/I & SSES study to be for central system from which a CIP rehabilitation/replacement program is planned. See Also No. 8 Above.
	20b	Similar surcharging conditions exist at the Mamajanao pump station where GWA reported 1 SSO's from this location between October 2011 and September 2012.	GWA completed the Mamajanao SPS rehabilitation project which installed a new pump/motor and controls to stabilize flow pumped into the collection system instead of surging it. **COMPLETED**
	20c	From October 2011 through September 2012, GWA reported 8 SSO's at the Harmon pump station, 7 of which were attributed to high flows exceeding the capacity of the pump station.	This is a duplicate of #6a
	20d	Evidence of a recent SSO was observed at a manhole in the sewer line just upstream of the New Chaot pump station on April 30, 2012. No SSO in this area or time frame was reported by GWA as part of its quarterly SSO report to EPA.	See response to #2 and #20a
Sanitary Sewer Overflow Identification, Response, Reporting, and Notification	21	The five separate spill response SOPs provided by GWA appear to be duplicative in purpose and/or scope in some instances. The existence of multiple SOPs with similar, but not identical, concurrent provisions could create confusion. (p.21)	GWA has review its SOP's and report templates and eliminated redundant SOP's fourth quarter CY 2013. **Formal reporting to USEPA and GEPA are standard operating procedure.**
Sanitary Sewer Overflow Identification, Response, Reporting, and Notification	22	GWA does not have a public notification process for informing the public of SSO incidents and the potential associated health impacts. (p.22)	GWA does have a REQUIRED process to address public notification for SSO or other events that may pose a potential impact on public health. GWA's SOP is to use the EPA 861-R-07-003, March 2007 *Revised Public Notification Handbook* when it is deemed beneficial by mutual agreement with GEPA. **Formal reporting to USEPA and GEPA are standard operating procedure.**
Sanitary Sewer Overflow Identification, Response, Reporting, and Notification	23	For the January 25, 2012 spill at Yigo Pump Station, NEIC noted a discrepancy between the spill duration and volume recorded in GWA's Incident Notification Form (45 minutes, 180 gallons), GWA's report to EPA (680 gallons) and GWA staff description of the spill. GWA staff acknowledged during the NEIC inspection that the incident was of significantly greater duration and volume than reported to EPA. (p.23)	GWA has revised the incident reporting methods and QA/QC of spill calculations. **COMPLETED**
Sanitary Sewer Overflow Identification, Response, Reporting, and Notification	24	GWA's spill rate for October 2011 through September 2012 was 43.26 SSO's per 100 miles per year. By comparison, the average spill rate for the state of California, for data collected from 2007 through 2011, was 8.2 SSO's per 100 miles per year and the median spill rate was 3.4 SSO's per 100 miles per year. For similar sized municipal sewer systems to GWA (200 to 999 miles of sewer pipe), the average spill rate for the state of California was 4.32 SSO's per 100 miles per year and the median spill rate was 1.48 SSO's per 100 miles per year. (p.24)	GWA's position is that comparison to California is inappropriate. Comparison to other tropical island would be more appropriate, using ones operating in "Run to Failure" mode as was Guam prior to the formation of the Consolidated Commission on Utilities in 2002. To expect such a utility to have achieved performance comparable to a maintained system in only 14 years is not realistic. GWA has conducted I/I & SSES studies as well as upgrading the wastewater hydraulic model. This will help evaluate system capacity and identify and prioritize improvements in the collection systems. **COURT ORDER ISSUE**
Northern District STP	25	At the time of the inspection, the Northern District STP was undergoing major modification to provide enhanced primary treatment. (p.26)	Enhanced Primary Treatment Upgrade completed and facility has been in compliance since Feb. 2013 **COMPLETED**
Northern District STP	26	At the time of the inspection, only one of two influent channels at the Northern District STP was in operation. The other channel was out of service and being bypassed to allow installation of an automatic mechanically cleaned bar screen and conversion of the aerated grit chambers into a mixing tank for chemically enhanced primary treatment. (p.26)	Only one influent channel originally existed, the other mentioned channel was actually for a comminutor. The second channel was a bypass channel to provide maintenance of comminutor. A new mechanical bar screen is now place along with bypass channel. **COMPLETED**
Northern District STP	27	Six months before the inspection, the drive system for one clarifier failed, requiring it to be taken out of service for repair. At the time of the inspection, only one of the clarifiers was in operation, with the other being bypassed. The out-of-service unit was being overhauled as per the modification plan. (p.27)	Both clarifiers have been completely renovated including new drive systems as of Jan. 2013 and are operational. **COMPLETED**
Northern District STP	28	Northern STP has reported frequent effluent limit violations for BOD and TSS. Substantial amounts of solids were observed passing over the weir at the clarifier and were observed being discharged at the plant outfall. (p. 27)	See Comment #25 **COMPLETED**

2013 NEIC Findings for GWA Wastewater Collection and Treatment System, dated 08/01/2017

Facility/function	#	Findings	GWA Plan/Schedule to address findings
Northern District STP	29	At the time of the inspection, both of the two anaerobic sludge digesters were being used as sedimentation tanks only and for storing solids and, therefore, were not functioning as designed for solids stabilization. This condition had been ongoing since 2006. The out-of-service condition of the digesters increases BOD in the STP discharge. Finally, the inability to stabilize the solids at Northern STP places the burden of doing so on the facility at Hagåtña STP. (p. 27)	See comment #25 Upgrade to the WWTP plant has addressed the BOD permitted limits. Anaerobic digesters are also not in the plant process flow. **COMPLETED**
Northern District STP	30	The sludge dewatering centrifuges had been removed at the time of the inspection and the building housing them was under reconstruction to accommodate GWA's planned installation of replacement units. (p.28)	Building renovation and 2 new centrifuges installed and operational since Dec. 2012. Replaced under CO 4a. **COMPLETED**
Northern District STP	31	At the time of the inspection, GWA was not disinfecting effluent discharged to the ocean outfall. (p.28)	Although disinfection is not a specific NPDES permit requirement, GWA does recognize the Bac-t limits in the NPDES Permit. Because of the most recent refurbishment of the WWTP, the optimum pathogen control method for the WWTP is not yet known. A project being planned to manage this issue. Discussions on this subject are in progress with EPA.
Northern District STP	32	The effluent Parshall flume, designed for measuring effluent flow rate, was not in use at the time of the inspection. All plant flow was being reported based on the temporary flow measurement system at the headworks. (p.28)	New permanent mount flow meters installed at influent and effluent structures and both operational as of May 2013. **COMPLETED**
Northern District STP	33	At 12 MGD, the maximum flow recorded at the Northern District STP, the design peak hydraulic loading rate for the primary clarifiers is just met with both clarifiers in service; it is greatly exceeded when only one clarifier is in operation. Under those conditions, there is an increased risk of solids wash out, which could lead to permit effluent limit violations for BOD and Total Suspended Solids (TSS). (p.29)	See Comment #25 Reference AECOM NDWWTP Capacity Report July 2013; "The rated capacity of the existing primary clarifiers was provided by VWG. According to record plans and documentation the clarifiers are 130 feet diameter with a minimum side water depth of 7 feet. The documentation provided indicates that the effective treatment capacity is based on the following criteria: • Surface overflow rate at average flow = 900 gal/day/ft2 or 11.9 mgd average flow capacity" The design of the plant is 12 MGD. 2011 Court Order limits the NDWWTP to 6 MGD however the CO allows GWA to petition USEPA to move to 9 MGD. Currently GWA is only using one clarifier but should the second clarifier be required GWA will put the other on-line. (all flow based upon monthly average) **COMPLETED**
Northern District STP	34	With only one of two clarifiers in operation at the time of the inspection, if the operating clarifier fails, there will be no alternative but to bypass partially treated sewage. David Fletcher indicated that the acquisition of parts for the plant takes months, suggesting that major component failures may take considerable time to correct. (p.29)	See comment #27 **COMPLETED** Only one clarifier is required with current plant flow loading.
Northern District STP	35	The plant is incapable of adequately treating waste septage. (p.30)	New septage receiving station was completed in June 2013 with satisfactory results. Required under CO 5(b) **COMPLETED**
Hagåtña STP	36	At the time of the inspection, one of the three clarifiers was out of service and being by-passed. The clarifier had been out of service for approximately two years at the time of the inspection. (p.31)	Renovation of clarifier #2 was **COMPLETED** December 2013
Hagåtña STP	37	The Hagåtña STP receives unstabilized solids from the Northern District STP and septage waste into its Gravity Thickener. These waste streams may contribute substantial concentrations of BOD, particularly soluble BOD, to the plant effluent. (p.32)	Hagåtña no longer receives solids from NDWWTP and the new Septage Receiving Station located at NDWWTP will be completed in June 2013 **COMPLETED**
Hagåtña STP	38	No effluent disinfection was being provided at the time of the inspection. (p.32)	Although disinfection is not a specific NPDES permit requirement, GWA does recognize the Bac-t limits in the NPDES Permit. Because of the most recent refurbishment of the WWTP, the optimum pathogen control method for the WWTP is not yet known. A project being planned to manage this issue. Discussions on this subject are in progress with EPA.
Hagåtña STP	39	Flow monitoring is not provided at the effluent discharge. (p.32)	Effluent flow monitoring is not a permit requirement and current layout does not allow for flow monitoring. Flow is reported on influent.
Hagåtña STP	40	Hagåtña STP has reported repeated violations of the BOD and TSS limits. This may be due to exceptionally high ratios of soluble BOD to Total BOD in the incoming wastewater and to poor settlability of the incoming solids. Also, the BOD contributed by septage waste and unstabilized solids being added to the gravity thickener as described above may contribute to the problem. (p.33)	**COURT ORDER ISSUE** **Operation under Completed Chemically Enhanced Primary Treatment upgrade construction project meets CO specifications.**
Agat-Santa Rita STP	41	The low influent BOD and TSS concentrations and peak influent flows reported at the Agat-Santa Rita STP (Agat) are indicative of high amounts of infiltration and inflow into the collection system. (p.34)	**COURT ORDER ISSUE** GWA has conducted I/I & SSES study for southern system. GWA will continue to upgrade the wastewater hydraulic model to further evaluate system capacity and with the I/I & SSES studies is evaluating possible mitigation projects.
Agat-Santa Rita STP	42	The wastewater influent line just upstream of the Agat headworks bar screen is hydraulically overloaded during high influent flow conditions such as those experienced during rain storms. To alleviate this overloading, GWA uses a trailer mounted pump to bypass influent wastewater around the bar screen and directly into the contact tank. Wastewater solids that would normally be removed by the bar screen can cause operational and maintenance problems in the STP. (pp. 34, 37)	**COURT ORDER ISSUE** GWA is currently conducting I&I/SSES study for southern system. GWA awaiting USEPA response to CO 9(c) to allow GWA to further develop an action plan.
Agat-Santa Rita STP	43	The Agat plant regularly operates in excess of its maximum hydraulic design capacity and far in excess of the clarifier design surface loading rate. This increased surface loading rate may result in washing out of the clarifier, leading to possible permit limit exceedances of both BOD and TSS. (pp. 36, 39)	**COURT ORDER ISSUE** GWA is currently conducting I&I/SSES study for southern system. GWA awaiting USEPA response to CO 9(c) to allow GWA to further develop an action plan.
Agat-Santa Rita STP	44	Peak wet weather flows at the Agat STP, including flow bypassed around the bar screen, cause hydraulic overloading in the biological treatment portion of the STP, resulting in under treatment of wastewater and solids washout to the plant discharge. GWA reported solids washout on at least 8 days during the period January 2011 through October 2011. (pp. 37, 38)	**COURT ORDER ISSUE** GWA is currently conducting I&I/SSES study for southern system. GWA awaiting USEPA response to CO 9(c) to allow GWA to further develop an action plan.
Agat-Santa Rita STP	45	The aeration system does not provide even mixing and aeration throughout the contact basin, stabilization basin or the digester sections of the Agat STP. Inadequate aeration and mixing impairs the biological treatment system resulting in incomplete treatment of pollutants including BOD and ammonia. (pp. 35, 39)	**COURT ORDER ISSUE** New aeration and fine bubble diffuser system purchased. GWA seeking EPA approval to bypass facility to allow installation of equipment. GWA awaiting USEPA response to CO 9(c) to allow GWA to further develop an action plan.
Agat-Santa Rita STP	46	The Agat STP was constructed as a single-train system. Failure of a major component in the STP would effectively shut down the plant and result in either overloading of the plant or failure to meet permit effluent limits. (p.38)	**COURT ORDER ISSUE** To be address through CO Paragraph 10 – Agat/Santa Rita Wastewater Systems Evaluation
Agat-Santa Rita STP	47	There is no disinfection system being operated at the plant, even though the permit specifies discharge limits for e. coli and fecal coliform. GWA has reported effluent limit violations for both e. coli and fecal coliform in the Agat discharge. (p.38)	**COURT ORDER ISSUE - COMPLETED** To be address through CO Paragraph 10 – Agat/Santa Rita Wastewater Systems Evaluation
Agat-Santa Rita STP	48	Agat STP flow is measured by a magmeter installed between the headworks building and the contact tanks. Flow monitored at this location is not representative of the effluent flow rate and does not conform with the permit requirement to measure effluent flow rate. (p.38)	**COURT ORDER ISSUE - COMPLETED** The current I&I study and collection system repairs should minimize the need to pump influent flow through temporary piping and trash pump location presently being utilized to prevent SSO and customer backups.
Baza Gardens STP	49	At the time of the inspection, the grit chamber aeration system was shut off because the diffusers were plugged. (p.40)	Diffuser now operational as of March, 2013 **COMPLETED**

2013 NEIC Findings for GWA Wastewater Collection and Treatment System, dated 08/01/2017

Facility/function	#	Findings	GWA Plan/Schedule to address findings
Baza Gardens STP	50	The configuration of the aeration system reduces the efficiency of the activated sludge process. Mixing and aeration are uneven throughout the basin, and solids tend to build up along the outside perimeter wall. (p.41)	**COURT ORDER ISSUE** New aeration/mixing system needed but would require bypass of facility as this is a single train system facility. This upgrade has been forbidden by Region 9 USEPA because of the bypass issue. See # 52 below.
Baza Gardens STP	51	In appearance, the mixed liquor appears thin, with insufficient solids concentration. According to D. Fletcher, the MLSS concentration tends to be 400–600 mg/L, well below the target range. (p.41)	**COURT ORDER ISSUE** See response to #50
Baza Gardens STP	52	Baza Gardens STP is not configured or equipped to meet the precision operational control conditions needed to provide effective removal for either nitrate or orthophosphate. (p.41)	**COURT ORDER ISSUE** To be address through CO Paragraph 13 – Baza Garden Wastewater System Evaluations
Baza Gardens STP	53	At the time of the inspection, the clarifier gear box emitted an unusual amount of noise, possibly indicating problems with the gears. The skimmer arm appeared to hang at certain points in its rotation. (p.41)	The gear box was rebuilt in August 2012 and is in operation. **COMPLETED**
Baza Gardens STP	54	The plant has no operational disinfection system. There is no system for disinfection of the effluent, although the permit specifies an e. coli and fecal coliform limit. (p.42)	**COURT ORDER ISSUE** To be address through CO Paragraph 13 – Baza Garden Wastewater System Evaluations
Baza Gardens STP	55	The permit requires flow rates to be reported at the effluent monitoring point. However, data for the plant was being reported from the temporary flow meter installation at the influent headworks. (p.42)	**COURT ORDER ISSUE** To be address through CO Paragraph 13 – Baza Garden Wastewater System Evaluations and Paragraph 14 Baza Gardens Wastewater System Upgrades.
Baza Gardens STP	56	The tank walls were corroded through in several locations and the concrete was spalling on exposed surfaces. (p.42)	Structural repairs completed April, 2013 **COMPLETED**
Baza Gardens STP	57	The age of the mechanical components elevates the risk of major failures and makes it more difficult to secure replacement parts as these are not readily in stock. (p.42)	**COURT ORDER ISSUE** To be address through CO Paragraph 13 – Baza Garden Wastewater System Evaluations
Baza Gardens STP	58	Baza Gardens STP was constructed as a single train system. Failure of a major component would effectively shut down the plant resulting in either overloading of the plant or failure to meet permit limits. (p.43)	**COURT ORDER ISSUE** To be address through CO Paragraph 13 – Baza Garden Wastewater System Evaluations
Baza Gardens STP	59	The May 2011 monthly operating report indicated a 3-inch hole in the wall between the digester and aerator. As of the inspection on April 2012, the hole had not been repaired. (p.43)	Structural repairs completed April, 2013 **COMPLETED**
Baza Gardens STP	60	The plant has reported permit effluent limit violations for percent removal of BOD, and violations of the effluent concentration limits for nitrogen, nitrate, phosphorus, and e. coli. (p.43)	**COURT ORDER ISSUE** To be address through CO Paragraph 13 – Baza Garden Wastewater System Evaluations – in progress
Umatac-Merizo STP	61	The ultrasonic probe associated with the influent flow measurement Parshall flume was not functional at the time of the inspection. GWA was using an ISCO 2150 as a temporary system to measure influent flow. (p.44)	**COURT ORDER ISSUE -- Umatac-Merizo WWTP is not a zero discharge plant, NPDES Permit No. GU0020273.** To be address through CO Paragraph 15 – Umatac-Merizo Wastewater System Evaluation **!SCO 2150 is calibrated and operational.**
Umatac-Merizo STP	62	GWA does not have a flow measurement device capable of measuring the effluent flow rate at the permitted Discharge Point 001 as required by the permit. (p.45)	**COURT ORDER ISSUE** To be address through CO Paragraph 15 – Umatac-Merizo Wastewater System Evaluation; See response #65
Umatac-Merizo STP	63	GWA reports frequent violations of effluent limits at discharge point 001 including fecal coliform, e. coli, ortho Phosphate and BOD and TSS percent removal. (p.46)	**COURT ORDER ISSUE** To be address through CO Paragraph 15 – Umatac-Merizo Wastewater System Evaluation; See response #65
Umatac-Merizo STP	64	The Umatac-Merizo STP was constructed as a single-train system. Failure of a major component, such as the internal pump stations, would result in an eventual bypass. (p.46)	**COURT ORDER ISSUE** To be address through CO Paragraph 15 – Umatac-Merizo Wastewater System Evaluation. Additionally the internal pump stations #13 & #19 are both dual pump stations. See also response #65
Umatac-Merizo STP	65	GWA bypassed the Wetland Treatment System (WTS) on at least 27 days between January 2011 and March 2012 and made unpermitted discharges of the disinfected partially treated bypassed wastewater from the facultative pond overflow basin to the Toguan River. The bypasses are caused by insufficient pumping capacity at peak wet weather flows or due to pump failures. (p.47)	Design-build project for the upgrade of this facility to meet **NPDES Permit No. GU0020273** requirements was issue on June 30, 2017. Upgrade will be completed by 12/31/2018.
Umatac-Merizo STP	66	Although the plant is intended to be a no-discharge facility, during the inspection of the facility, the WTS was unable to absorb enough water to avoid discharging through Discharge Point 001. (p.48)	**Umatac-Merizo WWTP is not a zero discharge plant, NPDES Permit No. GU0020273.** See response #65
Umatac-Merizo STP	67	There is no system for disinfection of the effluent, although the permit specifies an e. coli and fecal coliform limit. The plant has reported failing effluent limits for both e. coli and fecal coliform. (p.48)	**COURT ORDER ISSUE** To be address through CO Paragraph 15 – Umatac-Merizo Wastewater System Evaluation; See response #65
Inarajan STP	68	Of the four cells in the treatment system, only one had a functioning aerator. (p.49)	Two cells are now aerated and cell # 3 is being utilized as a settling basin for clarification as of May 2013. **COMPLETED**
Pago-Socio STP	69	The plant did not appear to be receiving regular maintenance. (p.49)	GWA conducts regular maintenance and monitors the facility. GWA is developing plans to convert the facility to send the wastewater to Hagåtña WWTP..
Pago-Socio STP	70	The aeration system was not operating. (p.49)	See response #69
Pago-Socio STP	71	The only access to the plant had been blocked by a retaining wall constructed across the gate. (p.49)	See response #69
Pago-Socio STP	72	The discharge percolation area had been taken over as a planting area by a local gardener. (p.49)	See response #69

