



**CONSOLIDATED COMMISSION ON UTILITIES**

Guam Power Authority | Guam Waterworks Authority  
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | [guamccu.org](http://guamccu.org)

**GUAM WATERWORKS AUTHORITY WORK SESSION**

*CCU Conference Room  
4:30 p.m., Tues., March. 19, 2019*

**AGENDA**

1. ISSUES FOR DECISION
2. GM REPORT
  - 2.1 [GM Summary](#)
3. ISSUES FOR DISCUSSION
  - 3.1 [Drug and Alcohol-Free Workplace Policy](#)
4. DIVISION REPORTS
  - 4.1 Communications
  - 4.2 [Compliance & Safety](#)
  - 4.3 [Customer Service](#)
  - 4.4 [Engineering](#)
  - 4.5 [Finance](#)
  - 4.6 [Operations](#)
5. ANNOUNCEMENTS
  - 5.1 Next CCU Meetings: GPA WS 3/21/19; CCU MEETING 3/26/19
6. EXECUTIVE SESSION
  - 7.1 Litigation Matter
7. ADJOURNMENT



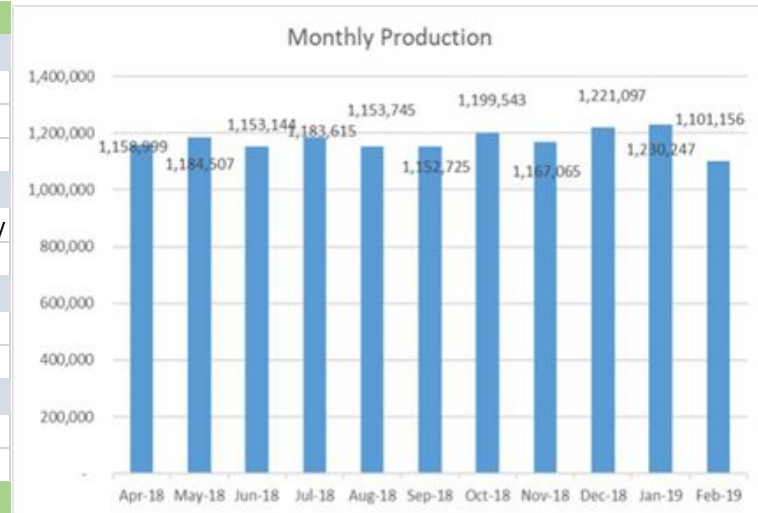
# Management Report

## GWA CCU Work Session, March 19, 2019

## Operations Update

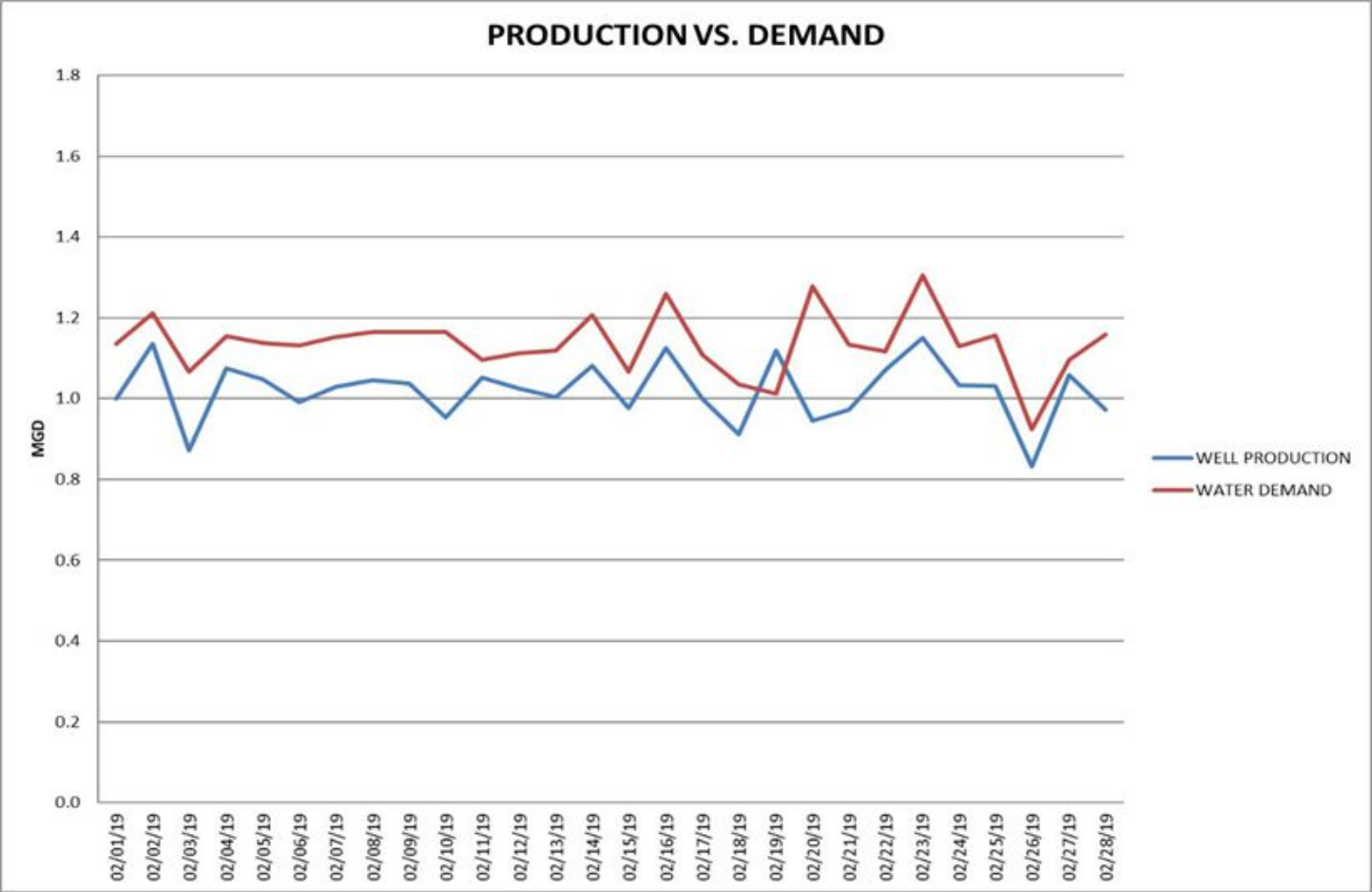
### Production

Monthly Production Summary - February 2019				
Deep Wells		36.3 MGD		
Active wells =	96 of 120			
Avg days in operation =	28 days			
Total Production =	1,016,259 Kgals			
Springs		0.00 MGD		
Avg days in operation =	0 days	*placed on standby		
Total Production =	0 Kgals			
Ugum Surface Water Plant		2.0 MGD		
Avg days in operation =	28 days			
Total Production =	56,354 Kgals			
Tumon Maui Well		1.02 MGD		
Avg days in operation =	28 days			
Total Production =	28,543 Kgals			
		1,101,156 Kgals	39.3 MGD	



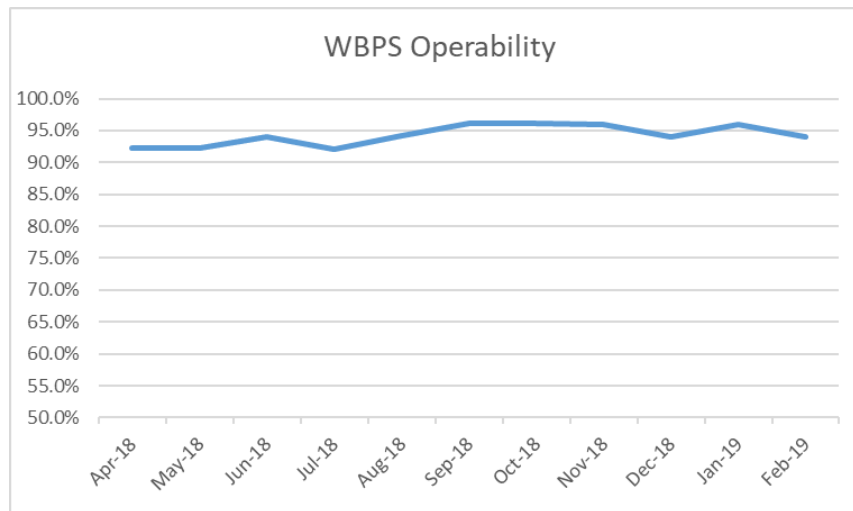
DW Status as of 2/28/2019	
Active	96
Grounded motor or Pump Failure	8
Out of commission	9
Secured, PFOs	2
Standby	5
TOTAL	120

Tumon Maui Well Production vs. Demand for February 2019



## Distribution

Monthly Distribution Summary - February 2019					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	20	18	90.0%
	Central	7	15	14	93.3%
	Southern	7	15	15	100.0%
		25	50	47	94.0%



Distribution – Tank Levels (February 2019)



## Wastewater Collections

**Monthly Collections Summary - February 2019****Wastewater Pump Stations**

	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	48	92.3%
	Central	29	65	55	84.6%
	Southern	25	52	44	84.6%
		76	169	147	87.0%