LEGEND

Section Heading (not an item entry)
Completed
Court Order Completed
Court Order Ongoing
In Progress or Reoccurring

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Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and Bill Chang **Update**: July 30, 2017

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

Preface to the Corrective Action Plan

Reporting

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

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

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

For Court Order updates/reporting, see the Court Order Submittals.

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

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

Recommendation:

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

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

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

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

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2.

Sources—No Wellhead Protection Plan

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

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

Recommendation:

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

Action Plan:

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

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

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

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

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

Comment: This item was incorrectly evaluated.

Tank is dual walled construction. Containment is adequate.

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

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

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

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

Action Plan:

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

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

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

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

Potential contamination of source.

- Missing screens on well casing vents

Action Plan:

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

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

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

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

Action Plan:

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

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

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

Difficulty in ensuring adequate chlorination/disinfection

Recommendation:

Remove heavy vegetative growth around the clear well structure.

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

Action Plan:

Initiate repair. Document completion of repair.

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

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

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

Action Plan:

Initiate repair. Document completion of repair.

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

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

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

Recommendation:

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

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

Action Plan:

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

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

Action Plan:
Initiate repair. Document completion of repair.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

23. Distribution System-- Inadequate cross connection control program exists within GWA. Potential for backflow/backpressure and contamination.	
Action Plan: Engage consultant to develop how GWA can plan for backflow prevention program. Create report documenting procedures for implementing a program.	
Proposed Action Item Schedule	**Task Description**
02/01/2013	Engage consultant Brown and Caldwell
05/05/2013	Submit draft plan for GWA review
06/05/2013	Submitted draft plan to USEPA
NTP Pending	Draft Detailed Cross-Connection Control Plan by PMO Work Order.
Pending CCU approval	GWA processing positions to man and execute this project..
Included in Plan	Detailed Cross-Connection Control Plan Approved by GWA management
Updates (Reporting per Preface)	**Final plan implementation on approval.**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and Bill Chang **Update**: July 30, 2017

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

29. Water Quality-- Inadequate monitoring and reporting – Ugum WTP and Santa Rita Spring (turbidity and chlorine residual) exceedances (violations) may be going undetected and unreported.
Recommendation:
Continue to improve utility-wide communications to address previous lack of complete communication between departments.

Action Plan:
GWA has made this KPI and it is managed via weekly reports

Proposed Action Item Schedule	Task Description
06/06/2013	GWA to submit weekly report documentation to USEPA.
05/30/2013	GWA submitted documentation to USEPA. Complete

30. SDWA Compliance-- Lead and Copper Rule monitoring overdue.

Action Plan:
GWA has implemented the required LCR monitoring and will proceed to complete and continue as required by the rule without waiting for GEPA to approve the schedule and process. If GEPA ever decides to participate, GWA will make additions that are requested.

Proposed Action Item Schedule	Task Description
12/04/2012	Routine Procedure started.
06/14/2013	Round 1 completed with all sample results below both Pb and Cu action levels.
12/31/2013	Completed second Round of Monitoring
01/31/2014.	Lab results verify GWA is in compliance. - Complete

31. SDWA Compliance-- Unaddressed Stage 2 Disinfection/Disinfectant Byproducts rule (DBP) Rule MCL Violations, required public notification.

Action Plan:
Continue to report in CCR and add quarterly mailings to Central (GU0000003) and or Southern (GU0000001) System customers. GWA to await schedule for Navy water compliance schedule from Fena Reservoir for Central (GU0000003).

Proposed Action Item Schedule	Task Description
05/20/2013	Southern (GU0000001) System is now compliant with Stage 2 DBP Rule
05/20/2013	Central (GU0000003) System is compliant with Stage 2 DBP Rule in all areas except one small part of Agat. Mailings to all Central Customers will continue until clear.
06/06/2013	Initiated quarterly mailings to affected customers. [Central (GU0000003)]
Consecutive System Management	GWA continues to reduce purchases of water from the Fena SWTP which has made the difference in the Central (GU0000003) System.
Navy Water is now in compliance	DBP exceedance Central (GU0000003) System has ended with changes in the Navy Fena Surface Water Treatment Plant's operations, achieving compliance with the Stage 2 DBP Rule.
Quarterly mailings are discontinued.	Complete

32. Administration-- No formal, comprehensive training program for operators and other personnel.
Can result in inappropriate or inadequate operation and negative impacts on water quality.

Action Plan:
GWA to complete an annual Workforce Development Report

Proposed Action Item Schedule	Task Description
01/16/2014	First Annual Workforce Development (Training) Report.
Regular Training Scheduled	**Adapted dependent on subject matter. Assisted by PMO.**
Updates (Reporting per Preface)	**See Comprehensive management Plan 08/27/2013**

GUAM WATERWORKS AUTHORITY

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

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

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and Bill Chang **Update**: July 30, 2017

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

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

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

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

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

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

GUAM WATERWORKS AUTHORITY

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

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

Prepared By: Paul Kemp, Vangie Lujan and Bill Chang **Update**: July 30, 2017

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

38. Operator Compliance-- Plant operators do not regularly conduct jar tests. Inadequately trained operators do not perform process control adequately, which impacts finished water quality.	
Proposed Action Item Schedule	**Task Description**
5/15/2013	Prepare change order for installation of TOC and appurtenances. Smithbridge
08/12/2013	Completed installation of on site TOC analyzer.
08/15/2013	Completed training of operators on site TOC analyzer.
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA - Complete

39. Operator Compliance-- Plant operators and engineering staff did not understand the correlation between ineffective coagulant dosing. Inadequately trained operators do not perform process control adequately, which impacts finished water quality.	
Proposed Action Item Schedule	**Task Description**
5/15/2013	Prepare change order for installation of TOC and appurtenances. Smithbridge
08/12/2013	Completed installation of on site TOC analyzer.
08/15/2013	Completed training of operators on site TOC analyzer.
07/23/2013	Additional Specialized training on coagulation optimization for membranes
08/01/2013	Training certification sent to USEPA - Complete

40. Operator Compliance-- No level 4 Operator is actually located on site at the Ugum WTP, as required. Violation of Guam Operator Certification requirement.	
Action Plan: Level 4 operators are not required at Ugum, Current status requires only Level 3 operators. **GWA has always been in compliance.**	
Proposed Action Item Schedule	**Task Description**
06/06/2013	Submit Certification information USEPA.
05/24/2013	Certification information sent to USEPA - Complete

Status Summary: as of January 30, 2017

Corrective Action Plan Legend	Fill Color	No. of Items
Information and/or future steps	**No Fill**	
Completed – no further action-or pending EPA approval	Green	**25**
Court Order Managed items (some are completed- the others are on schedule)	Blue	**10**
On Schedule or Continuous (Long Term Commitment/Reporting)	Orange	**11**

GWA Progress Significant Finding Water: Dashboard, 07/30/2017

#	Function	Significant Deficiencies	Internal Milestone	GWA Schedule	Due Date	Notes
1	**Sources**	Lack of routine maintenance (both corrective and preventative of sources).	Ongoing	GWA has implemented new O&M SOPs, programs, and systems and it will remain an on-going process.	Ongoing	Established. Updates as Asset Management Program proceeds.
2	**Sources**	no wellhead protection plan	**Done**	GWA will build from the existing 1992 Guam Law, Ch. 7 section 7130 of the Water Resource Development and Operating Regulations (GEPA) entitled "Well Head Protection for Public Water Supply Well". EA Assessment and Plan completed and sent to EPA.	06/06/13 06/29/2015	100% Complete
3	**Sources Ugum**	Diesel fuel storage tank containment located near intake for Ugum Water Treatment Plant (WTP) is undersized;	**Done**	Completed.	N/A	100% Complete
4	**Sources Well**	Some wells have cracks and other openings in the well pads, well casings and improperly sealed sanitary seals.	**Done**	GWA corrected within a 180 day time frame.	06/6/2013	100% complete
5	**Sources Well**	Missing screens on well casing vents.	**Done**	GWA corrected within a 90 day time frame.	03/7/2013	100% complete.
6	**Sources Well**	Wells have bypass lines that were routed into the ground and off-site without an air gap.	**Done**	GWA corrected within a 90 day time frame.	3/7/2013	100% Complete
7	**Sources Spring**	Lack of operating flow-meter at spring source makes operation (including chlorine dosing) problematic.	**Done**	Completed.	N/A	100% Complete
8	**Sources Spring**	Santa Rita Spring Box (Clear Well) –	**Done**	Completed.	N/A	100% Complete
9	**Treatment**	Lack of operations and maintenance (Ugum, Santa Rita Spring)	2011 CO	GWA is implementing new O&M SOPs, programs, and systems and it will be an on-going process.	Ongoing	2011 CO ¶ 26. Documentation of SR Springs SOP training completed
10	**Treatment**	Lack of operating turbidimeter at Santa Rita Spring source	**Done**	Completed.	N/A	Complete
11	**Treatment**	Plant operators do not regularly conduct jar tests and do not optimize precursor removal at Ugum WTP	**Done**	GWA can correct within a 180 day time frame.	6/6/2013	Change Order for TOC Meeting. Documentation training required
12	**Treatment**	Inadequate turbidity monitoring and reporting at Ugum	**Done**	GWA can correct within a 180 day time frame.	6/6/2013	Programming SCADA
13	**Treatment**	At least one well (D-5) did not have a chlorination system in place.	**Done**	Completed.	N/A	Complete
14	**Treatment Well**	At least one well, the well log indicated chlorine gas had run out in the past	**Done**	Completed.	N/A	Complete
15	**Water Storage**	Severe internal/external rust and corrosion including roofs, roof vents, walls, base and other welds,	2011 CO	The schedule was established per the 2011 Court Order	N/A	See Quarterly report for 2011 Court Order
16	**Water Storage**	Bolts, many completely rusted through, compromise structural stability of tanks.	2011 CO	See response to #15.	N/A	See Quarterly report for 2011 Court Order
17	**Water Storage**	Inadequate Site Security (holes in fences, missing gates) and unlocked hatches allow easy access to	2011 CO	GWA can correct within a 270 day time frame.	N/A	Change Order executed on 02/01/2013
18	**Water Storage**	Leaking tanks.	2011 CO	See response to #15.	N/A	See Quarterly report for 2011 Court Order
19	**Water Storage**	Flooded, uncovered and unsecured valve vaults.	2011 CO	GWA can correct within a 1 year time frame.	N/A	Change Order executed on 02/01/2013
20	**Water Storage**	No screen or flapper on the storage tanks' overflows.	2011 CO	GWA can correct within a 270 day time frame.	N/A	Change Order executed on 02/01/2013

GWA Progress Significant Finding Water: Dashboard, 07/30/2017

#	Function	Significant Deficiencies	Internal Milestone	GWA Schedule	Due Date	Notes
21	**Water Storage**	Ladders not locked, allow easy potential access by vandal.	2011 CO	GWA can correct within a 270 day time frame.	N/A	Change Order executed on 02/01/2013
22	**Water Storage**	Ladders severely corroded or no cage will prevent adequate maintenance	2011 CO	See response to #15.	N/A	See Quarterly report for 2011 Court Order
23	**Distribution System**	Inadequate cross connection control program exists within GWA	**Preliminary Done**	A preliminary plan within a 180 day, full-scale program over the next year.	12/31/2017	Final Plan pending approval of draft.
24	**Distribution System**	Undersized water lines impact water pressure and water quality and contribute to potential cross-connections.	**Plan Done**	An initial plan and schedule for replacement will be developed within a 180 day time frame.	Ongoing	GEPA provide no adequate records of pressure problems
25	**Pumps**	No pump controls at many of the booster pump stations; lack of maintenance Leaking seals in pumps and valves	**Plan Done**	Plan submitted to EPA for approval. Line Item in CIP.	Ongoing	CIP update approved by CCU on 02/26/2013, Inspection Report on schedule.
26	**Pumps**	Lack of adequate backup pumps. Flooding of booster pump stations.	**Plan Done**	Plan submitted to EPA for approval. Line Item in CIP.	Ongoing	NTP issued for construction to raise FFE.
27	**Pumps**	No controls on well pumps or booster pumps.	**Plan Done**	Plan submitted to EPA for approval. Line Item in CIP.	Ongoing	CIP update approved by CCU on 02/26/2013, Inspection Report on schedule.
28	**Pumps**	Leaking pump seals, valves, lines, and highly rusted piping.	**Plan Done**	Plan submitted to EPA for approval. Line Item in CIP.	Ongoing	CIP update approved by CCU on 02/26/2013, Inspection Report on schedule.
29	**Water Quality**	Inadequate monitoring and reporting – Ugum WTP and Santa Rita Spring (turbidity and chlorine residual)	**Done**	GWA will perform within a 120 day time frame.	04/09/2013	GWA has made this KPI and it is managed via weekly reports
30	**SDWA Compliance**	Lead and Copper monitoring overdue.	**Done**	GWA will complete the two 2013 rounds of sampling,	12/31/2013	Sampling completed, GWA water system is in LCR compliance.
31	**SDWA Compliance**	Unaddressed Stage 2 Disinfection/Disinfectant Byproducts rule (DBP) Rule MCL Violations, required public notification?	**Done**	Tier 2 report, Quarterly.	12/31/2013	New SOP established for southern and Fena SWTP Operations Mod.
32	**Administration**	No formal, comprehensive training program for operators and other personnel	**Plan Done**	GWA will continue to certify funds for training in 2014.	Ongoing	GWA has an annual Workforce Development Report
33	**Administration**	Hydraulic model is neither complete nor accurate enough to make operational or design decisions.	2011 CO	To be updated as needed.	Ongoing	On schedule
34	**Administration**	No preventative maintenance programs for most operational areas.	Ongoing	Preventative maintenance program currently in development and in implementation.	Ongoing	GWA is working with EPA & CDM to improve assets management
35	**Administration**	Data are collected, but do not have the capacity to analyze the information to assist with operational decisions.	Done	GWA is currently in the process of improving data collection. This is on-going.	**Done**	GWA will improve data collection and assessment function.
36	**Administration**	Lack of Standard Operating Procedures ("SOPs").	**Done**	GWA has correct.	09/06/13	Update sent to EPA. SOP training required on routine basis.
37	**Operator Compliance**	No proper operator certification for system type.	**Done**	Lead operator is level IV Certified.	**09/06/13**	GWA has always been in compliance See 08/08/2005 GEPA memo
38	**Operator Compliance**	Plant operators do not regularly conduct jar tests.	**Done**	GWA can correct within a 180 day time frame.	6/6/2013	GWA has made this KPI and will manages with weekly reports
39	**Operator Compliance**	Plant operators and engineering staff did not understand the correlation between ineffective coagulant dosing	**Done**	GWA can correct within a 180 day time frame.	6/6/2013	GWA specific training planned, Training will be documented.
40	**Operator Compliance**	No level 4 operator is actually located on site at the Ugum WTP, as required.	**Done**	GWA can correct within a 180 day time frame with proper clarification from GEPA	6/6/2013	Level 4 Operator by 02/06/2013 GWA has always been in compliance

09/06/2013 Summary: **Completed = 27**, **Longer term 4**, **Court Order 09**

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

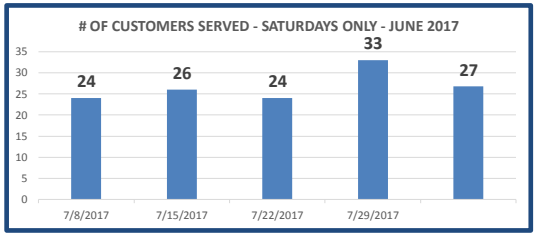
UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JUNE 2017	JUNE 2017 MONTHLY TOTAL	WEEK ENDING: 7/8/2017	WEEK ENDING: 7/15/2017	WEEK ENDING: 7/22/2017	WEEK ENDING: 7/29/2017	WEEKLY AVERAGE JULY 2017	JULY 2017 MONTHLY TOTAL
Collections Unit								
I. Number of accounts cut for nonpayment:	73	364	49	96	50	69	66	264
II. Number of accounts restored for nonpayment:	58	290	40	71	51	47	52	209
III. Number of No water reports responded to:	1	7	2	2	6	1	3	11
IV. Number of Secure/Unsecure valve reports responded to:	1	3	2	2	0	2	2	6
V. Number of Verify reads responded to:	2	8	1	0	2	3	2	6
VI. Number of new pay plans negotiated for **active** accounts :	29	146	75	81	89	79	81	324
VII. Number of active pay plans negotiated and ongoing :	380						#DIV/0!	
VIII. Number of **inactive** accounts with a payment arrangement:	6		0	0	0	0	0	
IX. Number of broken payment plans:	48	242	59	30	60	30	45	179
Customer Service Unit								
I. Service Delivery Points:								
a. GBN Public Service Building – Fadian								
i. Total Customers Assisted :	255	1277	255	266	257	222	250	1000
ii. Total Abandoned Requests :	26	130	20	22	26	19	22	87
ii. Average Wait Time:	11 minutes		12 minutes	13 minutes	14 minutes	13 minutes	11 minutes	
iii. Average Service Time:	13 minutes		11 minutes	12 minutes	12 minutes	13 minutes	13 minutes	
iv. Breakdown by request type:								
1. Apply for wa	67	336	50	60	63	51	56	224
2. Restore wate	10	52	9	16	8	10	11	43
3. Terminate W	26	131	26	16	23	20	21	85
4. Copy of Bill	33	166	28	39	38	36	35	141
5. Billing Dispu	50	248	63	77	57	61	65	258
6. Billing Dispu	3	14	2	2	6	2	3	12
7. General Que	32	159	32	36	34	25	32	127
8. Report a wa	2	11	5	2	0	3	3	10
9. Report wate	0	1	0	0	1	0	0	1
10. Payment Ar	27	135	41	18	27	14	25	100
b. Julale Satellite Office – Hagatna								
i. Total Customers Assisted :	248	1242	251	235	259	191	234	936
ii. Total Abandoned Requests :	13	66	11	15	18	6	13	50
ii. Average Wait Time:	7 minutes		11 minutes	10 minutes	9 minutes	8 minutes	7 minutes	
iii. Average Service Time:	12 minutes		11 minutes	12 minutes	10 minutes	12 minutes	12 minutes	
iv. Breakdown by request type:								
1. Apply for wa	55	275	56	61	54	52	56	223
2. Restore wate	12	62	5	17	9	7	10	38
3. Terminate W	27	136	31	12	19	15	19	77
4. Copy of Bill	53	266	37	37	64	30	42	168
5. Billing Dispu	48	238	52	51	63	43	52	209
6. Billing Dispu	1	4	3	2	3	1	2	9
7. General Que	26	132	32	24	22	18	24	96
8. Report a wa	0	0	0	1	0	0	0	1
9. Report wate	0	0	1	0	0	0	0	1
10. Payment Ar	25	125	36	30	25	25	29	116

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

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JUNE 2017	JUNE 2017 MONTHLY TOTAL	WEEK ENDING: 7/8/2017	WEEK ENDING: 7/15/2017	WEEK ENDING: 7/22/2017	WEEK ENDING: 7/29/2017	WEEKLY AVERAGE JULY 2017	JULY 2017 MONTHLY TOTAL
c. Upper Tumon Satellite Office – Upper Tumon								
i. Total Customers Assisted :	300	1499	290	327	294	273	296	1184
ii. Total Abandoned Requests :	15	77	36	38	29	26	32	129
ii. Average Wait Time:	12 minutes		15 minutes	12 minutes	12 minutes	11 minutes	12 minutes	
iii. Average Service Time:	11 minutes		10 minutes	10 minutes	9 minutes	10 minutes	11 minutes	
iv. Breakdown by request type:								
1. Apply for wa	72	362	55	76	66	53	63	250
2. Restore wate	9	43	19	11	10	14	14	54
3. Terminate W	26	132	26	36	27	28	29	117
4. Copy of Bill	58	290	64	60	68	55	62	247
5. Billing Dispu	72	359	55	77	56	58	62	246
6. Billing Dispu	2	10	7	2	2	5	4	16
7. General Que	28	142	26	35	29	27	29	117
8. Report a wa	2	10	2	2	2	3	2	9
9. Report wate	1	5	0	0	0	0	0	0
10. Payment Ar	29	147	36	29	34	30	32	129
II. Customer Call Center								
a. Calls Recieved :	644	3220	369	262	222	182	259	1035
b. Calls Immediately Answered :	73	363	294	217	182	162	214	855
c. Calls Abandoned	119	593	75	45	40	20	45	180
d. Calls Handled by Voice mail:	453	2264	201	136	99	89	131	525
e. Ratepayers called back after voice mail message placed:								
f. Average duration of calls answered:	16 minutes		12 minutes	6 minutes	13 minutes	3 minutes	9 minutes	
III. Customer Emails:								
a. Emails Recieved :								
i. customers@guamwaterworks.org	46	229	48	41	51	31	43	171
Breakdown by request type (email):								
1. Apply for water	4	22	3	3	1	0	2	7
2. Terminate Water	3	13	5	2	2	1	3	10
3. Copy of Bill	2	8	2	2	3	0	2	7
4. Billing Dispute & follow up	6	32	2	12	6	16	9	36
5. General Questions & Othe	20	100	29	11	23	5	17	68
6. Report a water leak	4	20	2	4	7	2	4	15
7. Report water theft	0	0	0	0	0	0	0	0
8. Online services inquiry	7	34	5	7	9	7	7	28
ii. realtors@guamwaterworks.org	3	17	2	4	1	0	2	7
b. Emails Replied (both):	35	173	32	43	38	17	33	130

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

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JUNE 2017	JUNE 2017 MONTHLY TOTAL	WEEK ENDING: 7/8/2017	WEEK ENDING: 7/15/2017	WEEK ENDING: 7/22/2017	WEEK ENDING: 7/29/2017	WEEKLY AVERAGE JULY 2017	JULY 2017 MONTHLY TOTAL
			7/8/2017	7/15/2017	7/22/2017	7/29/2017		
IV. Saturday Services: 9AM TO 1PM ONLY	21		24	26	24	33	27	
a. VISITS: Breakdown by request type:								
1. Apply for water	4		5	6	7	5	6	
2. Restore water cut for non p	0		1	0	2	1	1	
3. Terminate Water	0		4	1	0	1	2	
4. Copy of Bill	7		6	14	6	7	8	
5. Billing Dispute	6		6	4	4	12	7	
6. Billing Dispute follow up	0		0	0	0	1	0	
7. General Questions & Other	1		1	0	0	3	1	
8. Report a water leak	0		0	0	0	0	0	
9. Report water theft	0		0	0	0	0	0	
10. Payment Arrangement	2		1	1	5	3	3	



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

7/8/2017	7/15/2017	7/22/2017	7/29/2017



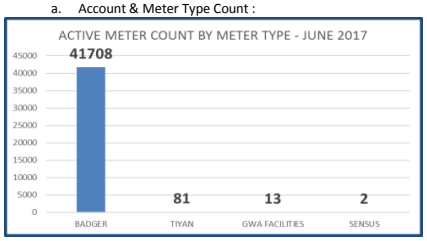
GWA Utility Services Division
Monthly Status Report
Month ending July 31, 2017

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE JUNE 2017	JUNE 2017 MONTHLY TOTAL	WEEK ENDING: 7/8/2017	WEEK ENDING: 7/15/2017	WEEK ENDING: 7/22/2017	WEEK ENDING: 7/29/2017	WEEKLY AVERAGE JULY 2017	JULY 2017 MONTHLY TOTAL
Dispute Resolution & Document Control								
I. Dispute Resolution:								
a. Number of disputed accounts resolved:	9	44	12	9	11	12	11	44
b. Number of disputed accounts under review:	179	895	179	179	179	179	179	716
II. Document Control:								
a. Number of field activities posted :	381	1905	236	396	618	799	512	2049
b. Number of field activities pending:	151	753	336	506	480	205	382	1527
Disconnect/Reconnect Unit								
I. Number of field activities received:	314	1569	310	328	227	264	282	1129
II. Number of field activities completed:	312	1562	308	328	227	264	282	1127
III.Number of field activities pending field action:	2	8	2	4	0	0	2	6
Meter Reading Unit								
I. Number of meters read:								
a. Electronically Read Meters:	8409	42043	7765	10577	7356	11439	9284	37137
b. Manually Read Meters:	27	136	24	32	10	43	27	109
II. Unread meters (Meters scheduled to be read but not read):	89	443	214	71	34	82	100	401
III. Number of data logs received:	28	139	20	89	32	34	44	175
IV. Number of data logs retrieved:	26	129	25	31	33	22	28	111
V. Number of data logs pending field action:	8	38	0	8	4	27	10	39
VI. Number of estimated readings (for the week):	22	108	83	60	3	15	40	161
a. Reasons for Estimations:								
i. Cant locate meter:	1	6	6	5	1	3	4	15
ii. Temporary Obstruction	0	0	1	0	0	0	0	1
iii. Vicious Dog	0	0	2	1	1	0	1	4
iv. Flooded meter	2	10	2	1	1	1	1	5
iiv. Corrective action requested (database corrections n	12	59	76	55	0	3	34	134
iiiv. Possible changed out meter:	3	15	76	55	0	3	34	134
ix. Other:	11	56	38	56	17	4	29	115
VII. Electronic Read Percentage: (for the week):	99%	99%	96%	99%	99%	99%	99%	99%
Revenue Protection Unit								
I. Number of Inactive Still Consuming Reports rec'd & investigated	1	5	0	0	0	1	0	1
II.Number of Illegal Connection reports rec'd & investigated:	1	4	1	0	0	2	1	3

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

METER TYPE	COUNT
SENSUS	2
METRON FARNIER	0
	2

a. Account & Meter Type Count :



GUAM WATERWORKS AUTHORITY

Engineering Monthly Report
August 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 Malojloj Elevated & Yigo Elevated	$ 200,000.00	100.00%	0.00%	$ 485,117.00	100.00%	0.00%	$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	$ 100,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	$ 50,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	$ -	N/A	N/A	$ -	N/A	N/A	$ 2,000,000.00	0.00%	100.00%
		$ 41,903,304.66			$ 58,317,117.00			$ 64,647,830.00		

Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastew ater System Planning	$ 1,500,000.00	100.00%	0.00%	$ 651,000.00	100.00%	0.00%	$ 349,000.00	89.68%	10.32%
WW 05-05	Wastew ater Vehicles	$ 235,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	$ 250,000.00	100.00%	0.00%	$ -	N/A	N/A	$ -	N/A	N/A
WW 09-01	Lift station upgrades	$ -	N/A	N/A	$ 946,000.00	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	100.00%	0.00%
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	0.00%	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	5.36%	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	79	**	$83.153	95.14%	12.63
2013	$139.325	42	**	$129.294	92.80%	36.94
2015	$140.019	12		$60.030	42.87%	60.03
	* - End date November 2013 via CCU Resolution 06-FY2014					
	** - Includes month of July 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**	
99% Complete	**Activities/Notes:** Resolution approved in July CCU meetings. Contract submitted for fund certification to finance.	
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**	
50% Complete	**Activities/Notes:** Final designs complete. GWA preparing Bid package. New anticipated advertisement date by end of August.	
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**	
99% Complete	**Activities/Notes:** Petition approved by PUC. Contract awaiting fund certification then will be sent to GM for final execution.	
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.	

RFP OEA GRANT	**Design Services for the Upgrade of the Northern District WWTP**	
100% Complete	**Activities/Notes:** CCU approved resolution for project and design firm fee met budget. Contract fully executed August 4th and NTP issued August 8th.	
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.	

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 on-going. Agat/Umatac tank by-pass requires contractor to trouble shoot control. Testing occurred for Malojloj tank take down, requires Ops to shut valve. 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
99% 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 – 100% design in hand. Tumon #2 – 100% design in hand. Hyundai - 100% design in hand. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon – Permit received, Geotech to start week of 8/21/17. 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:**	**Completion Date:**

	GWA receive approval from Parks Service start design field investigation work.	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 foundation poured and core wall #1 on-going. Yigo #2 under tank pipe vaults, and yard work on-going. Austombo #1 under tank pipe and vaults 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) 40% Complete (PH 2, Part 2)	**Activities/Notes:** CCU approved resolution for CM services to December 2017 with contingency to go to March 2018. Change Order with Finance. Typical CM inspections on-going.	**Completion Date:** Anticipate December 2017 due to contractor extensions.
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
99% Complete	**Activities/Notes:** UOG to publish report. GWA awaiting final billing.	**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-40% 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:** Sample collection work completed. Finalizing the mixing zone study.	**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
99% Complete	**Activities/Notes:** Laboratory Analysis work competed, GWA awaiting final billing.	**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 anticipate to bid design in October 2017.	**Completion Date:** Due to issue with ACOE anticipate August 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
15% Complete	**Activities/Notes:** SPS site grading and force main installation along Route 17 (near river) on-going.	**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
15% (PH 1) 15% (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
15% Complete	**Activities/Notes:** SPS site grading and force main installation along Route 17 on-going.	**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:** Mobilized field office and conducting field survey.	**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.	

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
78% Complete	**Activities/Notes:** Contractor working on tiling, wiring, sidewalks, built in furniture, French drain.	**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.

G. Permits Section

PERMITS
MONTHLY REPORT 2017

	2016	2017						
Description	Jan	Jan	Feb	Mar	Apr	May	June/July	Aug
Building Permit		27	11	13	17	23	27	27
Occupancy Permit		64	10	17	5	25	28	28
New Installation		11	5	10	15	15	33	33
Sewer Application		10	5	4	3	4	3	3
Sewer Inspection		6	0	1	0	1	0	0
Private Utility Acceptance		0	0	0	0	0	0	0
Relocation of Water Meter		1	0	1	0	0	0	0
Tapping-Water		4	2	2	0	3	8	8
Tapping-Sewer		3	2	2	1	3	5	5
Clearance-Water		15	13	15	2	20	26	26
Clearance-Sewer		15	13	15	2	20	26	26
Highway Encroachment		59	3	27	6	20	12	12
Verification of Utilities		12	15	2	5	1	8	8
Fire Flow Test		1	0	0	0	0	3	3
Schedule Water Outage		1	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 8/18/17
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	· CO #8 (Balancing Change Order): Submitted to GWA Finance. · Received final contractor invoice and release of claims. · CIPP quality issues found during April 2017 GWA warranty period CCTV inspection. CM submitted videos to contractor, still awaiting contractor official response. On 8/10, notified contractor that continued lack of response/action is unacceptable.
					Const. Mgmt	1	11/10/2015	3/30/2017	$ 211,722	TG Engineers	CM continue to work on CIPP quality issue for GWA
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 working on revised bid schedule for rebid; expected by week of 8/18.
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	3/6/2017	$ 2,623,300	B&C	· Volume 2 Final Draft submittal on June 27. · Volume 3 Final Draft submittal on July 24. · Developing Cost projections for financial planning. · Financial Planning Workshop has been delayed. New date to be determined.
					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	· 30% Design received on 8/1. 30% design review meeting with GWA/BC was held on 8/11. · Change Order No. 3: Submitted to GWA Finance. · A-2: APDI drilled second borehole. Design rate of 250 gpm (34.6 ft drawdown). Proceeding with 90% design. · A-12: APDI redrilled borehole. Design rate of 200 gpm (45.5 ft drawdown). Proceeding with 90% design. · A-7: APDI drilling deeper. Continued issues with parts of borehole filling in. · D-5: APDI redrilled borehole. Design rate of 125 gpm (39 feet drawdown). Proceeding with 90% design. · F-3: APDI to abandon first borehole and drill a second one. F-3 design work removed from scope.
8A	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where	Brown & Caldwell	9/30/2017	Design	7	6/24/2016	6/30/2017	$ 572,089	TG Engineers	· GWA received 90% design which is under review.
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	7/8/2017	$ 1,505,760	ProPacific	Installation at all sewer pumps station, plug valves, painting, hoist support system, repair leaks in wet wells and sluce gates.
					Const. Mgmt	2	9/9/2016	7/8/2017	$ 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	8/2/2017	$ 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	7/30/2017	$ 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 stamping and routing final plans and specs; Gloria is ready for bidding. · Meeting with EMPSCO for scoping meeting on 8/18.