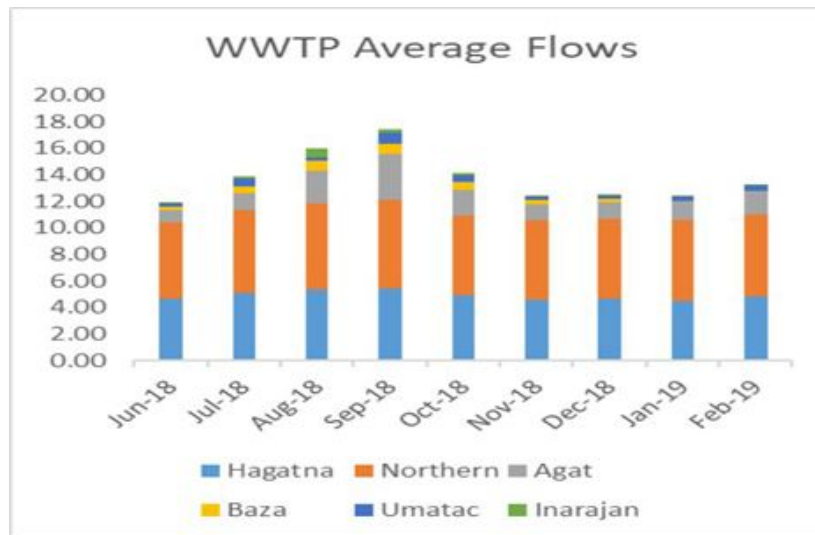


## Wastewater Treatment

**Monthly Wastewater Treatment Summary - February 2019**

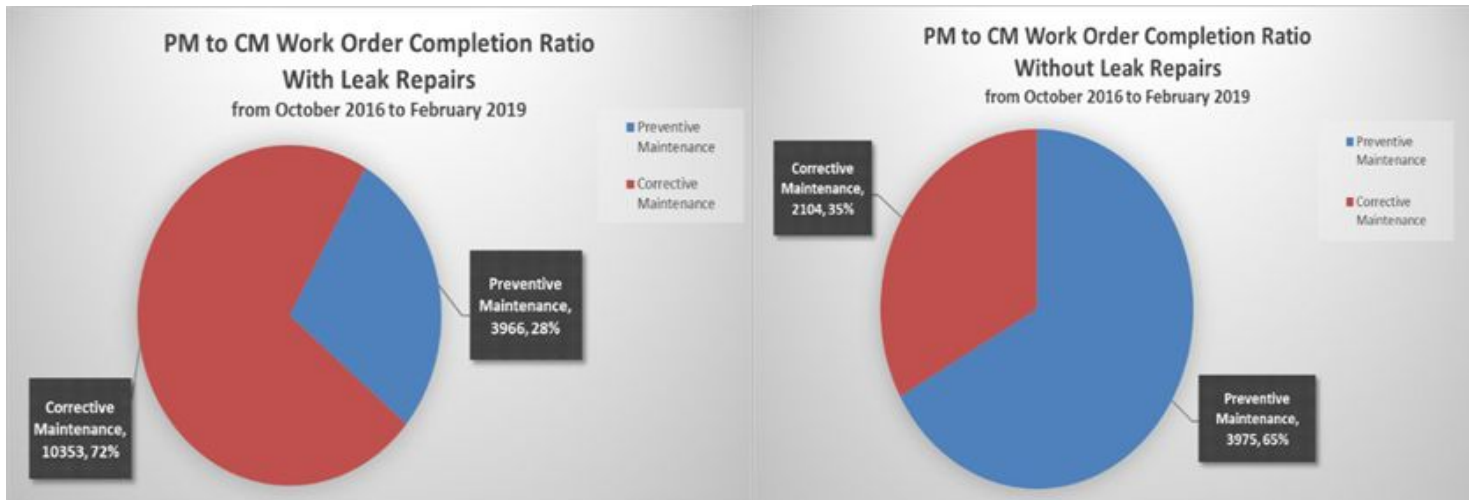
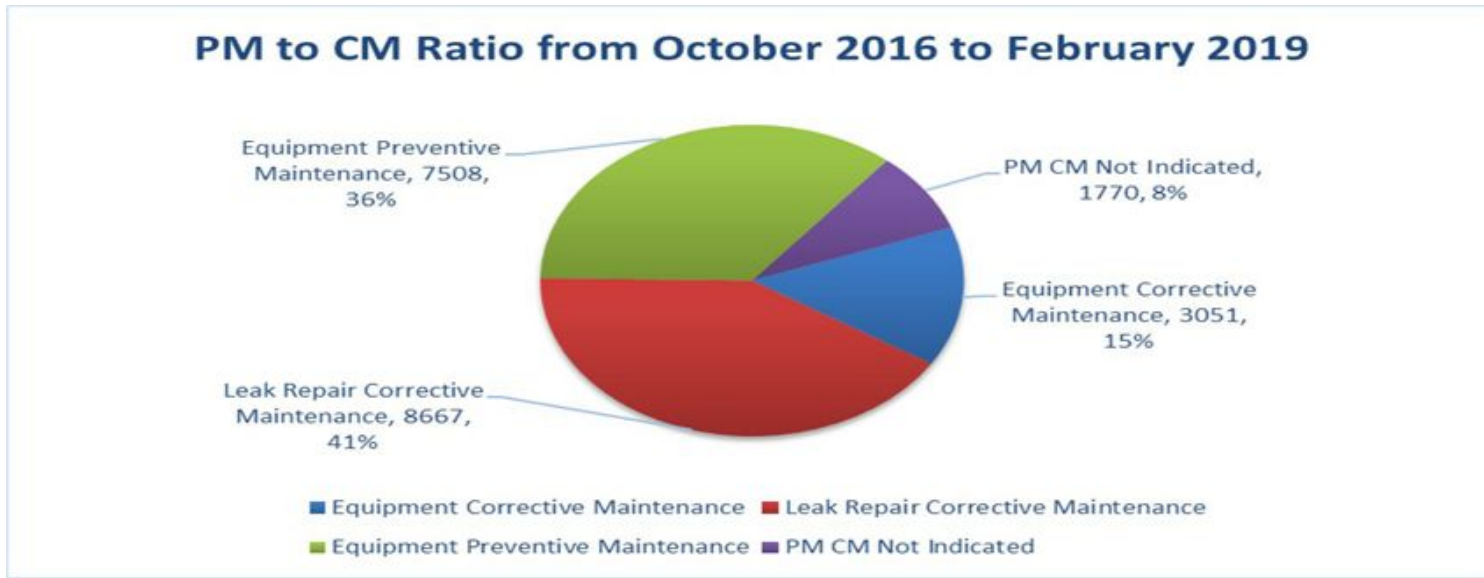
## WW Treatment Plants - Flows

	Facility	Avg. Daily Flows	Sludge (lbs)	Sludge Disp. (\$)
	Hagatna	4.80	426,480	\$ 38,383
	Northern	6.2	675,120	\$ 60,761
	Agat	1.8		
	Baza	0.00		
	Umatac	0.40		
	Inarajan	0.1		
		13.30	1,101,600	\$ 99,144





Asset Management for February 2019



## Operational Issues

### Production & Distribution

- Leak repair/detection
  - Crews maintaining performance - Currently, there are 14 pending repairs
  - Remote leak detection services contract underway – Images ordered; field work tentatively scheduled for February
- WSCC/Dispatch –
  - SCADA preparation pending room modifications (GPA)
  - Call Center training and certification this week
- Production
  - Pump and motor orders have been released.
  - In December, improvements in production (Well M-17A back online, tuning of Hyundai-Barrigada back-feed) resulted in
- Super-Typhoon Yutu Recovery Efforts
  - From November 29 through December 23, 2018, GWA sent a twelve (12) man crew to assist our neighbors in Saipan with Super-Typhoon Yutu Recovery efforts. See Attachment A

### Wastewater Collection & Treatment

- CCTV & Collections System:
  - Two of three combination trucks returned to service
  - CCTV target met for November 2018, short for December 2018, but okay for the year.
- Pump stations
  - Working to address pump operability issues
  - Critical spares and replacements procurement – protest addressed; re-evaluation completed, notices to be sent this week; orders pending
- Treatment Plants
  - Hagatna WWTP
    - Two Centrifuges are operating, but still need repair to controls on one unit;
    - Clarifier – two operational, one being repaired
    - Digester aerator – 2 of 3 operational, gear-box issue
  - Northern WWTP
    - No. 2 centrifuge gear-box replaced; now have belt replacement on-going
  - Agat-Santa Rita WWTP
    - UV-disinfection system went down for a few days but it back online
    - Contractor is being assessed LDs
    - Equalization tank construction still on-going

- Paving and sitework to be partially completed
- U-M WWTP
  - Work on-going at the site
  - Contractor Claims have been submitted for delays – evaluation on-going
- Baza Gardens
  - Baza Gardens WWTP has ceased discharging into the Togcha River
  - Flows are now being sent to A-SR WWTP
  - Phases 1 and 2 complete, punch-list items being addressed;
  - Phase 3 work still ongoing (70%); working on deductive change for equalization tanks

GWA Work Session - March 19, 2019 - GM REPORT

Meters from January 2017 through January 2019 (pending February 2019 report from Chris Budasi)

COMPLETED FIELD ACTIVITY JAN 2017 THRU JAN 2019 (POSTED IN CIS)	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	TOTAL:	COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Test Meter	30	9	9	371	745	87	393	743	1000	1007	434	378	750	969	1213	1429	84	1299	797	1489	639	1366	950	1206	1330	18727	598
GWA - Meter Exchange	393	179	220	276	482	353	501	807	1526	1039	452	259	239	1086	2120	121	121	1056	1248	1125	767	744	1620	3106	158	19998	0
GWA - Verify Zero Report	30	124	114	94	96	402	261	199	550	89	82	169	356	106	117	69	13	2	2	1	5	6	7	10	8	2912	0
GWA - Verify Low Usage	0	0	0	2	37	36	196	488	657	202	127	612	858	1122	1055	463	19	5	3	6	6	2	5	40	27	5968	0
TOTAL:	453	312	343	743	1360	878	1351	2237	3733	2337	1095	1418	2203	3283	4505	2082	237	2362	2050	2621	1417	2118	2582	4362	1523	47605	598

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	345	350	144	252	305	210	302	397	1013	1130	927	704	721	1041	1347	815	671	544	1159	1216	1013	1179	1345	1208	937	19275	\$ 2,499,902.66
# OF BACKBILLINGS APPLIED AS PER FINANCE REPORTS:	0	0	0	20	122	84	29	111	219	80	77	4	136	23	323	48	75	20	30	253	243	500	1209	1412	1188	6206	
# OF FIELD CREW PERFORMING CHANGE OUTS:	19	10	13	9	21	21	14	24	35	28	28*	28*	5	13	2	2	2	28	17	25	25	25	25	25	1		
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS	7	4	5	6	9	9	10	13	15	15	13	13	8	11	5	4	1	13	9	5	5	5	5	5	0		
# OF SUPPLY STAFF TO ISSUE MATERIALS AND PROGRAM NEW METERS:	2	2	2	2	2	2	2	2	2	2	2	2	2	4	0	0	0	2	2	2	2	2	2	2	0		
# OF TEST FACILITY PERSONNEL TESTING METERS:	2	2	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	1	2	2	2	2	2	2		
# OF ACCOUNTANTS CALCULATING BACK BILLS:	0	0	0	2	3	2	2	3	3	2	2	2	2	2	2	2	2	2	2	N/A	N/A	N/A	5	5	5		
TOTAL:	30	18	22	22	38	37	31	45	58	50	48	48	20	32	11	10	7	47	31	34	34	34	39	39	8		

\*Project overtime on hold Nov 18, 2017 thru Dec 16, 2017. During this period, 4 personnel performed work on this project during the regular work day with a majority of the work completed during Nov and Dec month occurring before and after the OT moratorium.