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	6/22/2017	$ 6,149,647	Pacific Rim	· D-03: Continuing site work; will be dry tapping. PRC to submitted paperwork to GWA Permitting. · D-17: Tapped new line and capped existing line. · D-18: Tapped new line and capped existing line. Developing wellhead. · D-22: Working on above ground pipe. · M-09: Waiting on CO#7. · Electrical work, PRC coordinating with GPA.
					Const. Mgmt	4	3/22/2016	5/22/2017	$ 798,503	EA	· CO#6 (PRC), Well Rig CO, PRC working on ordering rig and equipment. · CO#7 (PRC) to include additional gravel used (D-22), and isolation valves at D-17/18, M-09 work, additional time/scope for PRC, additional electrical work needed. · Working with EA on Contractor invoices; Contractor invoice #11 submitted to finance 8/1; starting review on invoice #12.
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. · Perma-Liner currently on Guam. · CO #2 (Removal of Obstructions): CM issued recommendation letter on 7/10. Awaiting revised cost proposal. · Santa Rita Wetland area (drawing AG-101): · Perma-Liner / PPBC completed two CIPP lines under wetland, which have quality issues. · PPBC continually bypass pumping through the wetland area, due to collapse of CIPP liner. · Baza Gardens area: First CIPP line installed on 6/7 (MH 4136 -- MH 3418), poor lab test results. Second line installed on 8/16 (MH 4161 -- MH 4162), awaiting lab results.
					Const. Mgmt	5	7/29/2016	5/28/2017	$ 289,096	EMPSCO	CM on hold with field work until issue with Propacific addressed. Potential need for contact extension due to Propacific issues.
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 finishing up survey work; working on letter and following up on land issues for New Plaza Market. · GWA received 90% design whichis under review.
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	6/28/2017	$ 478,000	EMPSCO	60% design submitted for Talafofo SPS's and Chalan Pago 30% 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	6/28/2017	*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 submittal expected to be received by last week of August.

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.	Construction work for force main segment complete. Excavation for four manholes on-going. Change Order #1 for $540K with Finanace for approval.
					Const. Mgmt	6	9/16/2016	8/29/2017	$ 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		· Asan Sewer Break Repair (CM - HDR / Contractor - PRC) · PRC and HDR working on finalizing CO#2, to include additional work at phase I and phase II. · Work on 222' section on going; ~60' trench open. Additional pipe to arrive on island 8/29. · Working on bedding for 149' section; starting on downstream section and will be placing new MH in the next week or two. · PRC Invoice #3 with Finance.
					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 August.
					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		11/16/2016	11/30/2017	$ 4,392,765		Procurement 98%, CCU passed resolution. Contract being process for fund certification and execution.
					Const. Mgmt		6/30/2017	6/30/2018	$ 584,725		Procurement 98%, PMO recommneded approval of final fee proposal from TGE. Fee proposal within GW authority. 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			
					Const. Mgmt		4/23/2017	10/31/2018			
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

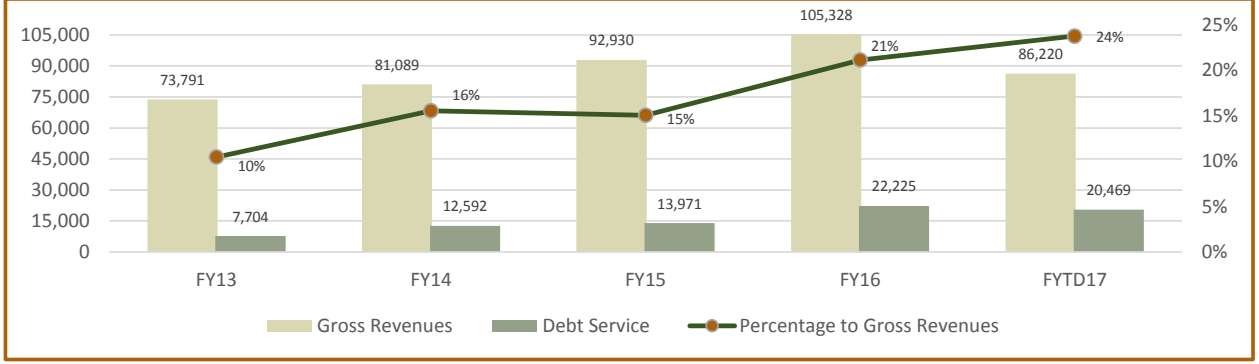
July 2017 YTD Budget vs Actual ($000)

Category	Description	Budget FY17	Actual FY17	Variance
Rate Based Revenues	Water	$58,723	$54,310	($4,413)
	Wastewater	33,791	31,441	(2,350)
	Total	92,514	85,752	(6,762)
Operations & Maintenance	Salaries & Benefits	21,841	16,502	(5,339)
	Power	10,618	9,805	(813)
	Water Purchases	6,764	6,048	(715)
	A&G	9,070	6,989	(2,081)
	Contractual	3,233	3,092	(141)
	Total	$67,614	$57,346	($10,268)

Key Financial Ratios ($000)

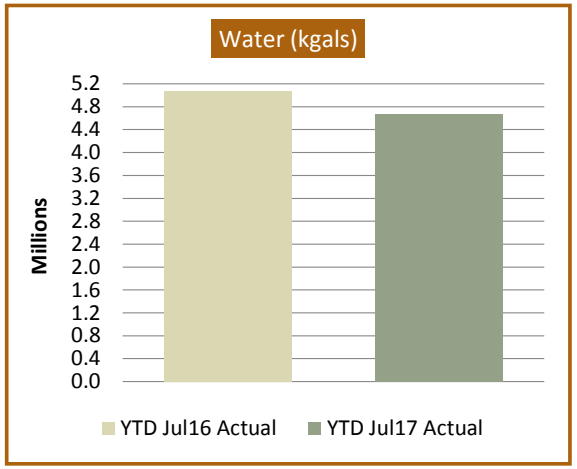
Category	FY17	FY16
Accounts Payable $$/Days	$4,480 / 53 days	$4,909 / 53 days
Accounts Receivable $$/Days	$19,006 / 53 days	$16,709 / 51 days
Days Cash On Hand	190 days	178 days
Annual Debt Service (Revenue Bonds)	$24,563	$22,225
Debt Service Coverage (Bond/PUC)	2.06 / 2.52	2.33 / 2.54

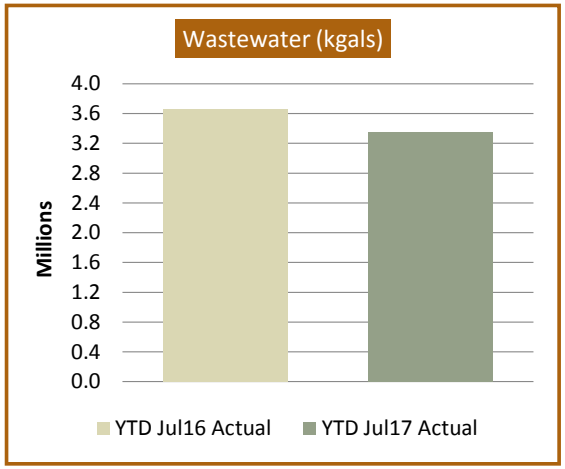
Debt as a Percent to Gross Revenue

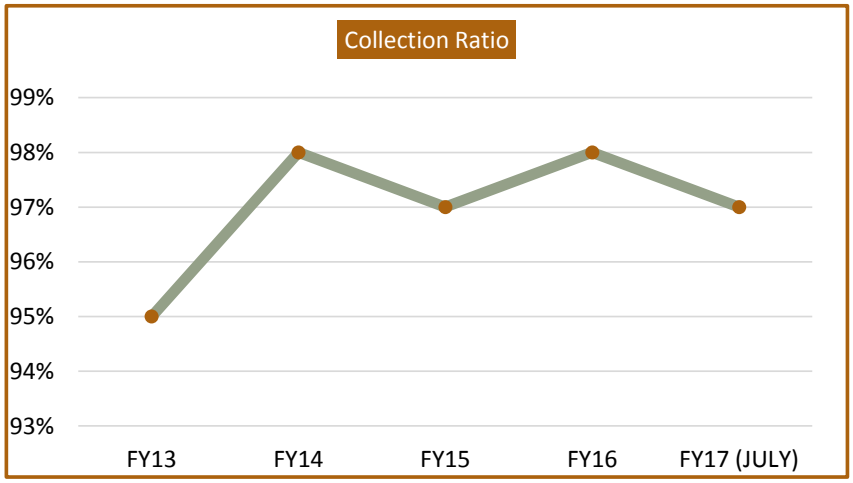


(1) Gross Revenues excludes SDC
(2) Debt Service Excludes Cap I

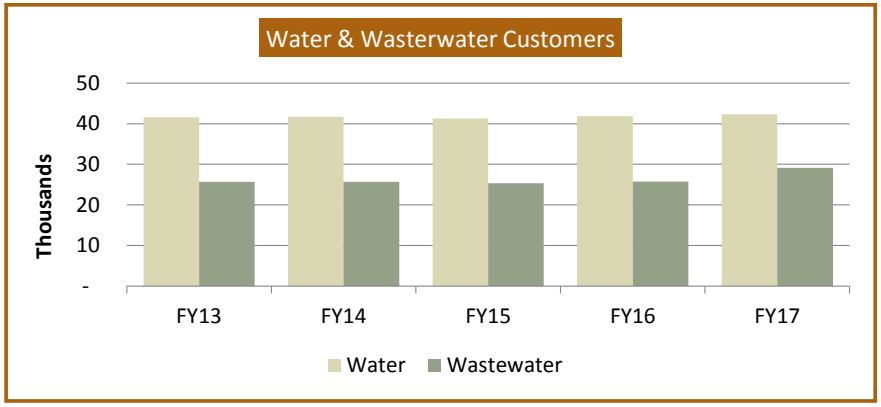
Water & Wastewater Analytics

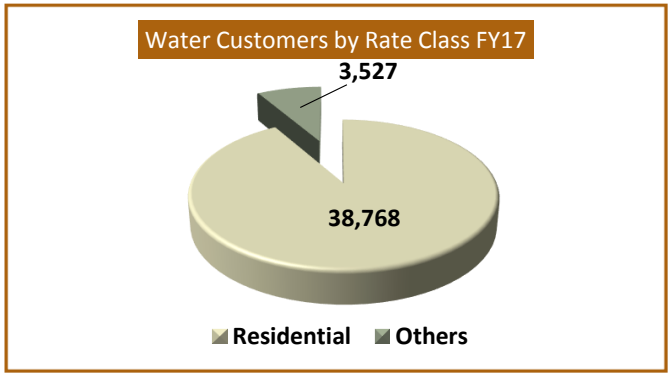


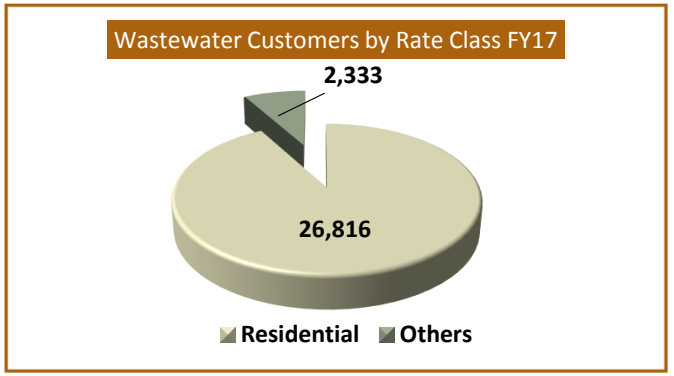


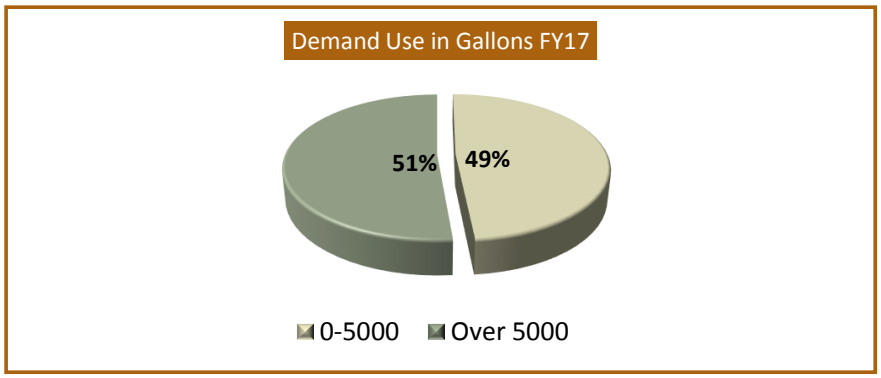


Water & Wastewater Customers





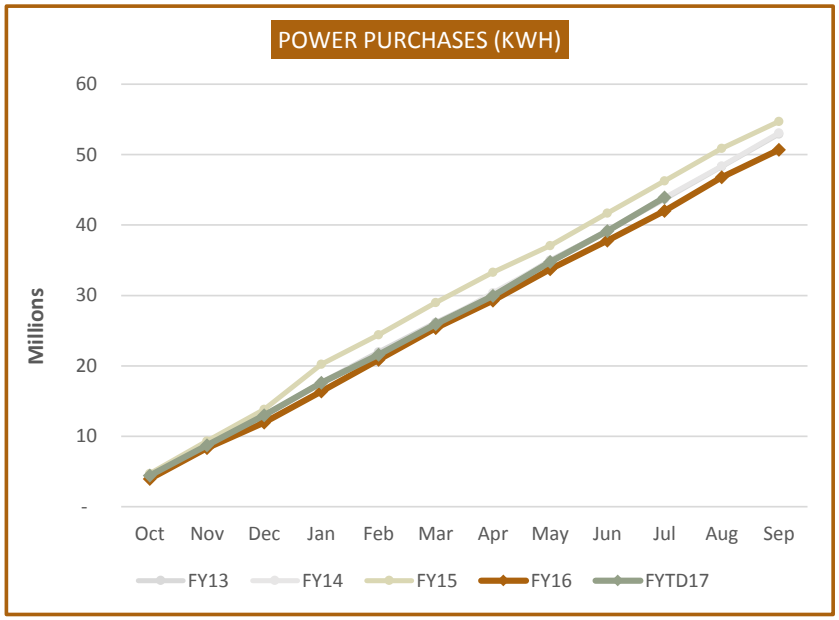


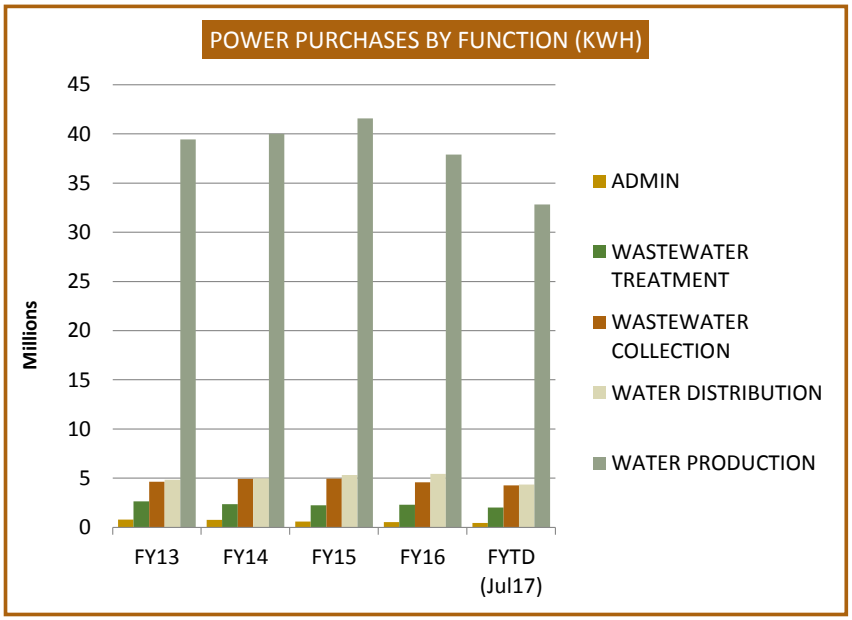


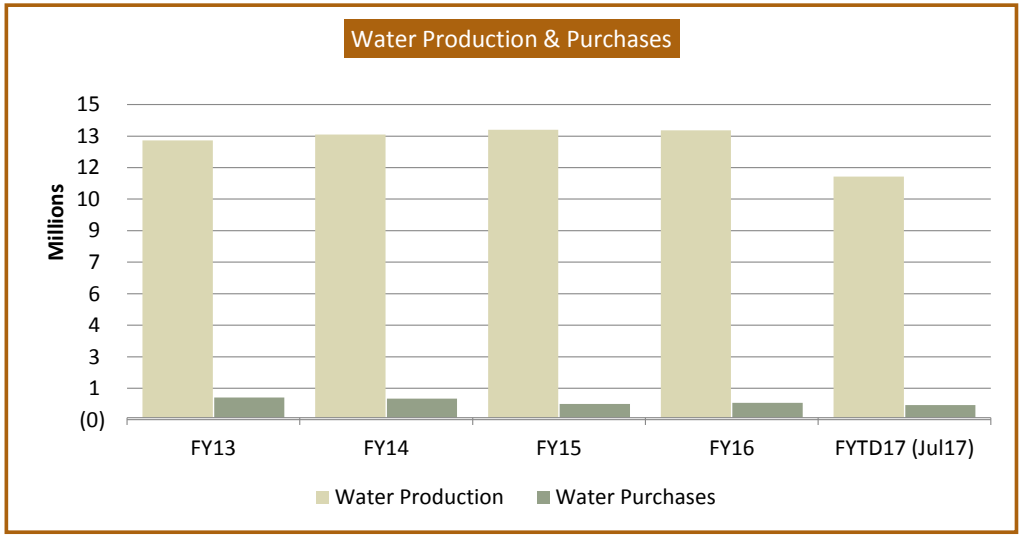
Top Ten Largest Water and Wastewater Customers – July 2017

Water			Wastewater		
Customer Name	FY17 YTD Revenues	% of Total	Customer Name	FY17 YTD Revenues	% of Total
1) MDI GUAM CORPORATION/LEOPALACE	$1,099,676	2.02%	1) AIR FORCE DOD	$3,231,668	10.28%
2) PACIFIC ISLANDS CLUB	1,002,831	1.85%	2) NAVY DOD	1,387,067	4.41%
3) HOTELS OF THE MARIANAS INC	826,014	1.52%	3) HOTELS OF THE MARIANAS INC	883,330	2.81%
4) SHERATON LAGUNA GUAM RESORT	723,165	1.33%	4) SHERATON LAGUNA GUAM RESORT	774,076	2.46%
5) HYATT	707,590	1.30%	5) HYATT	757,348	2.41%
6) HOTEL NIKKO GUAM	676,853	1.25%	6) HOTEL NIKKO GUAM	723,129	2.30%
7) PACIFIC STAR RESORT & SPA	541,621	1.00%	7) PACIFIC STAR RESORT & SPA	577,887	1.84%
8) GUAM REEF HOTEL INC	528,069	0.97%	8) GUAM REEF HOTEL INC	564,539	1.80%
9) MDI GUAM CORPORATION/WESTIN	527,279	0.97%	9) MDI GUAM CORPORATION/WESTIN	563,691	1.79%
10) OUTRIGGER GUAM RESORT	497,476	0.92%	10) OUTRIGGER GUAM RESORT	532,890	1.70%
Total	**$7,130,573**	**13.12%**	**Total**	**$9,995,626**	**31.81%**

Power, Water Purchases and Water Production

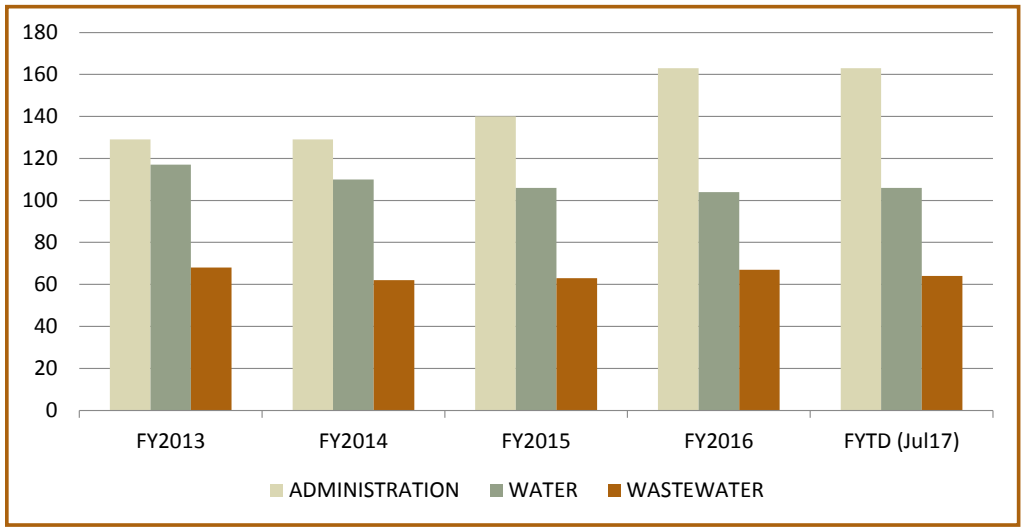






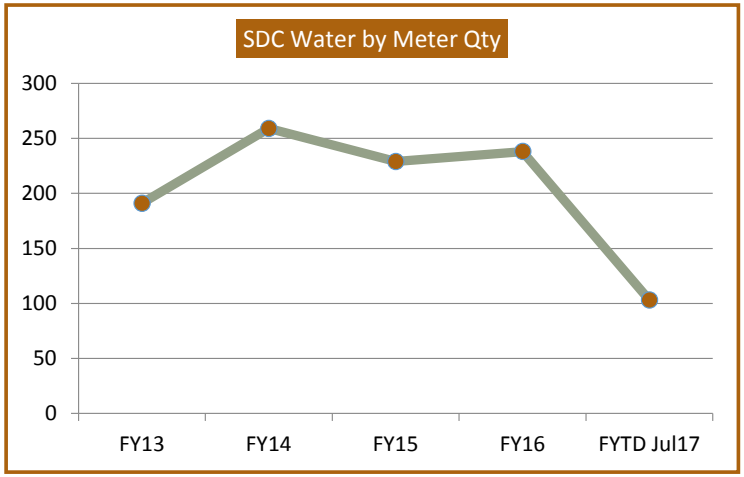
FTE by Major Division

DIVISION	FY2013	FY2014	FY2015	FY2016	FYTD (Jul17)
ADMINISTRATION	129	129	140	163	163
WATER	117	110	106	104	106
WASTEWATER	68	62	63	67	64
TOTAL NUMBER OF STAFF	314	301	309	334	333
Gross Salaries & Wages ($000)	14,929	15,532	15,805	16,442	13,963
Water Customers	41,582	41,702	41,274	42,259	42,295
Staff to Customers Ratio	0.76%	0.72%	0.75%	0.79%	0.79%

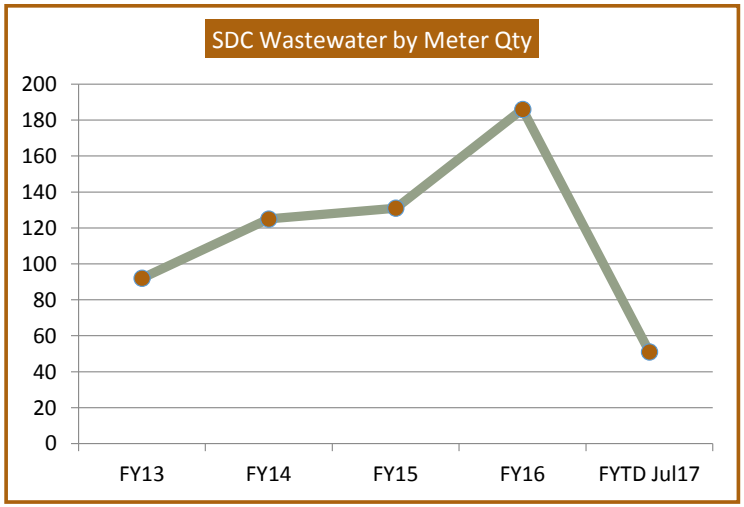


Note: FYTD17 number of employees 333 is as of July 2017

SDC Water & Wastewater (Meter Quantity)



Actual Meter Sizes (Inches)	FY 2013	FY 2014	FY 2015	FY 2016	FYTD (Jul17)
5/8 x 3/4	179	248	220	239	99
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	105



Actual Meter Sizes (Inches)	FY 2013	FY 2014	FY 2015	FY 2016	FYTD (Jul17)
5/8 x 3/4	80	115	124	179	47
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	51

GUAM WATERWORKS AUTHORITY
JULY 31, 2017
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
July 31, 2017

SCHEDULE A

ASSETS	Unaudited July 31, 2017	Audited September 30, 2016	Increase (Decrease)
Current Assets:			
Cash:			
Unrestricted (Schedule G)	4,233,844	5,157,430	(923,586)
Restricted Funds (Schedule G)	63,314,605	51,436,547	11,878,059
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $11,927,579 at Jul 31, 2017 and $11,302,579 at Sep 30, 2016	15,446,311	14,562,072	884,239
Other Receivable	3,559,323	2,147,155	1,412,169
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $457,370 at Jul 31, 2017 and Sep 30, 2016	1,865,432	2,269,775	(404,343)
Total Current Assets	88,419,516	75,572,979	12,846,537
Property, Plant and Equipment			
Utility plant in service:			
Water system	309,160,290	306,262,568	2,897,722
Wastewater system	279,994,424	259,512,407	20,482,017
Non-utility property	22,987,128	22,474,787	512,341
Total property	612,141,841	588,249,761	23,892,080
Less Accumulated Depreciation	(296,127,693)	(282,837,613)	(13,290,080)
Land	1,110,998	254,288	856,710
Construction Work in Progress	116,234,951	81,877,561	34,357,391
Property, Plant and Equipment, net	433,360,098	387,543,997	45,816,101
Other noncurrent assets			
Restricted cash (Schedule G)	244,834,009	285,277,784	(40,443,775)
Investments (Schedule G)	36,970,211	41,029,262	(4,059,052)
Other Prepaid Expenses	911,322	652,000	259,321
Total other noncurrent assets	282,715,541	326,959,047	(44,243,505)
TOTAL ASSETS	804,495,155	790,076,022	14,419,133
Deferred outflows of resources:			
Debt defeasance loss on refunding	1,726,418	1,878,602	(152,184)
Deferred outflows from pension	3,623,203	4,668,010	(1,044,807)
Total Assets and Deferred Outflows of Resources	**809,844,776**	**796,622,635**	**13,222,142**
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	4,479,859	4,909,146	(429,287)
Accrued Expense	42,126	42,126	0
Interest Payable	2,249,826	6,748,638	(4,498,812)
Accrued Payroll and Employee Benefits	1,942,549	1,692,622	249,927
Accrued Annual Leave	1,760,094	1,641,497	118,597
Current portion of employee annual leave	533,038	548,845	(15,807)
Contractors' Payable	7,672,518	3,436,908	4,235,610
Customer and Other Deposits	2,053,737	2,228,235	(174,499)
Total Current Liabilities	28,647,733	29,162,004	(514,271)
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	(1,880,972)	(1,948,205)	67,234
Unamortized Discount - Bond 2013	(1,347,267)	(1,389,850)	42,583
Unamortized Premium - Bond 2014	4,849,129	5,071,307	(222,178)
Unamortized Premium - Bond 2016	17,364,224	17,870,470	(506,246)
Notes Payable	6,238,873.78	8,578,203	(2,339,329)
Unfunded Ret Liability (GASB 67/68)	35,966,167	38,195,938	(2,229,771)
Employee Annual Leave, Less Current Portion	861,534	887,084	(25,550)
TOTAL LIABILITIES	592,119,422	602,886,951	(10,767,528)
Net Assets	**217,725,354**	**193,735,684**	**23,989,670**
Total Liabilities and Net Assets	**809,844,776**	**796,622,635**	**13,222,141**

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

	Month to Date			Variance
	Budget July-17	Encumbered July-17	Actual (Unaudited) July-17	Increase / (Decrease)
OPERATING REVENUES				
Water Revenues	5,678,548		5,492,685	(185,862)
Wastewater Revenues	3,284,461		3,029,723	(254,738)
Legislative Surcharge	288,387		272,792	(15,595)
Other Revenues	43,750		29,496	(14,254)
System Development Charge	133,333		39,669	(93,665)
Total Operating Revenues	9,428,479		8,864,365	(564,114)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	676,391		607,400	(68,990)
Power Purchases	1,061,804		1,020,128	(41,676)
Total Utility Costs	1,738,195		1,627,528	(110,666)
Salaries and Wages	1,586,470		1,423,556	(162,915)
Pension and Benefits	597,585		246,390	(351,194)
Total Salaries and Benefits	2,184,055		1,669,946	(514,109)
Capitalized Labor and Benefits	(292,554)		(200,000)	92,554
Net Salaries and Benefits	1,891,501		1,469,946	(421,555)
Administrative and General Expenses				
Sludge removal	135,395	-	134,690	(705)
Chemicals	205,222	-	161,429	(43,793)
Materials & Supplies	204,856	-	204,690	(165)
Transportation	71,419	26,510	35,055	(9,854)
Communications	14,152	1,300	11,575	(1,277)
Claims	38,284	-	38,190	(93)
Insurance	76,312	-	75,480	(832)
Training & Travel	9,570	-	9,269	(301)
Advertising	7,045	-	5,794	(1,251)
Miscellaneous	95,363	3,146	59,054	(33,163)
Total Administrative and General Expense	857,616	30,956	735,226	(91,434)
Regulatory Expense	21,791	-	16,458	(5,332)
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	7,294	54,078	(17,258)
Building rental	38,368	-	36,582	(1,785)
Equipment rental	42,270	-	36,527	(5,743)
Legal	439	-	-	(439)
Laboratory	10,086	-	10,035	(51)
Other	202,892	-	202,813	(78)
Total Contractual Expense	372,685	7,294	340,036	(25,355)
Retiree Supp. Annuities and health care costs	239,312		229,333	(9,979)
Contribution to Government of Guam	49,500		49,500	-
Total Retiree Benefits	288,812		278,833	(9,979)
Total Operating Expenses	6,762,648	38,250	5,859,531	(864,868)
Earnings (Loss) from Operations	2,665,830	(38,250)	3,004,834	300,754
Interest Income-2010/13/14/16 Series Bond	1,029		121,552	120,524
Interest Income-Other Funds	642		17,675	17,033
Interest Income-SDC	-		748	748
Interest Expense- 2010/13/14/16 Series Bond	(2,223,983)		(2,211,025)	12,959
Interest Expense- ST BOG	(46,124)		(44,181)	1,943
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)	-	(1,548,068)	144,042
Net Income (Loss) before capital contributions	973,720	(38,250)	1,456,766	444,796
Capital Contributions				
Grants from US Government	250,000		2,178,134	1,928,134
Grants from GovGuam & Others	-		-	-
Other Contributions	-		-	-
Total Capital Contributions	250,000	-	2,178,134	1,928,134
Change in Net Assets	1,223,720	(38,250)	3,634,900	2,372,930
Debt Service Calculation				
Earnings From Operations	2,665,830		3,004,834	
System Development Charge	(133,333)		(39,669)	
Interest/Investment Income	642		17,675	
Depreciation	1,529,550		1,329,008	
Balance Available for Debt Service per Section 6.12	4,062,689		4,311,849	
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		5,243,983	
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		2.11	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.15		2.56	