NOTE: MARCH 18, 2018 - PROJECT ON HOLD PENDING ARRIVAL OF METERS

Project resumed June 04 2018; added 2 hrs per weekday field work on June 18, 2018

Project on hold pending new shipment of meters effective 12/22/18

REMAINING ACTIVE BADGER LP MODELS AS OF JAN 31, 2019: 11676

ACTIVE LP MODELS - PURCHASE MO & YEAR	COUNT	
2012	6501	10785 WARRANTY EXPIRED
2013	4284	
Feb-14	38	891 ACTIVE WARRANTY
Mar-14	1	
Apr-14	648	
Jun-14	9	
Aug-14	195	
<b>TOTAL :</b>	<b>11676</b>	

## METER INVENTORY AMR Meters

Stock #	Size	Meter Description	New Meters	Passed Field Meters	MMP	Meters Available	Meters at MTF	Total Count	Remarks
60484	3/4"	METER, Badger AMR 5/8" X 3/4" RCDL Model M25 Disc Meter	95	50	0	145	17	162	
74131	3/4"	METER, Badger AMR 5/8" x 3/4" **WARRANTY** RCDL Model M25	0	0		0	4	4	1EA @ KEN A
65293	3/4"	METER, Badger 5/8"x3/4" NSF61-G RCDL M25LL Disc Meter Integral	0	3	0	3	0	3	
74131	3/4"	METER, Badger AMR 5/8" x 3/4" RCDL Model M25 ***RMI***	0			0	13	13	

\*NOTE: 95 ea. Reserved for New Install only (NEW METERS)

## Public Response to Back-Billing

- Customers are surprised by back-billing
- Customers do not understand why they are being back-billing for prior year service dates
- Media reporting on back-billing and championing campaign for GWA to improve or eliminate back-billing

## New Steps Added to Back-Billing Process

- Improve communication by:
  1. Send customer a letter indicating meter has been replaced (with in 10 working days)
  2. For failed meters, send customer a letter indicating meter has been tested and account is under review for potential back-billing (with in 31 working days)
  3. If back-bill is required, send customer a letter with easily understandable calculations explaining charges for prior period water consumption (with in 49 working days)
- Researching future opportunities to improve speed and accuracy of process

## Current and Proposed Process Timelines

Process	Month 1					Month 2				Month 3		
	Week 1	2	3	4	5	6	7	8	9	10	11	12
Water Meter Exchange												
Water Meter Testing												
Back-Billing												

#### Marbo (Andy-South) Wells – Status

- Reversion documents / Notice of Entry filed by Office of U. S. Attorney in U.S District Court; property has reverted to U.S. Gov't (pending transfer to DoD)
- Informally advised that reservation was included so GWA will retain ownership of wells and no-cost easement being considered for access and use of well sites
- A copy of the reservation will be submitted to Department of Land Management. The property will be on the priority listing for the DOD Joint Land Use Group consideration for transfer to GWA.
- Press release will be issued.

#### One Guam Update

- Tumon Maui Well:
  - Inspection was done by NBG Public Works – no issues
- Santa Rosa Tank:
  - NAVFACMAR CO submitted the Executive Summary (briefing package) to the General for review. Waiting for response from Andersen CES regarding the MOU for the Santa Rosa Tank project.
- Agat-Santa Rita WWTP
  - GWA has not heard back from DoD who is preparing documents for “in-kind” consideration as payment for the Agat easement. It will require GWA to do simple mowing and the removal of one large tree at the lot near the Tumon Maui Well.
- OEA Projects
  - NGLA Observation Wells – SAR has been approved for all the wells except for NWF1 which is pending. WERI and NAVFACMAR met with Andersen Safety to provide GPS points and boundary for the well locations. The MEC plan for the well locations is being reviewed.
  - Sewer Interceptor – Revised SAR is still pending. Waiting on the MEC plan.
- Training and Collaboration
  - AWWA HIWPS training for operators – waiting for DoD interest
  - CIPP training scheduled for this month Oct 22-26.
- Property Transfers

Transfer of Navy laterals at Murray Road to GWA

- The lines were placed on the priority listing for the DoD Joint Land Use Group's (JLUG) consideration for transfer.
- Transfer of BPM-1 monitoring well
  - the property will be prioritized for transfer to GovGuam/GWA. Waiting on letter from USGS.
- Cabras Island Water Lines – GWA is still evaluating if this transfer is desired.
- Old Naval Air Station Cliff line (Tiyan)
  - There is a pending request for the reservation for easements for utilities in the Tiyan area. Maria Lewis will inquire with Real Estate for GWA to be “assigned”. This will ensure that GWA will be able to maintain the existing infrastructure. The lift station refurbishment is in GWA's water Resources Master Plan Update.

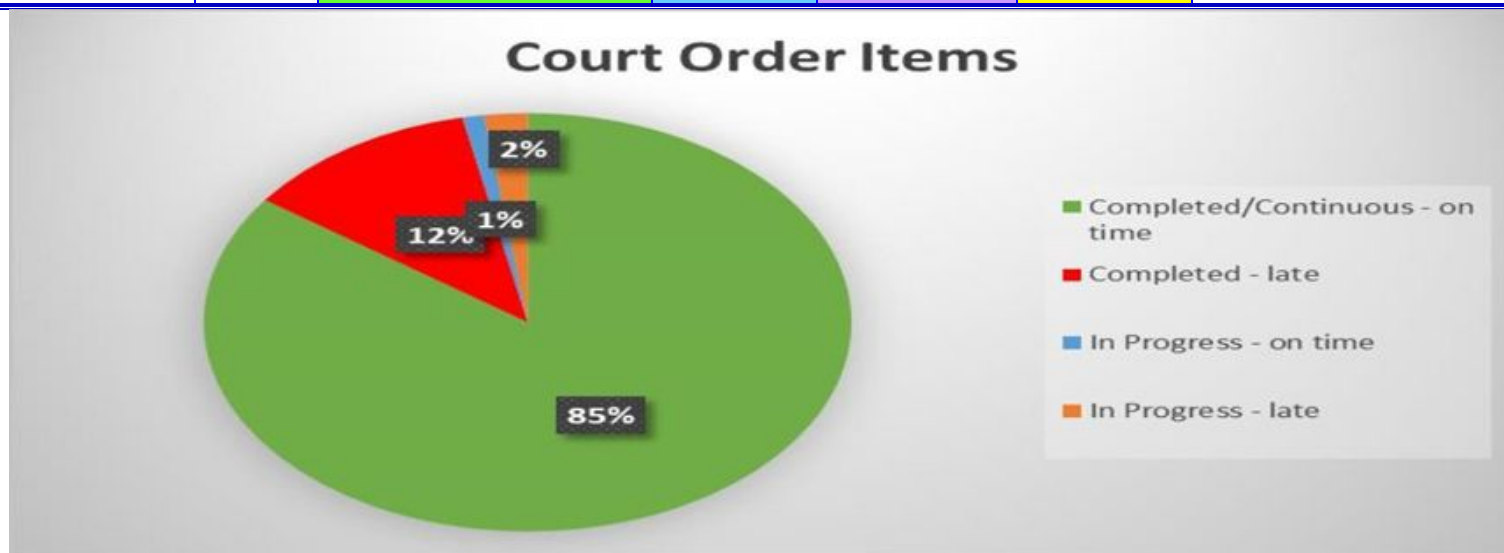
Other

- Data Sharing SOP/MOU - In final draft stage. Waiting on review from Air Force.
- Navy Raw Water Lines - DOD is studying the raw water cost and delivery to GWA. DOD will continue to sell GWA treated water, but work on a rate with distribution costs removed.



## Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
<b>Court order total</b>	<b>93</b>	<b>79</b>	<b>2</b>	<b>11</b>	<b>1</b>	<b>97.8%</b>



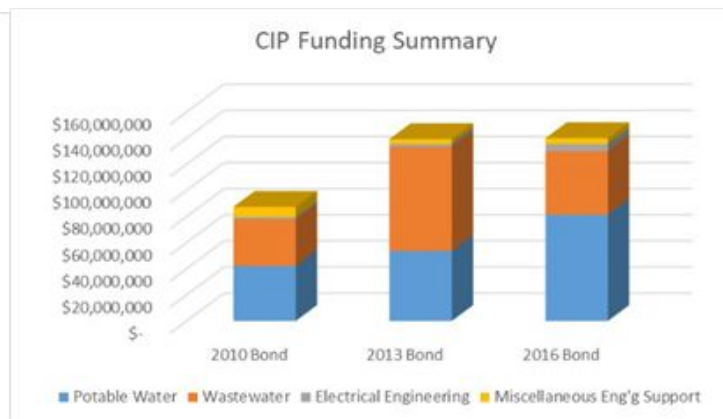
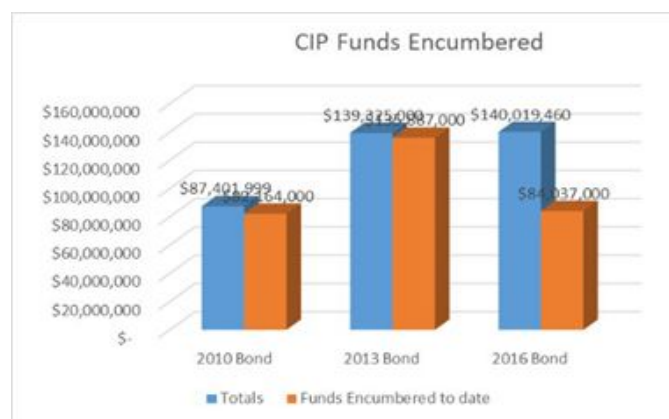
## Status Information

- 2 items delayed
  - Water Reservoir Repair. Replacement or Relocation program, CO II C 29(b)(6)(i) – (10 additional tanks by 7<sup>th</sup> CO anniversary). (Affects final date of the Court Order.)
  - Umatac-Merizo Wastewater Treatment Plant – July 2019
- Final Date to complete all Court Order items may be delayed past December 31, 2020. [CO 29(b) has been expanded by 31% beyond the original Court Order Requirements (Formal letter is in final review).]
- Overflow or Bypass events reported to USEPA:
  - Umatac WWTP, Bypass 02/24/2019 to 03/02/2019 (ended March 2<sup>nd</sup>, 2019 at 11:00 am), Typhoon Wutip Rain
  - 02/23/2019, Chalan Canto Tasi, Merizo, manhole, Typhoon Wutip Rain
  - 02/23/2019, Santa Maria, Santa Rita manhole, Typhoon Wutip Rain
  - 02/23/2019, R.R. Cruz Street, Santa Rita, manhole, Typhoon Wutip Rain

## CIP Summary

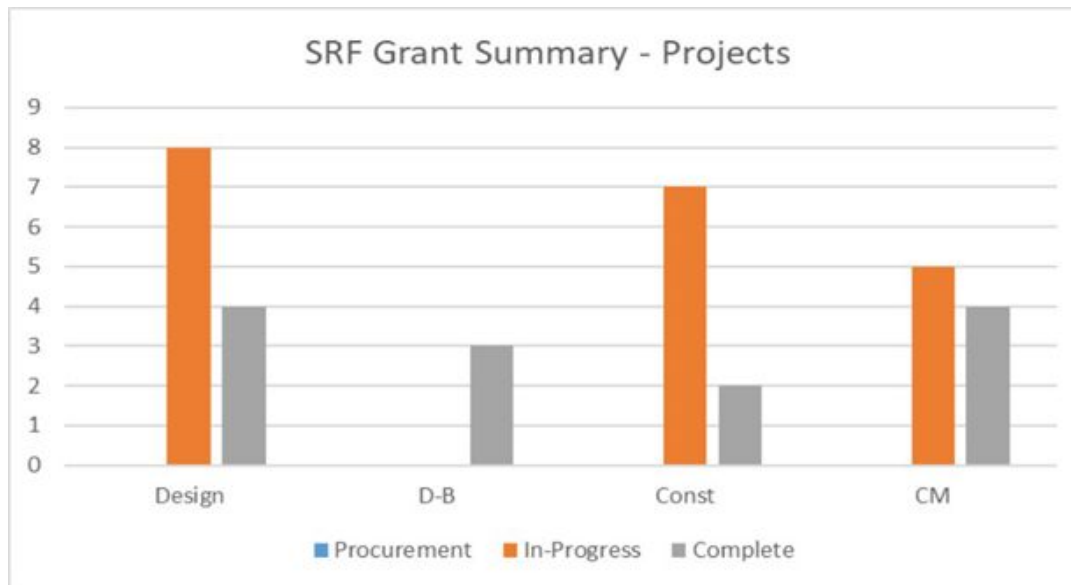
CIP Summary - Project Encumbrance (Eng'g. Report Dec 2018/Jan 2019)								
	2010 Bond		2013 Bond		2016 Bond			
	Funded	Complete	Funded	Complete	Funded	Complete	Total CIP Projects	%
Potable Water	28	17	19	13	15	4	35	49%
Wastewater	16	14	7	5	7	3	22	31%
Electrical Engineering	5	5	5	5	2	0	10	14%
Miscellaneous Eng'g Support	2	1	3	0	4	2	4	6%
<b>Totals</b>	<b>51</b>	<b>37</b>	<b>34</b>	<b>23</b>	<b>28</b>	<b>9</b>	<b>71</b>	<b>100%</b>
% of Total CIP by Fund Source	72%		48%		39%			

CIP Summary - Project Amounts (Eng'g. Report Dec 2018/Jan 2019)								
	2010 Bond		2013 Bond		2016 Bond			
	Funded	%	Funded	%	Funded	%	Total CIP Projects	%
Potable Water	\$ 42,099,790	48%	\$ 53,550,914	38%	\$ 81,331,136	58%	\$ 176,981,840	48%
Wastewater	\$ 35,813,403	41%	\$ 79,775,935	57%	\$ 48,801,428	35%	\$ 164,390,766	45%
Electrical Engineering	\$ 1,748,119	2%	\$ 2,383,897	2%	\$ 5,455,615	4%	\$ 9,587,631	3%
Miscellaneous Eng'g Support	\$ 7,740,687	9%	\$ 3,614,254	3%	\$ 4,431,281	3%	\$ 15,786,222	4%
<b>Totals</b>	<b>\$ 87,401,999</b>	<b>100%</b>	<b>\$ 139,325,000</b>	<b>100%</b>	<b>\$ 140,019,460</b>	<b>100%</b>	<b>\$ 366,746,459</b>	<b>100%</b>
Funds Encumbered to date	\$ 82,164,000	94%	\$ 135,887,000	98%	\$ 84,037,000	60%		
% of Total CIP Funding	23.8%		38.0%		38.2%			



## SRF Grant Summary

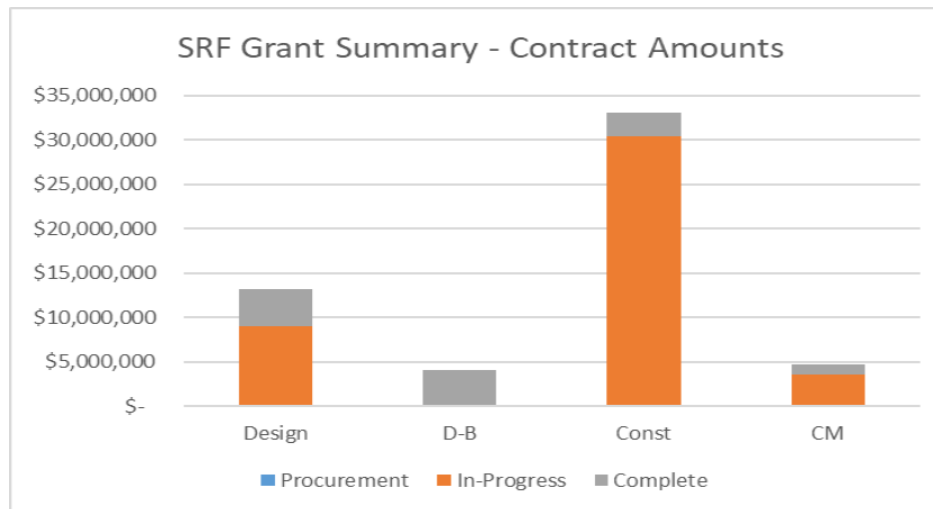
SRF Grant Summary - Projects (Dec 2018)					
	Procurement	In-Progress	Complete	Totals	%
Design	0	8	4	12	36%
D-B	0	0	3	3	9%
Const	0	7	2	9	27%
CM	0	5	4	9	27%
Totals	0	20	13	33	
%	0%	61%	39%		



## SRF Grant Summary

**SRF Grant Summary - Contract Amounts (Dec 2018)**

	Procurement	In-Progress	Complete	Totals	%
<b>Design</b>	\$ -	\$ 9,018,895	4,122,719	\$ 13,141,614	24%
<b>D-B</b>	\$ -	\$ -	\$ 4,108,217	\$ 4,108,217	7%
<b>Const</b>	\$ -	\$ 30,419,202	\$ 2,615,472	\$ 33,034,673	60%
<b>CM</b>	\$ -	\$ 3,547,682	\$ 1,131,597	\$ 4,679,279	9%
<b>Totals</b>	\$ -	\$ 42,985,778	\$ 11,978,005	\$ 54,963,783	
<b>%</b>	0%	78%	22%		



#### OEA Grant Summary

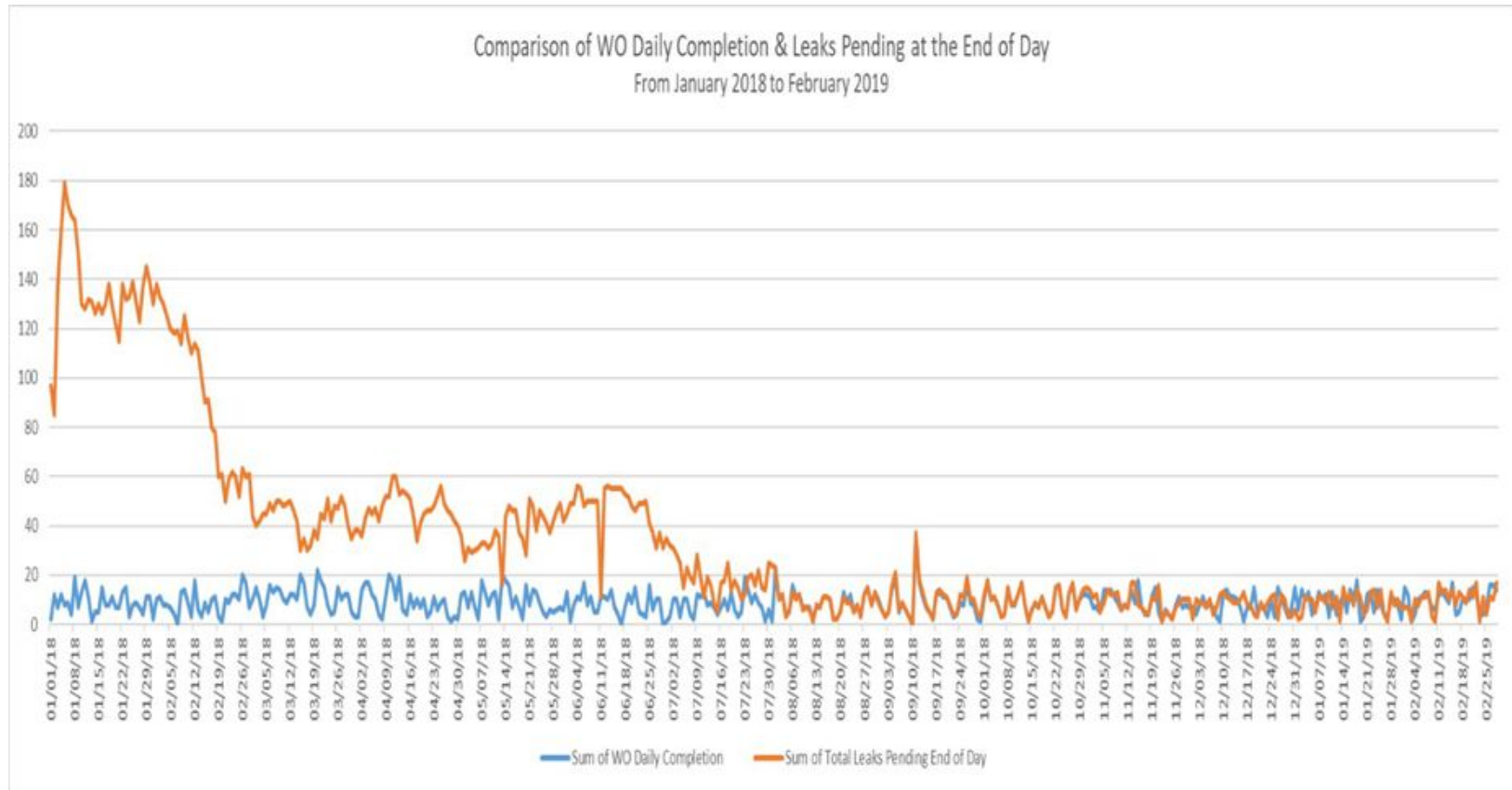
- NDWWTP Upgrades
  - 90% design submitted and reviewed.
  - Sitework bid package issued – Award pending
  - Vertical Multi-step Procurement – Step 1 Issued
  - Vertical Mutli-step Procurement Step 2 bid package planned for issuance Mar 2019
- Outfall Diffuser:
  - Bid received and currently being evaluated
- Sewer Line Interceptor Design-Build
  - 90% Design submittal expected January 18<sup>th</sup> for 1<sup>st</sup> Segment with verified CCTV and CIPP Calcs.
  - Construction start expected in January
- NGLA Observation wells – Design work completed
  - Bid package drawings and specs under review by GWA
  - Permitting issues being resolved and permits being obtained by PM/CM
  - Bid package to be issued once permits approved – expected in Mar 2019