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

SCHEDULE C

	Month to Date Actual (Unaudited) July-17	Month to Date Actual (Audited) July-16	Variance Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	5,492,685	5,361,643	131,043
Wastewater Revenues	3,029,723	3,102,398	(72,676)
Legislative Surcharge	272,792	241,527	31,265
Other Revenues	29,496	43,325	(13,828)
System Development Charge	39,669	119,028	(79,359)
Total Operating Revenues	8,864,365	8,867,921	(3,556)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	607,400	531,170	76,231
Power Purchases	1,020,128	935,490	84,638
Total Utility Costs	1,627,528	1,466,660	160,868
Salaries and Wages	1,423,556	1,333,993	89,563
Pension and Benefits	246,390	454,904	(208,514)
Total Salaries and Benefits	1,669,946	1,788,897	(118,951)
Capitalized Labor and Benefits	(200,000)	(248,363)	48,363
Net Salaries and Benefits	1,469,946	1,540,534	(70,588)
Administrative and General Expenses			
Sludge removal	134,690	130,423	4,267
Chemicals	161,429	186,596	(25,167)
Materials & Supplies	204,690	103,711	100,979
Transportation	35,055	47,876	(12,821)
Communications	11,575	10,265	1,310
Claims	38,190	10,618	27,573
Insurance	75,480	101,111	(25,631)
Training & Travel	9,269	12,457	(3,187)
Advertising	5,794	15,907	(10,114)
Miscellaneous	59,054	68,429	(9,375)
Total Administrative and General Expense	735,226	687,393	47,834
Regulatory Expense	16,458	27,104	(10,646)
Bad Debts Provision	62,496	86,193	(23,697)
Depreciation Expense	1,329,008	1,279,008	50,000
Contractual Expense			
Audit & Computer Maint.	54,078	86,467	(32,390)
Building rental	36,582	33,279	3,304
Equipment rental	36,527	58,162	(21,635)
Legal	-	362	(362)
Laboratory	10,035	10,234	(199)
Other	202,813	154,589	48,224
Total Contractual Expense	340,036	343,094	(3,058)
Retiree Supp. Annuities and health care costs	229,333	230,355	(1,023)
Contribution to Government of Guam	49,500	48,667	833
Total Retiree Benefits	278,833	279,022	(189)
Total Operating Expenses	5,859,531	5,709,007	150,523
Earnings (Loss) from Operations	3,004,834	3,158,914	(154,079)
Interest Income-2010/13/14/16 Series Bond	121,552	2,083	119,470
Interest Income-Other Funds	17,675	1,281	16,394
Interest Income-SDC	748	1,896	(1,147)
Interest Expense- 2010/13/14/16 Series Bond	(2,211,025)	(1,994,375)	(216,650)
Interest Expense- ST BOG	(44,181)	(59,096)	14,915
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)	(1,548,068)	(1,237,323)	(310,746)
Net Income (Loss) before capital contributions	1,456,766	1,921,591	(464,825)
Capital Contributions			
Grants from US Government	2,178,134	434,254	1,743,880
Grants from GovGuam & Others	-	23,151	(23,151)
Other Contributions	-	-	-
Total Capital Contributions	2,178,134	457,405	1,720,729
Change in Net Assets	3,634,900	2,378,996	1,255,904
Debt Service Calculation			
Earnings From Operations	3,004,834	3,158,914	
System Development Charge	(39,669)	(119,028)	
Interest/Investment Income	17,675	1,281	
Depreciation	1,329,008	1,279,008	
Balance Available for Debt Service per Section 6.12	4,311,849	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	5,243,983	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)	2.11	2.33	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.56	2.54	

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

	Year to Date			Variance
	Budget July-17	Encumbered July-17	Actual (Unaudited) July-17	Increase / (Decrease)
OPERATING REVENUES				
Water Revenues	56,785,476		52,540,853	(4,244,623)
Wastewater Revenues	32,844,606		30,583,117	(2,261,488)
Legislative Surcharge	2,883,870		2,627,751	(256,119)
Other Revenues	437,500		468,404	30,904
System Development Charge	1,333,333		760,815	(572,519)
Total Operating Revenues	94,284,785		86,980,941	(7,303,844)
OPERATING AND MAINTENANCE EXPENSES				
Water Purchases	6,763,906		6,048,415	(715,491)
Power Purchases	10,618,040		9,805,467	(812,573)
Total Utility Costs	17,381,946		15,853,882	(1,528,064)
Salaries and Wages	15,864,703		13,962,898	(1,901,804)
Pension and Benefits	5,975,846		2,538,929	(3,436,917)
Total Salaries and Benefits	21,840,548		16,501,827	(5,338,721)
Capitalized Labor and Benefits	(2,925,543)		(2,000,000)	925,543
Net Salaries and Benefits	18,915,006		14,501,827	(4,413,179)
Administrative and General Expenses				
Sludge removal	1,743,947	348,455	1,394,599	(893)
Chemicals	2,052,220	147,465	1,798,913	(105,842)
Materials & Supplies	1,654,306	355,190	1,298,397	(718)
Transportation	714,192	328,143	368,648	(17,401)
Communications	141,518	31,083	106,835	(3,600)
Claims	115,838	-	115,100	(738)
Insurance	1,353,117	-	936,272	(416,844)
Training & Travel	169,698	-	169,220	(478)
Advertising	95,445	-	94,212	(1,233)
Miscellaneous	1,029,633	39,358	707,055	(283,219)
Total Administrative and General Expense	9,069,913	1,249,694	6,989,251	(830,968)
Regulatory Expense	217,905	-	189,206	(28,699)
Bad Debts Provision	625,000	-	624,948	(52)
Depreciation Expense	15,295,500	-	13,290,080	(2,005,420)
Contractual Expense				
Audit & Computer Maint.	968,303	-	933,931	(34,372)
Building rental	383,677	-	365,514	(18,163)
Equipment rental	510,698	-	504,368	(6,330)
Legal	6,588	-	6,132	(456)
Laboratory	100,863	52,308	46,603	(1,952)
Other	1,262,918	-	1,235,354	(27,564)
Total Contractual Expense	3,233,045	52,308	3,091,901	(88,836)
Retiree Supp. Annuities and health care costs	2,393,117		2,310,170	(82,946)
Contribution to Government of Guam	495,050		495,000	(50)
Total Retiree Benefits	2,888,167	-	2,805,170	(82,996)
Total Operating Expenses	67,626,482	1,302,002	57,346,266	(8,978,214)
Earnings (Loss) from Operations	26,658,303	(1,302,002)	29,634,675	1,674,369
Interest Income-2010/13/14/16 Series Bond	10,287		487,730	477,444
Interest Income-Other Funds	6,418		75,997	69,579
Interest Income-SDC	-		17,506	17,506
Interest Expense- 2010/13/14/16 Series Bond	(22,239,834)		(22,226,876)	12,959
Interest Expense- ST BOG	(461,241)		(472,785)	(11,544)
Federal Expenditures	-		(256,661)	(256,661)
Loss on Asset Disposal	-		-	-
AFUDC	6,250,000		6,250,000	-
Amortization of Discount, Premium and Issuance Costs	377,375		618,607	241,232
Loss on Defeasance Bond05 Refunding	(194,830)		(152,184)	42,646
Deferred outflows from pension	(669,282)		(1,044,807)	(375,525)
Prior Year Adjustment	-		(557,890)	(557,890)
Total non-operating revenues (expenses)	(16,921,107)	-	(17,261,361)	(340,255)
Net Income (Loss) before capital contributions	9,737,197	(1,302,002)	12,373,313	1,334,115
Capital Contributions				
Grants from US Government	2,500,000		11,614,471	9,114,471
Grants from GovGuam & Others	-		1,886	1,886
Other Contributions	-		-	-
Total Capital Contributions	2,500,000	-	11,616,356	9,116,356
Change in Net Assets	12,237,197	(1,302,002)	23,989,670	10,450,471
Debt Service Calculation				
Earnings From Operations	26,658,303		29,634,675	
System Development Charge	(1,333,333)		(760,815)	
Interest/Investment Income	6,418		75,997	
Depreciation	15,295,500		13,290,080	
Balance Available for Debt Service per Section 6.12	40,626,888		42,239,937	
Working Capital Reserve Available for Debt Service	6,320,833		9,321,342	
Transfer to Working Capital Debt Service Reserve	(3,041,667)		-	
Balance Available for Debt Service inclusive of reserves	43,906,055		51,561,279	
Debt Service				
Principal	4,200,000		4,200,000	
Interest	16,268,584		16,268,584	
Total	20,468,584		20,468,584	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.98		2.06	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.15		2.52	

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

SCHEDULE E

	Year to Date ACTUAL (Unaudited) July-17	ACTUAL (Audited) July-16	Variance Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	52,540,853	53,616,428	(1,075,576)
Wastewater Revenues	30,583,117	31,023,984	(440,867)
Legislative Surcharge	2,627,751	2,415,271	212,481
Other Revenues	468,404	433,249	35,155
System Development Charge	760,815	1,190,277	(429,462)
Total Operating Revenues	86,980,941	88,679,209	(1,698,268)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	6,048,415	5,311,696	736,719
Power Purchases	9,805,467	9,354,903	450,564
Total Utility Costs	15,853,882	14,666,599	1,187,282
Salaries and Wages	13,962,898	13,339,929	622,970
Pension and Benefits	2,538,929	4,549,042	(2,010,114)
Total Salaries and Benefits	16,501,827	17,888,971	(1,387,144)
Capitalized Labor and Benefits	(2,000,000)	(2,483,632)	483,632
Net Salaries and Benefits	14,501,827	15,405,339	(903,512)
Administrative and General Expenses			
Sludge removal	1,394,599	1,304,233	90,366
Chemicals	1,798,913	1,865,956	(67,043)
Materials & Supplies	1,298,397	1,037,113	261,285
Transportation	368,648	478,758	(110,111)
Communications	106,835	102,649	4,187
Claims	115,100	106,177	8,923
Insurance	936,272	1,011,106	(74,833)
Training & Travel	169,220	124,567	44,653
Advertising	94,212	159,074	(64,862)
Miscellaneous	707,055	684,293	22,762
Total Administrative and General Expense	6,989,251	6,873,925	115,326
Regulatory Expense	189,206	271,043	(81,837)
Bad Debts Provision	624,948	861,925	(236,977)
Depreciation Expense	13,290,080	12,790,084	499,996
Contractual Expense			
Audit & Computer Maint.	933,931	864,674	69,257
Building rental	365,514	332,786	32,728
Equipment rental	504,368	581,619	(77,251)
Legal	6,132	3,623	2,509
Laboratory	46,603	102,341	(55,738)
Other	1,235,354	1,545,892	(310,538)
Total Contractual Expense	3,091,901	3,430,935	(339,034)
Retiree Supp. Annuities and health care costs	2,310,170	2,303,552	6,618
Contribution to Government of Guam	495,000	486,667	8,333
Total Retiree Benefits	2,805,170	2,790,219	14,952
Total Operating Expenses	57,346,266	57,090,070	256,196
Earnings (Loss) from Operations	29,634,675	31,589,138	(1,954,464)
Interest Income-2010/13/14/16 Series Bond	487,730	20,826	466,905
Interest Income-Other Funds	75,997	12,815	63,183
Interest Income-SDC	17,506	18,955	(1,449)
Interest Expense- 2010/13/14/16 Series Bond	(22,226,876)	(19,943,750)	(2,283,125)
Interest Expense- ST BOG	(472,785)	(590,955)	118,170
Federal Expenditures	(256,661)	(881,885)	625,224
Loss on Asset Disposal	-	(41,497)	41,497
AFUDC	6,250,000	11,423,701	(5,173,701)
Amortization of Discount, Premium and Issuance Costs	618,607	(1,608,116)	2,226,723
Loss on Defeasance Bond05 Refunding	(152,184)	(194,830)	42,646
Deferred outflows from pension	(1,044,807)	(74,517)	(970,290)
Prior Year Adjustment	(557,890)	(513,972)	(43,918)
Total non-operating revenues (expenses)	(17,261,361)	(12,373,227)	(4,888,135)
Net Income (Loss) before capital contributions	12,373,313	19,215,911	(6,842,598)
Capital Contributions			
Grants from US Government	11,614,471	4,342,537	7,271,933
Grants from GovGuam & Others	1,886	231,515	(229,629)
Other Contributions	-	-	-
Total Capital Contributions	11,616,356	4,574,052	7,042,304
Change in Net Assets	23,989,670	23,789,963	199,706
Debt Service Calculation			
Earnings From Operations	29,634,675	31,589,138	
System Development Charge	(760,815)	(1,190,277)	
Interest/Investment Income	75,997	12,815	
Depreciation	13,290,080	12,790,084	
Balance Available for Debt Service per Section 6.12	42,239,937	43,201,761	
Working Capital Reserve Available for Debt Service	9,321,342	3,820,833	
Transfer to Working Capital Debt Service Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	51,561,279	47,022,594	
Debt Service			
Principal	4,200,000	4,091,667	
Interest	16,268,584	14,429,496	
Total	20,468,584	18,521,163	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	2.06	2.33	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.52	2.54	

SCHEDULE F

Bond Compliance

		($$$) Per Indenture	As of 07/31/17 ($$$) 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 & BOG Reserves	*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 July 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	4,196,805	5,126,177	(929,372)
BOG - PRN Payroll	30,039	24,253	5,786
Sub-total Unrestricted	4,233,844	5,157,430	(923,586)
RESTRICTED			
BOG - Credit Card-Sweep	-	-	0
BOG - On Line Payment	-	-	0
BOG - Sweep Account	(2)	76	(78)
Bank of Hawaii	137,461	121,322	16,139
ANZ Bank	1	229	(228)
First Hawaiian Bank	13,643	47,741	(34,098)
Bank Pacific	10,111	14,194	(4,083)
Community First FCU	4,248	4,638	(390)
BOG - Customer Refunds	1,839,397	1,431,631	407,766
Bank Pacific - Surcharge	693,615	666,763	26,853
Bank Pacific - Escrow Deposit	665,870	845,734	(179,864)
BOG Emergency Reserve Fund	6,121	6,114	6
BOG - Revenue Trust	244,166	3,095,751	(2,851,585)
BOG Revenue Trust Fund	6,886,332	8,182,472	(1,296,140)
BOG Capital Improvement Fund-Bond	4,500	3,933	567
BOG Capital Improvement Revenue Fund	3,055,656.10	-	3,055,656
BOG-O & M Reserve	13,022,598	4,050,319	8,972,279
BOG-Debt Service Reserve	11,205,736	11,185,610	20,127
BOG-CAPEX Reserve	11,630,418	8,710,383	2,920,035
BOG Sewer Hookup Revolving Fund	63,398	62,132	1,266
BOG Short Term Loan DSF	-	-	0
BOG Subord. Sec. Fund	859,233	859,233	0
BOG Operation and Maintenance Fund	3,083,482	3,083,482	0
	53,425,984	42,371,755	11,054,229
BOG - SDC Deposit	2,138,621	1,064,792	1,073,830
BOG - SDC CDs	7,750,000	8,000,000	(250,000)
Total Restricted	63,314,605	51,436,547	11,878,059
Reserve Funds			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	0
BOG Series 10 Construction Fund	9,642,675	11,725,749	(2,083,073)
BOG Series 13 Construction Fund	79,247,076	107,622,618	(28,375,541)
BOG Series 13 CAP I Fund	-	-	0
BOG Series 14 Refunding Construction Fund	822,012	820,529	1,483
BOG Series 16 Construction Fund	135,917,916	138,748,131	(2,830,215)
BOG Series 16 Cap Int Fund	1,781,117	8,937,545	(7,156,428)
BOG Series 16 COI Fund	-	-	0
Total Restricted - Held by Trustee	244,834,009	285,277,784	(40,443,775)
USB Series 2010 Debt Service Fund	675,087	2,016,414	(1,341,326)
USB Series 2010 Debt Service Reserve Fund	7,566,460	7,566,460	0
USB Series 2013 Debt Service Fund	780,544	2,333,083	(1,552,539)
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	0
USB Series 2014 Refunding Debt Service Fund	600,829	1,791,266	(1,190,437)
USB Series 2014 Refunding Debt Service Reserve Func	7,727,350	7,707,628	19,723
USB Series 2016 Debt Service Fund	43	-	43
USB Series 2016 Debt Service Reserve Fund	7,588,209	7,582,725	5,484
Total Investments	36,970,211	41,029,262	(4,059,052)
Total Restricted and Unrestricted Cash	349,352,669	382,901,023	(33,548,353)

SCHEDULE H

Guam Waterworks Authority
Statement of Cash Flows (Unaudited)
FY 2017

	YTD Jul-17
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	84,752,252
Cash payments to suppliers/contractors for goods and services	(26,482,536)
Cash payments to employees for services	(18,174,396)
Net cash provided by operating activities	40,095,320
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	9,807,015
Acquisition of utility plant	(48,366,282)
Repayment of Long Term Debt	(7,363,527)
Interest expense	(28,785,083)
Net cash provided by (used in) capital and related financing activities	(74,707,878)
Cash flows from investing activities:	
Transfers from (to) restricted fund	33,125,244
Interest income received	563,728
Net cash provided by investing activities	33,688,972
Net increase (decrease) in cash	(923,586)
Unrestricted cash at beginning of the period	5,157,430
Unrestricted cash at end of period	4,233,844
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	28,932,987
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	13,290,080
Other Expense/income	
(Increase) decrease in assets:	
Accounts receivable	(668,376)
Materials and supplies inventory	404,342
Other Assets	(259,322)
Increase (decrease) in liabilities:	
Accounts payable, Contractors, Retention & Escrow Deposit	(592,408)
Accrued payroll	(837,433)
Customer deposits	(174,550)
Net cash provided by operating activities	40,095,320