Action Item	Date (Target)	Date (Actual)	Status	Remarks
Project Funds Available	July-16	AUG-30-16	Completed	
Land Acquisition	Jan-17	Jan-17 (Compensation Pending)	Completed	Survey complete, appraisals complete – Deed circulated for signatures
Procure PM/CM Firm	Jan-17	Jan-17 (NTP Issued Feb 10th)	Completed	
Procure Design Firm	Jul-17		Completed	Contract issued; kickoff pending
Design -- 30/60/90/Final -- Review	Jun-18	30% - completed May 60% - completed Sep 90% - Completed Dec	On-target	Project design schedule has been revised / delayed
NEPA Analysis and Determination	Feb-17	January 2019	Delayed	Pending OEA Director's Signature on FONSI
Procure Construction Firm	Dec-18		On-target	Phased construction; Phase 1 awarded; Phase 2 award in 1 <sup>st</sup> quarter '19
Construction Complete/Commence Operations	Nov-21		On-target	
Sewer line connection from MCB to GWA infrastructure	Jul-19		On-target	
MCB Initial Operating Capability	Jul-22		On-target	

## Land Acquisition Summary

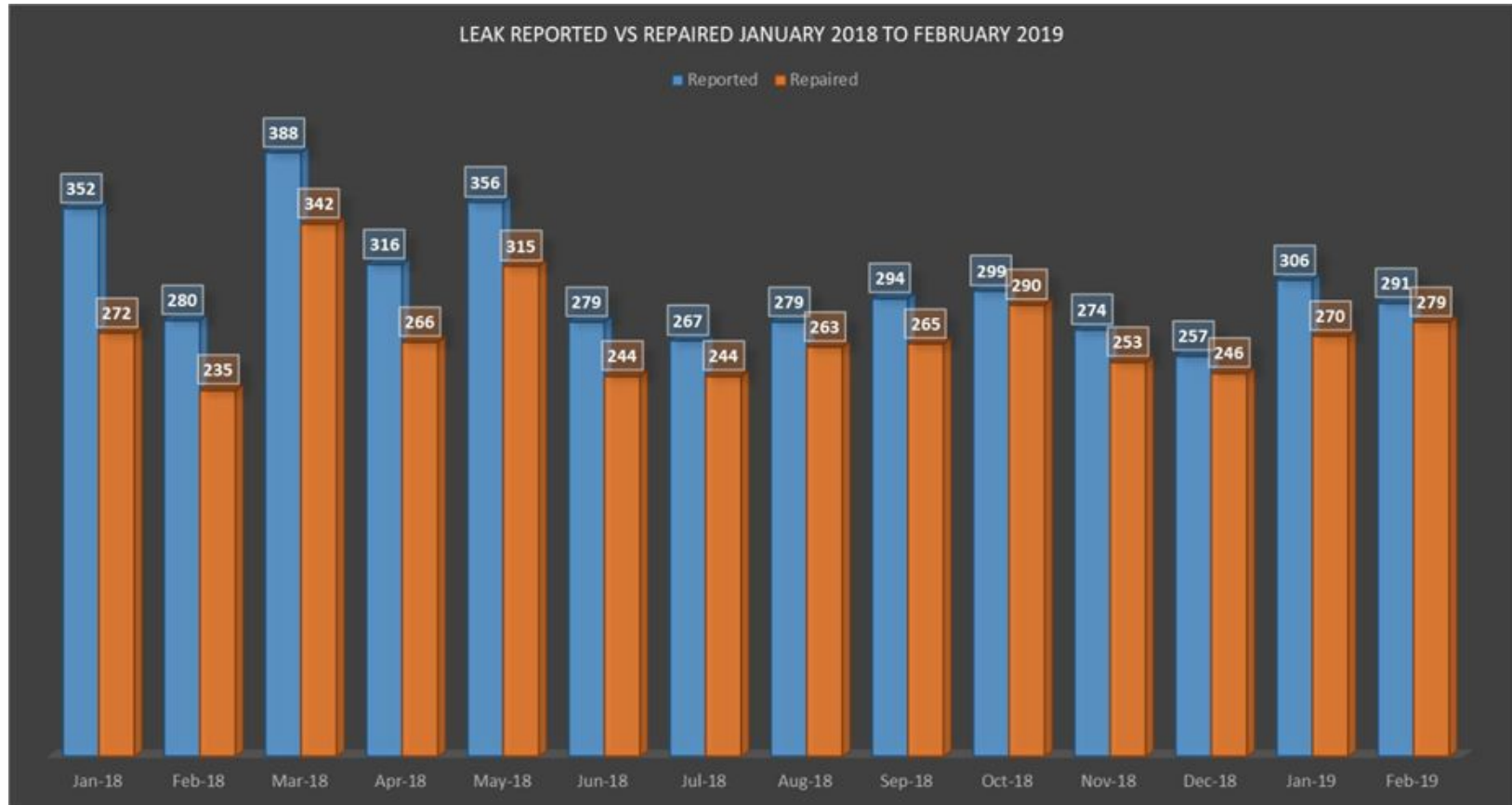
GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
Tanks	Ugum	Private	Escrow Documents received from property owners 03/04/19. Warranty Deed sent to GM for notarized signature 03/05/19
	Astumbo	Gov't. - CLTC	GWA and DLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DLM
	Piti	Private	Preliminary geotechnical investigation and archaeological investigation in the process 05/01/18
Expansion of the Northern District Wastewater Treatment Plant (NDWWTP)	Dededo	Gov't - GALC	Land acquisition completed and filed under GWA ownership 09/17/18
Deep Wells	AG-12	Dept. of Agriculture/Manhita Farms	Right of Entry Agreement sent to Dept of AG for signature 05/24/18. 2 <sup>nd</sup> follow up sent on 09/12/18. Decree of Land Registration recorded under Instrument No. 925872 08/23/18. Retracement Survey Property Map with DLM for review 03/06/19.
	Y-8	Gov't. - CLTC	Property ownership under Guam Waterworks Authority per Grant Deed No. 928090
Booster Pump Station	Agfayan	Private	Authorization Form to perform appraisal and investigative services for L28, B19, T3734, Inarajan signed by CLTC 10/29/2018
Sewer Pump Stations	2 <sup>nd</sup> Adjacent Property to Southern Link	Private	Amended LPSA picked up by Realtor Agent for property owner signature 03/04/19.
Asan Springs	Asan	Federal	License Agreement for Asan Springs facility that fall on Dept. of Park Services property currently under DOI review

Leak Repair Summary for February 2019





Comparison of Leaks Reported vs. Leaks Repaired – February 2019



### Monthly Leak Report Cost – February 2019



#### Assumptions:

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



**GUAM WATERWORKS AUTHORITY**

*"Better Water, Better Lives."*

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

Tel: (671) 300-6846

### **Issues for Discussion**

#### **Resolution No. \_\_ - FY2019**

Relative to the Re-evaluation and Implementation of the Revised GPWA Drug and Alcohol-Free Workplace Policy.

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

The GPWA Drug and Alcohol-Free Workplace Policy was approved by the CCU on 26 September 2017 for implementation on 01 October 2017. On 10 October 2017, GWA Legal Counsel received Attorney General's Opinion Memorandum, dated 06 October 2017 stated, random drug testing for *all government of Guam employees* without regard to the nature of the employee's duties and specific violation intended to be addressed will offend constitutional protections against warrantless searches.

GWA's Drug Free Workplace Program Policy authorizes random drug testing of positions identified as safety-sensitive in nature, through a Memorandum of Understanding with the Department of Administration. Furthermore, GWA Management requested a thorough review of other positions by the Department of Administration, not listed as safety-sensitive to be considered as part of the Testing Designated Position(s) (TDP) to proceed with inclusion of random drug testing. The request was made through a memorandum to the Director, Department of Administration transmitted on 06 April 2018. To date, the request has not received a successful response.

GWA Management conducted research and found that supporting opinion of the Authority's Legal Counsel is sufficient in determining inclusion of safety-sensitive positions to its current list of TDPs. This guidance is stated on the Substance Abuse and Mental Health Services Administration's (SAMHSA) 2013 Guide for Selection of TDPs, dated 06 May 2013.

The 35<sup>th</sup> Guam Legislature has been actively engaged in communications with the public relative to the use, production and law enforcement of recreational marijuana, also known as the Guam Cannabis Industry Act of 2019 in its Bill No. 32-35. The intention of this bill is to legalize the use, production and sale of cannabis by creating a regulated industry. The GPWA revised policy maintains the drug testing on its prohibited list of substances, including Marijuana/Cannabinoids (THC), consistent with the Drug-Free Workplace Act of 1988.

Moreover, Title 9 GCA, Chapter 67 Guam Controlled Substance Act, Article 1, Definitions (t) lists and defines Marijuana as a controlled substance.

Notwithstanding the disposition of the bill, it is GPWA's request to move forward and implement its Revised GPWA Drug and Alcohol-Free Workplace Policy and to authorize the legal counsel through documented support to add, delete and/or revise its TDP list as necessary, to effectively implement its Drug and Alcohol-Free Workplace Policy.

GWA further requests for the CCU's support and approval to transition on its own (away from the DOA process) to seek drug testing, laboratory and medical review officer services to effectively implement the GPWA Drug and Alcohol-Free Workplace Policy.

**Where is the location?**

Guam Power Authority and Guam Waterworks Authority

**How much will it cost?**

**When will it be completed?**

Drug and Alcohol-Free Workplace full implementation will take effect 01 October 2019.

**What is the funding source?**

Drug Testing is revenue funded.

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

Upon the approval by the CCU to transition on its own, GWA management will seek drug testing, laboratory and medical review officer services.

**D&AFWP Research References:**

- **35<sup>th</sup> Guam Legislature Bill 32-35** Guam Cannabis Act of 2019
- **9 GCA, Chapter 67** Guam Controlled Substance Act
- **Substance Abuse and Mental Health Services Administration (SAMHSA)** – 2013 Guidance for Selection of Testing Designated Positions (TDP)
- **Guam Attorney General Opinion Memorandum, Ref: LEG 17-0547**, dated 06 October 2017 – Opinion Request Relative to Random Drug Testing for All Government Employees
- **Memorandum dated 22 March 2018, transmitted to DOA 06 April 2018** – Addition to DFWP TDP List
- Drug-Free Workplace Act of 1988
- **Emerald Steel v. Bureau of Labor and Industries** – Employer does not have a duty to accommodate an employee who used medical marijuana outside the workplace because marijuana is illegal under federal law.
- **Coats v. Dish Network, LCC** – Colorado Supreme Court ruling; the state's lawful activities (medicinal marijuana) does not protect a worker's off-duty use of medical marijuana because this activity is not lawful under federal law.
- **Ross v. Raging Wire Telecomms** – California Supreme Court ruling; employers do not have to accommodate their employees' off-site medical marijuana use.



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

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

**I. Statement of Policy**

It is the policy of the GPWA to provide a safe, healthy and secure work environment for all employees and to ensure that all employees perform their job duties in a responsible, efficient and productive manner.