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

SCHEDULE I

Customer Name	No of Accounts	Current Balance	AGING 31-60 days	61-90 days	91-120 days	Over 120 days	Outstanding Bal.
GUAM POWER AUTHORITY	24	104,975	50,478	64,134	84,302	843	304,732
GUAM INT'L AIRPORT AUTHORITY	10	45,734	29,956	25,239	27,977	162,077	290,983
PORT AUTHORITY OF GUAM	2	37,172	39,473	-	-	-	76,645
UNIVERSITY OF GUAM	5	5,487	-	-	-	-	5,487
GUAM MEMORIAL HOSPITAL AUTHORITY	1	3,386	-	-	-	-	3,386
GUAM HOUSING & URBAN RENEWAL AUTHORITY	3	274	-	-	-	92	366
GUAM HOUSING CORPORATION	1	29	-	-	-	-	29
AUTONOMOUS AGENCIES	**46**	**197,056**	**119,907**	**89,373**	**112,279**	**163,012**	**681,627**
DEPT OF EDUCATION	50	142,755	234,821	250,972	13,214	163,825	805,587
DEPT OF PARKS & RECREATION	21	37,660	40,395	27,302	42,316	102,344	250,017
DEPT OF CORRECTIONS	8	117,212	55	-	-	-	117,267
DEPT OF PUBLIC HEALTH & SOCIAL SERVICES	5	2,006	1,959	932	372	103,195	108,465
MAYORS' COUNCIL OF GUAM	52	11,425	20,848	529	0	-	32,802
DEPT OF CHAMORRO AFFAIRS	2	16,119	-	-	-	-	16,119
GUAM FIRE DEPARTMENT	7	10,176	2,457	-	-	-	12,633
GUAM POLICE DEPARTMENT	2	12,083	-	-	-	-	12,083
DEPT OF AGRICULTURE	2	4,433	5,891	-	-	-	10,324
DIVISION OF SENIOR CITIZENS, DPH&SS	2	3,782	202	149	-	-	4,133
DEPT OF PUBLIC WORKS	8	1,600	647	-	-	-	2,248
OFFICE OF THE GOVERNOR	2	1,965	-	-	-	-	1,965
DEPT OF ADMINISTRATION	2	1,542	-	-	-	-	1,542
SANCTUARY INC	1	1,252	-	-	-	-	1,252
GHURA-AGAFU GUMAS PARK	1	119	278	34	34	258	723
GUAM VETERANS AFFAIRS OFFICE	2	347	-	-	-	-	347
GUAM PUBLIC LIBRARY	1	31	-	-	-	-	31
GUAM SOLID WASTE AUTHORITY	1	23	-	-	-	-	23
							-
LINE AGENCIES	**169**	**364,529**	**307,553**	**279,918**	**55,935**	**369,622**	**1,377,558**
TOTAL June 31, 2017	**215**	**561,585**	**427,460**	**369,292**	**168,214**	**532,634**	**2,059,185**
TOTAL September 30, 2016	**243**	**1,516,081**	**325,256**	**94,308**	**95,259**	**717,692**	**2,748,597**
% INCREASE/ (DECREASE)	**-12%**	**-63%**	**31%**	**292%**	**77%**	**-26%**	**-25%**

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

SCHEDULE J

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 07/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 07/31/17
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	$ 634,830	$ 140,172	$ 775,002	$ 124,998	$ 265,170
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 Assessment of Tank		$ 500,000	$ 497,004	$ 2,996	$ 500,000	$ -	$ 2,996
Agana Heights & Chaot Tanks		$ 4,700,000	$ 4,237,959	$ 462,041	$ 4,700,000	$ -	$ 462,041
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	$ 553,310	$ 117,481	$ 670,791	$ 229,209	$ 346,690
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	$ 692,882	$ 107,118	$ 800,000	$ (0)	$ 107,118
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							$ 48,637
Total Construction Fund (2010 Series Revenue Bond)	**$ 87,402,000**	**$ 87,402,000**	**$ 77,807,962**	**$ 3,808,493**	**$ 81,616,454**	**$ 4,785,546**	**$ 9,642,676**

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 July 31, 2017

SCHEDULE K

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 07/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 07/31/17
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	1,656,279	23,685	$ 1,679,964	$ 181,036	$ 204,721
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	598,453	25,547	$ 624,000	$ (0)	$ 25,547
Implement Ground Water Rule	$ 1,000,000	$ 1,000,000	1,000,000	-	$ 1,000,000	$ -	$ -
Deep Well Rehabilitation	$ 800,000	$ 200,000	189,780	10,220	$ 200,000	$ -	$ 10,220
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	578,549	281,252	$ 859,801	$ 122,199	$ 403,451
Water Wells	$ 4,200,000	$ 4,200,000	1,415,921	760,700	$ 2,176,621	$ 2,023,379	$ 2,784,079
Water Distribution System	$ 12,000,000	$ 11,151,000	4,177,802	4,627,558	$ 8,805,360	$ 2,345,640	$ 6,973,198
Pressure Zone Realignment /	$ 1,000,000	$ 431,000	321,464	1,260	$ 322,725	$ 108,275	$ 109,536
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	8,022,203	4,613,055	$ 12,635,258	$ 1,242,742	$ 5,855,797
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	676,523	10,928,477	$ 11,605,000	$ 0	$ 10,928,478
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	$ 8,000,000	$ -			$ -	$ -	$ -
Assessment of maloiloi Elevetad & Yigo Elevated	$ 500,000	$ 485,117	461,813	23,304	$ 485,117	$ -	$ 23,304
Fire Hydrant Replacement Program	$ -	$ -			$ -	$ -	$ -
		$ -					
Wastewater System Planning	$ 800,000	$ 651,000	550,453	100,547	$ 651,000	$ (0)	$ 100,547
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	377,153	264,595	$ 641,748	$ 138,253	$ 402,847
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	334,627	37,072	$ 371,699	$ 101,301	$ 138,373
Agat/Santa Rita STP Replacement	$ 19,000,000	$ 67,200,000	26,433,338	40,457,263	$ 66,890,601	$ 309,399	$ 40,766,662
Agana WWTP Interim Measures		$ 673,000	547,981	125,019	$ 673,000	$ (0)	$ 125,019
Umatac Merizo Replacement	$ 2,000,000	$ -			$ -	$ -	$ -
		$ -					
Wastewater Pump Station Electrical Upgrade	$ 620,000	$ 620,000	91,274	8,587	$ 99,861	$ 520,139	$ 528,726
Electrical Upgrade - Water Wells	$ 1,500,000	$ 1,500,000	1,480,583	19,417	$ 1,500,000	$ 0	$ 19,417
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	1,051,903	119,562	$ 1,171,465	$ 1,535	$ 121,097
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							$ 188,013
Total Construction Fund (2013 Series Revenue Bond)	**$ 139,325,000**	**$ 139,325,000**	**$ 60,540,943**	**$ 66,645,521**	**$ 127,186,464**	**$ 12,138,536**	**$ 79,247,075**

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

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

SCHEDULE L

PROJECT NAME	ORIGINAL APPROVED PROJECT	ADJUSTED PROJECT COST	EXPENDITURES AS OF 07/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	20% PUC AS OF 07/31/17	Construction fund balance AS OF 07/31/17
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	556,037	$ 21,799	$ 577,836	$ 0	$ 160,000	$ 21,799
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	$ 820,336
Interest Earned	$ 6,781,612	$ (0)				$ (0)		$ 1,677
Total Project Cost Funding	**$ 89,711,698**	**$ 89,711,698**	**88,891,990**	**$ 758,873.38**	**$ 89,711,543**	**$ 1**	**$ 13,990,813**	**$ 822,013**

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

SCHEDULE M

PROJECT NAME	ORIGINAL APPROVED PROJECT COST	Adjusted Project Cost	EXPENDITURES AS OF 07/31/17	OUTSTANDING ENCUMBRANCES	TOTAL EXPENDITURES AND ENCUMBRANCES	UNOBLIGATED PROJECT COST	Construction fund balance AS OF 07/31/17
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	77,999	398,295.15	$ 476,294	$ 1,799,706	$ 2,198,001
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	15,054	297,928.76	$ 312,983	$ 36,017	$ 333,946
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	2,421,109	26,979,060.99	$ 29,400,170	$ (0)	$ 26,979,061
Facilities Plan/Design for Umatac-Merizo WWTP	$ 527,000	$ 527,000	94,666	157,438.78	$ 252,105	$ 274,895	$ 432,334
Agat/Santa Rita STP Replacement	$ 3,000,000	$ 3,000,000	165,646	281,604.29	$ 447,250	$ 2,552,750	$ 2,834,354
Agana WWTP Interim Measures	$ 827,000	$ 827,000			$ -	$ 827,000	$ 827,000
Umatac Merizo Replacement	$ 8,000,000	$ 20,800,000	21,192	19,347,234.76	$ 19,368,427	$ 1,431,573	$ 20,778,808
						$ -	
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	702,723	424,276.85	$ 1,127,000	$ -	$ 424,277
Land Survey	$ 1,998,000	$ 1,998,000		107,000.00	$ 107,000	$ 1,891,000	$ 1,998,000
General Plant Improvements / Water	$ 2,769,463	$ 2,769,463	119,592	1,357,138.23	$ 1,476,730	$ 1,292,733	$ 2,649,871
Information Technology Integration Improvements	$ 500,000	$ 500,000	244,068	-		$ 500,000	$ 255,932
Interest Earned		$ -					$ 234,339
		$ -					
Total Construction Fund (2016 Series Revenue Bond)	**$ 140,019,463**	**$ 140,019,463**	**$ 4,335,886**	**$ 53,999,698**	**$ 58,091,516**	**$ 81,927,947**	**$ 135,917,915**

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

SCHEDULE N

	7/31/2017
BANK OF GUAM	
BOG - Revenue Account	6,886,332
BOG - Operations and Maintenance Reserve	3,083,482
BOG - Operations, Maintenance, Renewal and Replacement Reserve Fund	17,423,213
BOG - Capital Improvement Fund	3,060,156
BOG - O & M Reserve	13,022,598
BOG - Debt Service Reserve	11,205,736
BOG - CAPEX Reserve	11,630,418
Total BOG Bank Account Balance	**66,311,935**
Series 2010 Bond:	
BOG - Construction Account	9,642,675
USB - Debt Service Fund	675,087
USB - Debt Service Reserve Fund	7,566,460
Total Series 2010 Bond Bank Balance	**17,884,223**
Series 2013 Bond:	
BOG - Construction Fund	79,247,076
BOG - Capitalized Interest Fund	-
USB - Debt Service Fund	780,544
USB - Debt Service Reserve Fund	12,031,688
Total Series 2013 Bond Bank Balance	**92,059,308**
Series 2014 Refunding Bond:	
BOG - Construction Fund	822,012
USB - Debt Service Fund	600,829
USB - Debt Service Reserve Fund	7,727,350
Total Series 2014 Refunding Bond Bank Balance	**9,150,191**
Series 2016 Bond:	
BOG - Construction Account	135,917,916
BOG - Capitalized Interest Fund	1,781,117
BOG - Cost of Issuance Fund	-
USB - Debt Service Fund	43
USB - Debt Service Reserve Fund	7,588,209
Total Series 2016 Bond Bank Balance	**145,287,285**

Guam Waterworks Authority	Date: 8/18/2017 Time:

REVIEWS			
TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	90%
TOTAL PUMPS OPERATIONAL	46	% OF OPERATING PUMPS	90%
TOTAL BOOSTER PUMP STATIONS	25		

GUAM WATERWORKS AUTHORITY

WATER DISTRIBUTION FACILITIES REPORT

Northern District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gayinero	20	2	2	100%	OP	A						
2	Mataguac	25	2	2	100%	OP	A						
3	Santa Rosa	15	2	1	50%	OP	A	Unusual noise from pump # 1.					
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**	**19**	**90%**								
pump availability =no of operational pumps/no of pumps*100%													

Central District

NO:	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1	Pago	150 / 100	3	2	67%	0P	A	Pump 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 Spring	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%													

GUAM WATERWORKS AUTHORITY

Guam Waterworks Authority

VEHICLE FLEET STATUS

8/15/2017

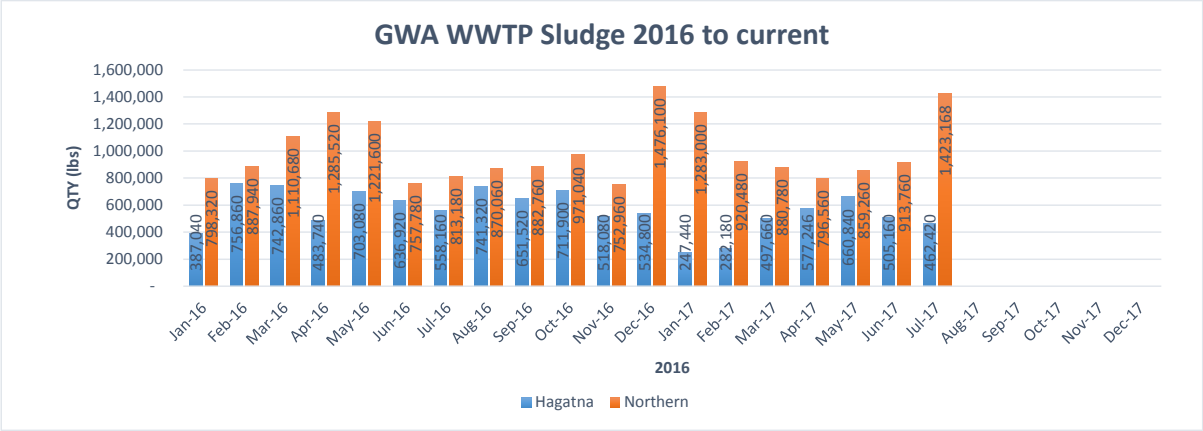
EQUIPMENT STATUS				
Description	Number of Equipment	Number of Equipment Available	Number of Equipment Not Available	Percentage
Backhoe	5	1	4	20%
Bobcat	1	1	0	100%
Boom Truck	2	0	2	0%
Crane	2	0	2	0%
Dump Truck	3	1	2	33%
Flat Bed	1	0	1	0%
Forklift	7	6	1	86%
Fuel Tanker	1	0	1	0%
Heavy Duty	3	1	2	33%
Light	150	101	49	67%
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	135	76	

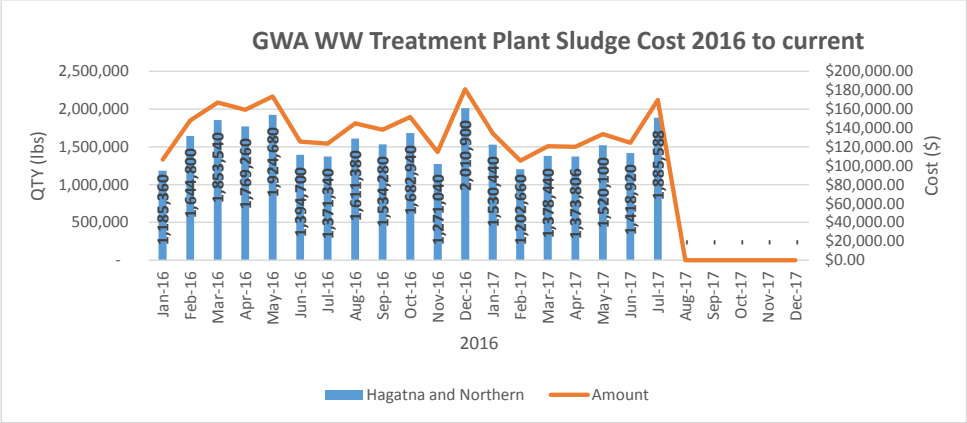
SUMMARY						
Operational	Operational w/Rprs Pending	In Shop-Accident Repairs	In Shop-Assessment Pending	In Shop-Repairs Pending	In Shop-Vendor Repairs	Recommend Survey
1	0	0	0	2	1	1
1	0	0	0	0	0	0
0	0	0	0	2	0	0
0	0	0	0	0	1	1
1	0	0	1	1	0	0
0	0	0	0	0	0	1
6	0	0	0	0	0	1
0	0	0	0	1	0	0
1	0	0	0	0	1	1
100	1	2	4	10	10	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	1	0	0
8	1	0	0	1	0	2
1	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	1	0
2	0	0	0	0	0	0
4	0	0	0	0	0	1
132	3	2	5	22	15	32

2016	Hagatna		Northern		Hagatna and Northern	
Month- Yr	Qty lbs	Amount $	Qty lbs	Amount $	Qty lbs	Amount $
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**

2017	Hagatna		Northern		Hagatna and Northern	
Month- Yr	Qty lbs	Amount $	Qty lbs	Amount $	Qty lbs	Amount $
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		$0.00		$0.00	-	$0.00
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	**3232946**	**$284,205.45**	**7077008**	**$623,250.16**	**10309954**	**$907,455.60**

Hagatna and Northern WWTP Sludge Report 2016, GWA Operations kcog / df, 8/3/2017





Hagatna and Northern WWTP Sludge Report 2016, GWA Operations kcog / df, 8/3/2017

GUAM WATERWORKS AUTHORITY

GWA WASTEWATER TREATMENT O&M REPORT

August, 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

Normal operations

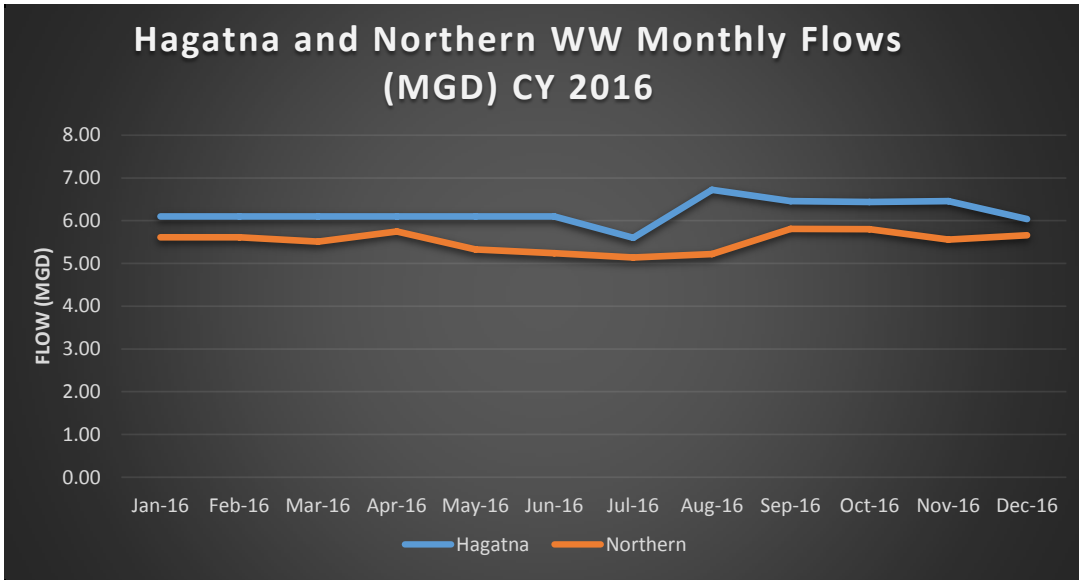
Design/build upgrade of system processes underway to include flow equalization basin, new pump stations, renovation of overland flow system, and UV disinfection.

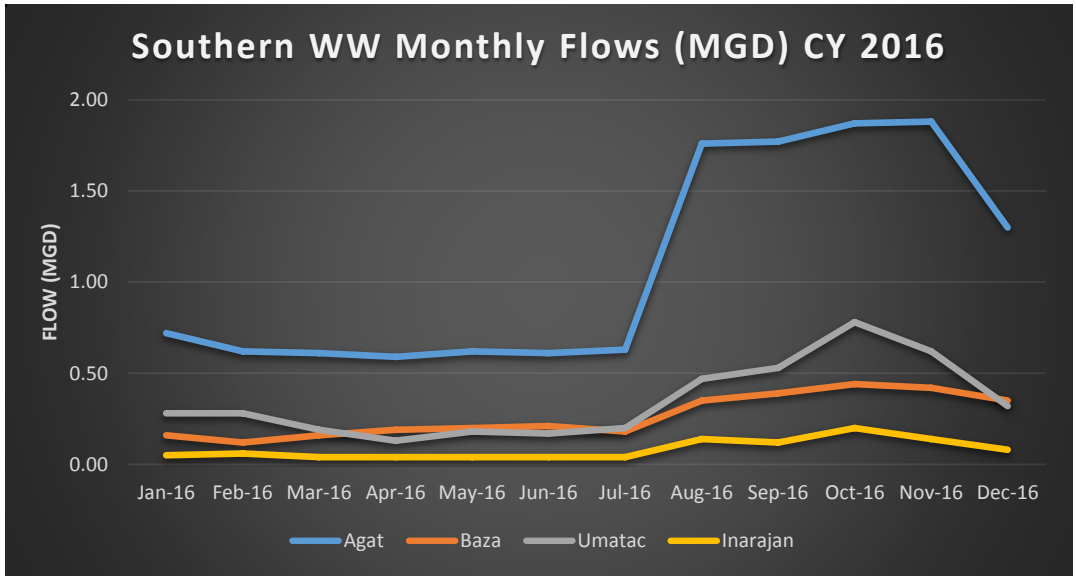
Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

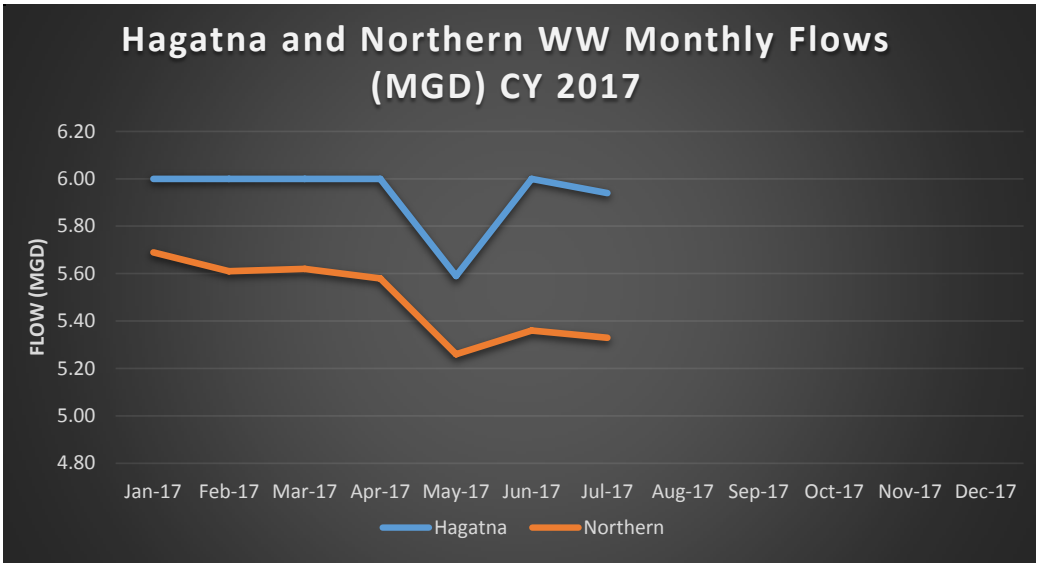
2016	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-16	6.10	5.61	0.72	0.16	0.28	0.05
Feb-16	6.10	5.61	0.62	0.12	0.28	0.06
Mar-16	6.10	5.51	0.61	0.16	0.19	0.04
Apr-16	6.10	5.75	0.59	0.19	0.13	0.04
May-16	6.10	5.33	0.62	0.20	0.18	0.04
Jun-16	6.10	5.24	0.61	0.21	0.17	0.04
Jul-16	5.60	5.14	0.63	0.18	0.20	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

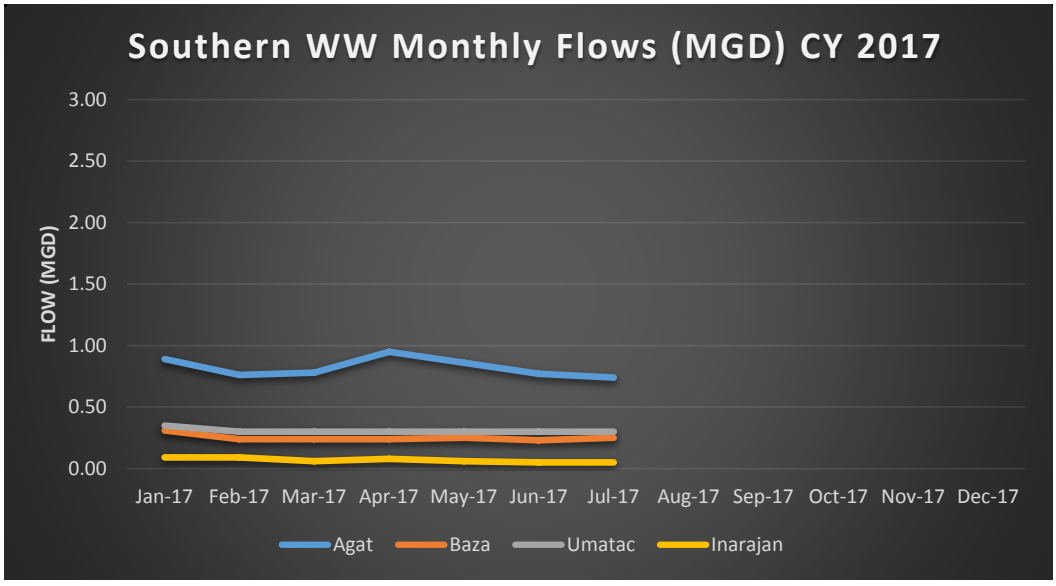
2017	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-17	6.00	5.69	0.89	0.31	0.35	0.09
Feb-17	6.00	5.61	0.76	0.24	0.30	0.09
Mar-17	6.00	5.62	0.78	0.24	0.30	0.06
Apr-17	6.00	5.58	0.95	0.24	0.30	0.08
May-17	5.59	5.26	0.86	0.25	0.30	0.06
Jun-17	6.00	5.36	0.77	0.23	0.30	0.05
Jul-17	5.94	5.33	0.74	0.25	0.30	0.05
Aug-17						
Sep-17						
Oct-17						
Nov-17						
Dec-17						
2017 Average MGD	**5.93**	**5.49**	**0.82**	**0.25**	**0.31**	**0.07**
2017 Total MGY	2,165	2,005	300	92	112	25

GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 8/3/2017

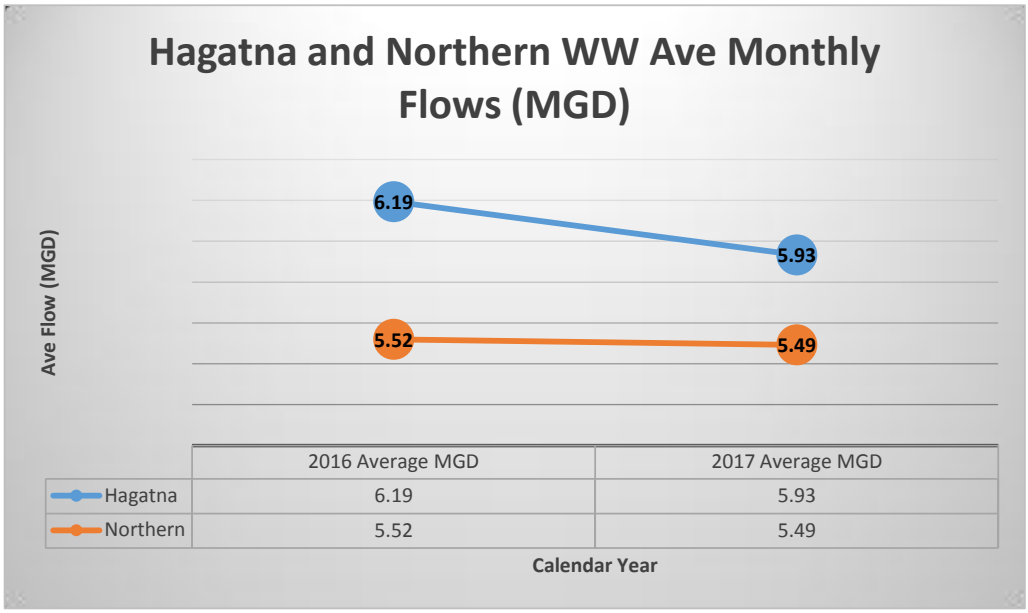

Hagatna and Northern WW Monthly Flows (MGD) CY 2016
FLOW (MGD)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16
Hagatna
Northern

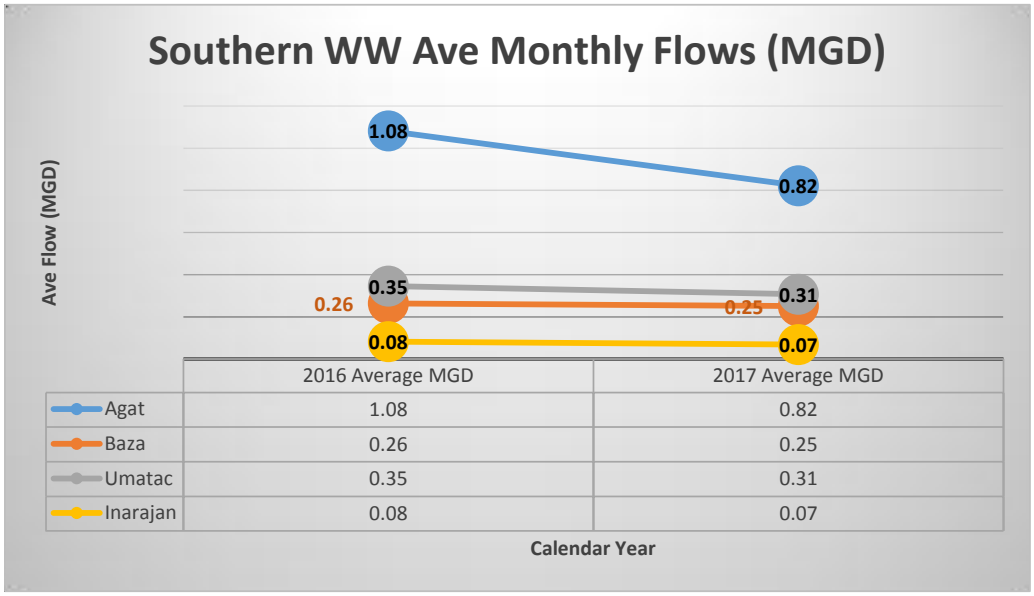

Southern WW Monthly Flows (MGD) CY 2016
FLOW (MGD)
2.00
1.50
1.00
0.50
0.00
Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16
Agat
Baza
Umatac
Inarajan

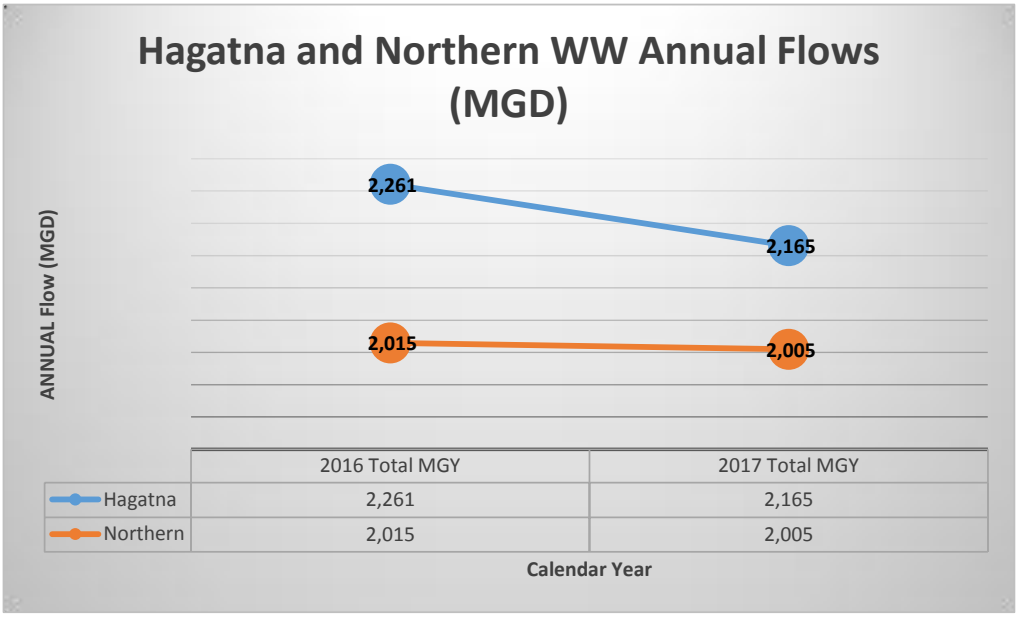


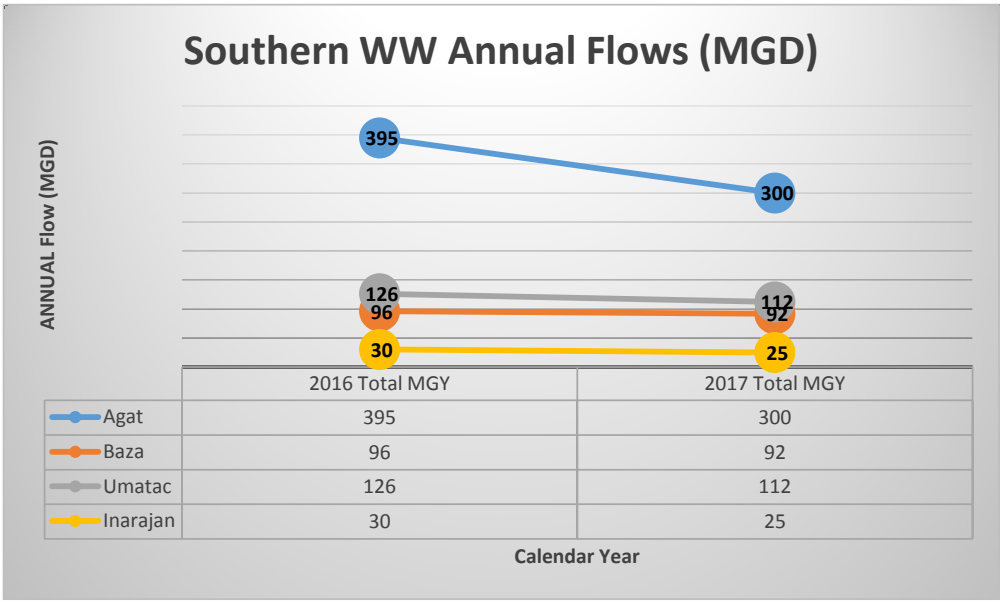


GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 8/3/2017


Hagatna and Northern WW Ave Monthly Flows (MGD)
Ave Flow (MGD)
6.19
5.93
5.52
5.49
2016 Average MGD
2017 Average MGD
Hagatna
6.19
5.93
Northern
5.52
5.49
Calendar Year


Southern WW Ave Monthly Flows (MGD)
Ave Flow (MGD)
1.08
0.82
0.35
0.31
0.26
0.25
0.08
0.07
2016 Average MGD
2017 Average MGD
Agat
1.08
0.82
Baza
0.26
0.25
Umatac
0.35
0.31
Inarajan
0.08
0.07
Calendar Year





GWA WWT Flow Report 2013 to Present, prepared by kcog/df, 8/3/2017