GPWA employees are responsible to ensure that its equipment and facilities are maintained and utilized appropriately so as not to pose a risk of harm to customers or the community. The use of drugs and the misuse of alcohol are inconsistent with delivering services, protecting water resources and GPWA assets in a safe, productive and reliable manner. Furthermore, employees who illegally use drugs or abuse alcohol may be a danger to themselves, other people and the environment as well as cause various work-related problems including tardiness, absenteeism, substandard job performance, disruptive behavior, delays in completing tasks and poor service. Accordingly, to protect the health, safety and welfare of employees, citizens, visitors and persons who interact with GPWA employees during the course and scope of their employment, GPWA has adopted this Drug-and Alcohol-Free Workplace Policy. GPWA will not tolerate illegal use of drugs or abuse of alcohol by enforcing a policy of zero-tolerance.

**II. Prohibited Conduct**

The following violations of the Drug and Alcohol-Free Workplace Policy constitute gross misconduct and shall result in immediate termination:

1. Unauthorized use, possession, sale, or solicitation for purchase/sale of drugs, drug paraphernalia or alcohol on GPWA property, in GPWA vehicles or while the employee is on duty.
2. Reporting to work or engaging in any work activity whatsoever on behalf of the GPWA in a condition which could pose a threat of harm to the employee or any other person, or reporting to or engaging in any work on behalf of the GPWA in a condition which could impair the ability to satisfactorily perform any essential function of the job, due to the use of drugs or misuse of alcohol. Should any detectable amount of drugs, or alcohol in a concentration of 0.04 breath alcohol content (BAC) or greater be established, the employee is in violation of the GPWA Drug & Alcohol-Free Workplace Policy. No employee shall perform their job functions within four hours after using alcohol.
3. Abusing or misusing prescription drugs or over-the-counter medication when such conduct could reasonably interfere with the safe or satisfactory performance of any essential job function. This includes, but is not limited to, the use, possession, sale or solicitation for the purpose of purchase or sale any prescription medication for

- which the employee lacks a valid prescription. Use of prescriptions prohibited in the policy such as medical marijuana are a violation Section III(1)(a).
4. Hindering, obstructing or refusing to cooperate or participate in any investigation involving suspected violations of this policy. This includes, but is not limited to, providing false, misleading or incomplete information in response to any inquiry from a supervisor related to a suspected violation of this policy. It also includes refusing to undergo a drug or alcohol test(s).
    - a) Refusal by an applicant to sign a consent form will be considered a refusal to submit to a drug and/or alcohol test as a condition of employment and will be considered the equivalent of receiving a confirmed "positive" result for employment and disqualification purposes. Such applicant will have his/her name removed from the certified list of eligible candidates and the position eligibility listing.
    - b) Refusal by an employee to sign a consent form will be considered a refusal to submit to a drug and/or alcohol test as a condition of employment and will be considered the equivalent of receiving a confirmed "positive" result for employment and subject to immediate termination.
  5. Hindering, delaying or obstructing a drug or alcohol test(s), including but not limited to, tampering with a sample or interfering in any way with the chain of custody.

### **III. Prohibited Substances**

As used in this policy, "prohibited substances" include but are not limited to, the following:

1. "Drugs" refers to marijuana, cocaine, amphetamines, opiates (including heroin and codeine), phencyclidine, and all other "controlled substances" as defined in Title 9 GCA Chapter 67 Guam Uniform Controlled Substances Act.
  - a) Specimens from applicants and employees will be screened in all cases to identify the following classes of substances:
    - i. Marijuana/Cannabinoids (THC);
    - ii. Cocaine Metabolites;
    - iii. Opiates;
    - iv. Phencyclidine (PCP);
    - v. Amphetamines/Methamphetamine; and
    - vi. Barbiturates
  - b) GPWA reserves the right to change, add or delete any combination of "controlled substances" for screening as new forms become available.
2. "Alcohol" includes any beverage or substance containing alcohol manufactured for the primary purpose of personal consumption.
3. "Prescription drugs" means any substance, which is attainable only by lawful prescription from a physician.
4. "Over-the-counter medication" includes any substance which does not require a prescription but has the capacity to affect a person physically, mentally, or emotionally or which could otherwise affect a person's ability to safely perform his/her duties.

### **IV. When Testing is Required**

1. Random Testing: Positions listed on Appendix A as Testing Designated Positions (TDPs) at GPWA shall be subject to random testing as follows:
  - a) Tests will be ordered on a random, unannounced basis from the entire population of GPWA list of TDP employees.

- i. A scientifically valid method such as a random number table or a computer-based random number generator will be used to select employees, thereby allowing each employee an equal chance of being tested each quarter.
  - ii. At least 25% of the employees will be selected for drug testing each quarter of the testing year.
  - iii. An employee's name will remain in the potential testing population after being selected so that every employee will have an equal chance of being tested each time selections are made. Therefore, it is possible that any employee, who is randomly selected for testing, may be randomly selected again every quarter.
  - iv. Every employee selected for random testing must be tested unless that employee is excused by the General Manager for reasons such as long-term leave, disability or termination of employment.
  - v. Any employee who has not had an equal chance of being tested each time a selection was made will be tested on or before September 30 of any year.
- b) GPWA reserves the right to increase or decrease the frequency of testing based on the needs of each utility, availability of resources, and experience in the program, consistent with the duty to achieve a drug free workplace.
- c) GPWA reserves the right to add or delete positions it deems as health, safety and security sensitive in nature to its TDP list, with supporting opinion by its Legal Counsel in accordance with the Substance Abuse and Mental Health Services Administration's (SAMHSA) Guidance for Selection of Testing Designated Positions.
- 2. All competitive and non-competitive recruitments within GPWA will be tested after a conditional offer of employment has been extended. Drug testing will be required for but, not limited to the following:
  - a) **Pre-Employment (Probational/Unclassified/Exempt/Provisional/Temporary):** Applicants selected for positions within GPWA must report for pre-employment drug testing within three business days of receiving a conditional offer of employment. An applicant who refuses a drug test(s) or who tests positive, or fails to comply with this subsection shall not be extended a final offer of employment.
  - b) **Promotions, Transfers, Reclassification from non-TDP to TDP:** Employees within GPWA will be tested upon the General Manager's approval for selection/reclassification. An employee who refuses a drug test(s) or who tests positive, shall be subject to immediate termination.

Except for emergency situations, applicants and employees will not be permitted to reschedule drug testing after they are notified that such testing is scheduled.
- 3. Return to Duty Testing: Employees who are absent from work without approval for more than fifteen calendar (15) days shall be tested for drugs and alcohol immediately after returning to work and before performing any job duties.
- 4. Reasonable Suspicion: All employees will be subject to testing when there is reasonable suspicion that the employee has used drugs or misused alcohol in violation of this policy. Grounds for reasonable suspicion testing shall include, but not be limited to personal observation of the employee's job performance, appearance, behavior, speech or odor which causes reasonable suspicion that the employee
  - a) is impaired by drugs or alcohol,



- b) has used drugs or alcohol while on duty,
  - c) or poses a threat to personal safety or others due to the use of drugs or misuse of alcohol in violation of this policy.
- 5. When specific and objective facts indicate that drug or alcohol use by an employee may have caused or been a contributing factor to an on-duty motor vehicle accident. An alcohol test(s) shall be completed within two (2) hours of the accident and a drug test(s) within twenty-four (24) hours of the accident. The following facts, if present, may independently or collectively, depending upon the circumstances, give rise to reasonable suspicion:
  - a) the appearance, behavior, speech or odor of the employee immediately prior to or after the accident;
  - b) the employee left the scene or attempted to leave the accident scene without legal authority or permission to do so;
  - c) the employee acted contrary to a safety rule, established safety practice or otherwise engaged in demonstrably unsafe behavior for which there is no reasonable explanation;
  - d) the employee was arrested or received a traffic citation;
  - e) the employee or any person received medical attention as a result of the accident;
  - f) the employee has been involved, as a contributing factor, in a pattern of repetitive on-duty motor vehicle accidents whether they involved actual or potential injury.
- 6. When specific and objective facts indicate that drug or alcohol use by an employee may have caused or been a contributing factor to an on the job accident. An alcohol test(s) shall be completed within two (2) hours of the accident and a drug test(s) within forty-eight (48) hours of the accident. The following facts, if present, may independently or collectively, depending on the circumstances, give rise to reasonable suspicion:
  - a) The appearance, behavior, speech or odor of the employee immediately prior to or after the accident;
  - b) The employee left the accident scene or attempted to leave the accident scene without legal authority or authorization to do so, or failed to report the accident to the appropriate individual or otherwise attempted to keep appropriate persons from learning about the accident or the extent of the accident;
  - c) The employee acted contrary to a safety rule, established safety practices or otherwise engaged in demonstrably unsafe behavior without a reasonable explanation.
  - d) The employee or any other person received medical attention because of the accident;
  - e) The employee has been involved as a contributing factor in a pattern of on-duty accidents whether or not they involved actual or potential injury.
- 7. Drugs, drug paraphernalia, alcohol or containers indicating the presence of drugs or alcohol are observed or discovered in a location in which the employee had primary control or access, including but not limited to, desks, lockers, equipment, machines or vehicles. The employee must have accessed the location within eight (8) hours prior to the discovery of such items.
- 8. Consent: By acknowledging receipt of this Policy in writing, the employee is providing his or her consent to any and all testing required to comply with the Policy.

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

1. Any supervisor who has received training in the signs and symptoms of drug and alcohol use and impairment may request an employee to undergo a reasonable suspicion test(s) for drugs or alcohol based upon
  - a) the personal observation of the employee by the trained individual, or
  - b) personal observation of the employee by another employee who has fully disclosed the observations to the trained individual, or
  - c) observation of the employee by a nurse or physician engaged in the treatment or evaluation of a work-related injury who has disclosed such observation to the trained individual.
2. Any untrained supervisor may request a reasonable suspicion test(s) for drugs or alcohol based upon his personal observation of the employee, under the following circumstances:
  - a) The employee has been independently observed by a trained supervisor, or
  - b) A trained supervisor has reviewed the underlying facts and agrees that reasonable suspicion exists to require a test.
  - c) Any supervisor, personnel of managerial capacity, or personnel of the Safety and Human Resources Divisions trained in detecting drug and alcohol impairment, may request a reasonable suspicion drug or alcohol test(s) following a work-related accident based upon personal observation of the employee or upon review of the specific and objective facts underlying the accident.

**VI. Testing Procedures**

1. Whenever there is reasonable suspicion to require a drug or alcohol test(s) under this policy, the General Manager, department/division heads or designees and Human Resources shall be notified of the circumstances necessitating the test(s) as soon as possible.
2. All circumstances causing reasonable suspicion to require a drug or alcohol test(s) shall be fully documented by the supervisor(s) and/or managerial personnel and all appropriate witnesses as soon as possible.
3. All GPWA-issued equipment, property and facilities, including but not limited to, desks, lockers, and vehicles (collectively "materials") are subject to inspection at any time and for any reason. No employee shall have any privacy interest whatsoever in any GPWA issued materials. No personal property may be searched unless the owner of the property has consented or a search is otherwise legally permissible.
4. Alcohol screening will be conducted using a federally approved evidential breath-testing device. An initial screening test of one (1) breath sample will be conducted first, and if an initial test detects any level of alcohol, a second confirmation test of one (1) additional breath sample will be completed.
5. Testing will be performed by a certified, licensed forensic laboratory. Drug test methods, collection, security and chain of custody procedures will conform to federal regulations. The drug test will include marijuana, cocaine, amphetamines, methamphetamines, opiates (including heroin and codeine), and phencyclidine (PCP) and barbiturates. Other "controlled substances" may be added as new forms become available. All specimens identified as positive for illegal drugs on the initial

screening will be confirmed using the gas chromatography/mass spectrometry technique.

6. All positive test results for drugs will be interpreted by a physician approved by GPWA as a medical review officer (MRO) before the results are reported to the GPWA. Prior to notifying GPWA, the MRO will make reasonable efforts to contact the employee for the purpose of allowing the employee to offer an alternative medical explanation for the positive test result. If the MRO is able to contact the employee and determines there is a legitimate medical explanation for the positive test, the result will be communicated as negative to GPWA. The MRO's inability to contact the employee before providing test results to the GPWA will not void the test result or make the test result unusable in any subsequent disciplinary action. Because the employee is present for interpretation of an alcohol test, the procedure concerning prior notification by the MRO is not applicable.
7. Upon notification by the MRO of a verified positive result for drugs, the employee may request that the remaining portion of his split specimen undergo a second confirmation test at his expense. The results of the second confirmation test, upon review by the MRO, will be determinative. If the results from the second confirmation test is negative, all prior positive tests will be disregarded and shall not be the basis for any disciplinary or adverse action.
8. The GPWA will make reasonable efforts to notify the employee of a positive drug test within five (5) days from the date it receives the test results. Because the results of a breath alcohol test are immediately available, this provision will not apply to alcohol tests conducted in such a manner.
9. Any employee ordered to be tested, based upon reasonable suspicion, shall be immediately removed from duty, escorted to the testing facility and taken home (unless other suitable arrangements have been made to transport the employee including calling a cab). The employee shall turn in keys to a GPWA vehicle, building or office, their identification badge or any other property belonging to the GPWA. The employee shall be placed on paid administrative leave pending the results of the test.
10. An employee who tests positive for drugs or alcohol shall immediately be relieved from duty, required to turn in keys to a GPWA vehicle, building or office, identification badge or any other property that belongs to the GPWA, placed on paid administrative leave, and sent home pending disciplinary action, if appropriate. A supervisor may take an employee home. If a supervisor is not comfortable taking an employee home, however, a cab may be called to come and take the employee home at the employee's expense.
11. In situations in which the employee has been ordered to be tested or tests positive and the employee refuses assistance in leaving the building and walks out or insists on leaving in his/her own vehicle, document the situation and, depending upon the circumstances, call Guam Police Department's non-emergency phone number. Give the police the employee's name, vehicle description, and license plate number. However, if the employee is extremely agitated, violent or is making threats of violence, leaves the premises in a GPWA vehicle, or you believe the employee has violated the law, call the Guam Police Department at 9-1-1.
12. A refusal to consent to a drug or alcohol test is a violation of the Policy and will be considered the equivalent of receiving a confirmed "positive" result for employment and subject to immediate termination.

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

## **VII. Training**

1. All Department Heads, Managers and Supervisors and Leads are required to participate in GPWA Drug and Alcohol-Free Workplace Policy training every two (2) years. All new employees and any employee who is hired or promoted into a supervisory position must receive training on this policy within sixty (60) days of hire or promotion. The training shall include the following topics:
  - a) The requirements of the Drug-Free Workplace Policy, including supervisor responsibilities.
  - b) Behavioral indicators of drug and alcohol use in the workplace.
  - c) The prevalence of alcohol and drug abuse and its impact on the workplace.
  - d) Proper procedures including documentation for applying the Drug and Alcohol-Free Workplace Policy.
2. All employees are required to participate in GPWA Drug and Alcohol-Free Workplace Policy training. The training shall be required every two years and include the following topics:
  - a) The requirements of the Drug-Free Workplace Policy and Zero-tolerance.
  - b) The prevalence of alcohol and drug abuse and its impact on the workplace.
  - c) Behavioral indicators of drug and alcohol use in the workplace.
  - d) The progression of the disease of addiction.
  - e) What types of assistance are available in the community.

## **VIII. Employee Assistance Program**

Prior to September 30, 2019, any employee who self-refers to a GPWA Employee Assistance Program (EAP) or a similarly available treatment program will not be subject to disciplinary action. Failure to comply with all requirements of a treatment program will result in termination. Employees that do not self-refer for assistance with a drug or alcohol abuse problem who are found in violation of Section II of this policy will be subject to immediate termination.

Beginning on October 1, 2019, employee entry into the EAP upon voluntary identification by himself or herself as a user of drugs or abuser of alcohol will not be protected from disciplinary action if found in violation of Section II of this policy.

## **IX. Arrests for Drug and Alcohol Related Offenses**

Any employee who is arrested for a drug or alcohol related offense must notify the General Manager of the arrest immediately. GPWA will decide at that time whether the arrest causes a temporary or permanent disqualification from holding that position, or constitutes grounds for disciplinary action. All convictions for alcohol or drug related offenses must be reported immediately by an employee to the General Manager. GPWA reserves the right to take appropriate action based upon such conviction.

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

**X. Alcohol at GPWA Sponsored Events**

At GPWA sponsored social events where alcohol is present, legal age employees may consume moderate and responsible amounts of alcohol. Any employee misconduct as a result of the consumption of alcohol is subject to disciplinary action. All employees are responsible for behaving in a professional and courteous manner consistent with GPWA code of conduct standards regardless of any consumption of alcohol.

**XI. Confidentiality**

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

**XII. Effective Date**

This policy will go into effect upon CCU adoption by resolution and will apply to all employees of GPWA regardless of status or classification. The policy will be strictly enforced.



# Office of the Attorney General of Guam

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October 6, 2017

## OPINION MEMORANDUM

Ref: LEG 17-0547

Honorable Telen Cruz Nelson  
Chairperson, Committee on Housing, Utilities, Public Safety  
& Homeland Security  
*I Mina'trentai Kuattro Na Liheslaturan Guåhan*  
Guam Congress Building  
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Hagåtña, Guam 96910

Re: Opinion Request Relative to Random Drug Testing for  
All Government Employees

*Håfa Adai* Senator:

This Office is in receipt of your email regarding legislation that you intend to introduce requiring random drug testing for *all* government of Guam employees. Thank you for your preliminary efforts in seeking our Office's legal perspective on such a dramatically proactive piece of legislation.

The Fourth Amendment of the United States Constitution protects "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures[.]" It protects individuals from unreasonable searches conducted by the government, even when the government acts as employer. *National Treasury Employees Union, et al., v. Von Raab*, 489 U.S. 656 (1985). The collection and testing of blood, breath, or urine intrudes upon reasonable expectations of privacy such that these intrusions are deemed searches under the Fourth Amendment of the United States Constitution. *Skinner v. Railway Labor Executives' Association*, 489 U.S. 602 (1989). To be upheld under the Fourth Amendment, the drug testing of a public employee must be based on a reasonable suspicion of wrongdoing. *Chandler v. Miller*, 520 U.S. 305, 313 (1997).

Random drug testing of all government employees based only on a general need to deter drug use by government employees has been deemed insufficient. "*Chandler* makes clear that the need for suspicionless testing must be far more specific and substantial than the generalized existence of a societal problem."



Opinion Memorandum  
 Ref: LEG 17-0547  
 Re: Opinion Request Relative to Random Drug Testing  
 Page 2 of 3

*Lanier v. City of Woodburn*, 518 F.3d 1147, 1150-51 (9th Cir. 2008). “In order to pass constitutional muster, the [government employer] has the burden of demonstrating a ‘special need’ to conduct suspicionless searches of its prospective employees.” *Taylor-Failor v. County of Hawaii*, 90 F.Supp.3d 1095, 1099 (D. Hawaii 2015) (quoting *Chandler*, 520 U.S. at 318).

Courts evaluate “special need” using a two-step inquiry. First, courts examine whether the search serves a “special governmental need” beyond crime detection. *Nat’l Treasury Employees Union v. Von Raab*, 489 U.S. 656, 665–66, 109 S.Ct. 1384, 103 L.Ed.2d 685 (1989). Then, “[o]nly if the government is able to make a showing of substantial special needs will the court thereafter ‘undertake a context-specific inquiry, examining closely the competing private and public interests advanced by the parties,’ to determine the reasonableness of the search.” *Lebron v. Sec’y, Fla. Dept. of Children & Families*, 710 F.3d 1202, 1207 (11th Cir. 2013) (citing *Chandler*, 520 U.S. at 314, 117 S.Ct. 1295); *Von Raab*, 489 U.S. at 665–66, 109 S.Ct. 1384. The “permissibility of a particular search is judged by balancing its intrusion on the individual’s Fourth Amendment interests against its promotion of legitimate governmental interests.” *Skinner*, 489 U.S. at 619, 109 S.Ct. 1402 (citation omitted). *Taylor-Failor*, 90 F.Supp.3d at 1099-1100.

In limited circumstances, where the government employee’s privacy interests implicated by the search are minimal, and where an important governmental interest to be furthered by the intrusion would be jeopardized by requiring individualized suspicion, a suspicionless search may be reasonable. *Skinner*, 489 U.S. at 602. In *Skinner* the Court upheld a federal drug testing program for railroad employees noting that railroad employees’ duties are fraught with such risks of injury to others that even a momentary lapse of attention can have disastrous consequences. In *Von Raab* the Court upheld the U.S. Customs Service program’s need to conduct suspicionless searches against the privacy interests of employees directly engaged in drug interdiction, and of those otherwise required to carry firearms. *Von Raab*, 489 U.S. at 668.

Interpreting *Von Raab* to hold that the government may search its employees only when a clear, direct nexus exists between the nature of the employee’s duty and the nature of the feared violation, the Court of Appeals for the D.C. Circuit upheld random testing for Justice Department employees with access to top secret classified information. *Harmon v. Thornburgh*, 878 F.2d 484 (D.C. Cir. 1989), cert. denied 493 U.S. 1056 (1990). However, the court found that the government’s interests in work force integrity, public safety, and protection of sensitive information did not justify a plan for random testing of employees in less sensitive positions under the Fourth Amendment.

Random drug testing has been found permissible for aviation workers, police guards, and drug counselors. See, *National Federation of Federal Employees v. Cheney*, 884 F.2d 603 (D.C. Cir. 1989), cert. denied, 493 U.S. 1056 (1990). Unannounced drug testing in the Cook County Department of Corrections was required to be limited to employees with regular prisoner contact, with opportunities to smuggle drugs, or with access to firearms. *Taylor v. O’Grady*, 888 F.2d 1189 (7th Cir. 1989). The Supreme Court of California has held that while there is a sufficiently important governmental interest to justify the suspicionless drug testing for employment

Opinion Memorandum

Ref: LEG 17-0547

Re: Opinion Request Relative to Random Drug Testing

Page 3 of 3

positions involving the interdiction of drugs, the carrying of firearms, and the handling of truly sensitive information, it is not constitutionally permissible for a governmental employer to conduct suspicionless urinalysis drug testing of all current employees seeking promotion, regardless of the nature of the position at issue. *Loder v. City of Glendale*, 14 Cal.4th 846, 922 P.2d 1200, 59 Cal. Rptr.2d 696 (1997).

Job positions where suspicionless drug testing was found to be impermissible include: library workers: *Lanier v. City of Woodburn*, 518 F.3d 1147 (9th Cir. 2008); railroad mail clerks: *Liverpool v. New York City Transit Authority*, 835 F.Supp. 1440 (E.D. N.Y. 1993) *aff'd without opinion*, 41 F.3d 1501 (2nd Cir. 1994); bus depot custodians: *Bolden v. Southeastern Pa. Transportation Authority*, 953 F.2d 807 (3rd Cir. 1991), *cert. denied*, 504 U.S. 943 (1992); federal prosecutors who prosecute drug cases: *Harmon v. Thornburgh*, 878 F.2d 484 (D.C. Cir. 1989), *cert. denied* 493 U.S. 1056 (1990); cooks and painters aboard ships: *Transportation Inst. v. United States Coast Guard*, 727 F.Supp. 648 (D. D.C. 1989); and U.S.D.A. Food and Nutrition Service computer specialists, motor vehicle operators, and non-management non-law enforcement plant protection and quarantine officers who do not carry weapons and are not authorized to make arrests: *National Treasury Employees Union v. Ling*, 706 F.Supp. 934 (D. D.C. 1988).

In summary, a broad brushed attempt to institute random, suspicionless drug testing of all government of Guam employees without regard to the nature of the employee's duties and the specific violation intended to be addressed will offend constitutional protections against warrantless searches.

Respectfully,



ELIZABETH BARRETT-ANDERSON  
Attorney General

cc: Acting Governor Ray Tenorio  
DOA Director Christine Baletto





DATE: May 6, 2013  
 TO: Federal Executive Branch Agencies  
 FROM: Interagency Coordinating Group Executive Committee  
 SUBJECT: Updated Guidelines for Selection of Testing Designated Positions

## 2013 Guidance for Selection of Testing Designated Positions (TDPs)

### I. Purpose

Effective immediately, this guidance supersedes, but does not fundamentally change, the previous Testing Designated Position (TDP) guidance initially issued on August 2, 1999 and updated on April 5, 2010. This guidance document will serve as the primary agency reference for selecting and/or reviewing positions designated for random testing under the Federal Drug- Free Workplace Program established pursuant to Executive Order No. 12564.

#### A. Selection Categories

**Note: Agency requests for categorical inclusions of TDPs will not be considered. TDP submissions must provide specific position title(s)/classification(s)/justifications which includes a concurrence memo from their agency OGC.**

The 1999 guidance consolidated the results of court decisions and established specific categories of TDPs. In January 2010, the Department of Justice reviewed legal activity since the issuance of the 1999 guidance and concluded that there were no decisions altering the following TDP categories:

- **Presumptive Positions:** Must be included in all plans. Agencies desiring to **exclude** any of these positions must submit a written justification for doing so. Exclusions require the prior written approval of the Interagency Coordination Group Executive Committee (ICGEC).
- **Preferred Positions:** Should, but may not be included in all plans. Agencies desiring to **exclude** any of positions must provide a clear justification for doing so.
- **Discretionary Positions:** Agency specific. Agencies desiring to **include** such positions must present a clear justification for doing so, including a detailed description/statement of the immediate risks posed by incumbents using illegal drugs.
- **Disfavored Positions:** May not be included in any plan.

## B. Review Process

The 1999 TDP Guidance established the role of the Office of National Drug Control Policy in assuring appropriate consistency among the Executive Branch agencies implementing Executive Order 12564 and to convene the Interagency Coordinating Group Executive Committee (consisting of representatives of the Office of National Drug Control Policy, Department of Health and Human Services, Department of Justice and Office of Personnel Management) to provide concurrence reviews on agencies seeking to implementing substantive changes in their agency plans or TDP lists. These roles and processes remain in place.

Agencies are encouraged to seek informal, preliminary consultation on proposed substantive changes and submit their draft proposals to: The ICG Executive Committee, c/o Hyden S. Shen, Esq., Policy Oversight Lead, Federal Drug Free Workplace Program, Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA), Division of Workplace Programs, 5600 Fishers Lane, Rockville, Maryland, 20857<sup>1</sup>. Telephone: (240) 276-2600. E-Mail: Hyden.Shen@samhsa.hhs.gov

### Agency proposals should consist of the following information:

- A detailed statement describing the change(s) sought in the plan and the proposed language.
- Job descriptions or a summary of the duties performed by positions proposed for inclusion in the random testing pool.
- Justification for inclusion of each position (In some cases, group justifications may suffice for positions that share common duties and fall under the same TDP category.)
- **Supporting opinion from agency General Counsel**

## II. The Legal Framework

Based upon the prior agency program litigation, the courts have been able to establish "limits" on the TDP justifications for the presumptive, preferred, discretionary and disfavored positions noted below. However, given unique agency missions, a substantial gray area continues to exist within the TDP categories.

Agencies are advised to seek agency counsel review prior to proposing changes or additions to their TDP lists. The most significant and instructive cases in this field continues to be the early pronouncements within United States Supreme Court in *Skinner v. Railway Labor Executives' Assn.*, 489 U.S. 602 (1989), and *National Treasury Employees Union v. Von Raab*, 489 U.S. 656 (1989). Additionally, the Supreme Court has upheld the constitutionality of drug testing programs in other contexts, such as interscholastic athletics. See *Vernonia School District 47J v. Acton*, 515 U.S. 646 (1995) and "students in

<sup>1</sup> SAMHSA Address Updated: January 2017

competitive extra-curricula activities," *Board of Education Independent School District No. 92 of Pottawatomie County v. Earls*, 536 U.S. 822 (2002).

### **A. Presumptive Testing Designated Positions**

In light of the well established case law and clear public interest in testing certain categories of positions, the positions set forth below have been approved for inclusion in agency testing plans without the prior approval of the ICG Executive Committee. In order to improve consistency, it is essential that individual agencies include all positions in these categories in their plans, unless a clear and compelling reason can be provided for not doing so. Indeed, almost all agencies already test these positions.

Since courts have consistently found that testing of these safety-sensitive positions is justified, agencies need not submit for consultative review, their plan to include these positions as TDPs. However, an information copy of implemented changes should be forwarded to the ICG Executive Committee. If an agency head is of the opinion, that unique agency circumstances warrant the exclusion of all or some of the positions in these categories, these circumstances should be presented in writing to the ICG Executive Committee for consultative review. The positions that **must** be included in your agency plan are as follows:

#### **1. Employees Who Carry Firearms**

*NTEU v. Von Raab*, 489 U.S. 656, 109 S. Ct. 1384, 1393-94 (1989). This category was narrowed from "employees authorized to carry firearms" in order to distinguish various investigators and guards who do not carry a firearm on a daily basis, but are merely authorized to carry firearms. Employees in the latter category should be placed in the appropriate preferred TDP category. However, employees who actually carry firearms on a daily or regular basis are included in this presumptive category and should be included.

#### **2. Motor Vehicle Operators Carrying Passengers**

*NTEU v. Yeutter*, 918 F.2d 968, 972 (D.C. Cir. 1990). *AFGE v. Skinner*, 885 F.2d 884, 889 n.8 (D.C. Cir. 1989), *cert. denied*, 495 U.S. 923 (1990). This category also includes operators of motor vehicles weighing more than 26,001 pounds and operators of motor vehicles transporting hazardous materials. *Intern. Broth. of Teamsters v. Department of Transportation*, 932 F.2d 1292 (9th Cir. 1991). Note: Department of Transportation regulations implementing the Omnibus Transportation Employee Testing Act of 1991 require random testing for drugs and alcohol of Federal employees who operate vehicles that require a commercial driver's license. A commercial license is required for vehicle operators who: (1) carry 16 or more passengers, (2) transport hazardous materials, or (3) operate vehicles weighing 26,001 pounds or more.

#### **3. Aviation Flight Crew Members and Air Traffic Controllers**

*Bluestein v. Skinner*, 908 F.2d 451 (9th Cir. 1990). *AFGE v. Skinner*, 885 F.2d at 889 n.8.

#### 4. Railroad Operating Crews

*Skinner v. RLEA*, 489 U.S. 602, 109 S. Ct. 1402 (1989). *RLEA v. Skinner*, 934 F.2d 1096 (9th Cir. 1991). *AFGE v. Skinner*, 885 F.2d at 889 n.8.

#### B. Preferred Testing Designated Positions

The well established law and clear public interest applicable to drug testing make it evident that the categories set out under this section represents strong government interests for drug testing and should almost always need established judicial standards. However, inclusion of the following positions as TDPs is not presumptive. To ensure reasonable uniformity, agencies will be required to present for ICGEC consultative review, agency-specific justifications for testing these positions. Agencies choosing to exclude one or more positions as a TDP will be required to justify their decision to the ICG Executive Committee.

##### 1. Certain Health and Safety Positions

The first major category includes certain health and safety responsibilities that could cause immediate, substantial physical injury if carried out under the influence of drugs, usually involving a potentially dangerous instrument or machine. These positions are:

##### a. Employees authorized to carry firearms

*NTEU v. Von Raab*, 489 U.S. 656, 109 S. Ct. 1384, 1393-94 (1989). This category was changed from "employees having access to firearms". In many cases, there are guards or security personnel who do not regularly carry a firearm, but are authorized to carry one in some circumstances, e.g. emergencies. The rationale for including these positions as TDPs is the same as employees with a security clearance who see classified documents only rarely--granting security clearances in advance proved flexibility and ensures employees can be given access to classified material as soon as the need arises. See *Harmon v. Thornburgh*, 878 F.2d 484, 492 (D.C. Cir. 1989), *cert. denied*, 493 U.S. 1056 (1990).

##### b. Railroad Employees Engaged in Safety Sensitive Tasks

This includes persons engaged in handling train movement orders, safety inspectors and those engaged in maintenance and repair of signal systems. *Skinner v. RLEA*, 489 U.S. 602, 109 S. Ct. 1402 (1989). *RLEA v. Skinner*, 934 F.2d 1096 (9th Cir. 1991). *AFGE v. Skinner*, 885 F.2d at 889 n.8.

##### c. Aviation Personnel

This includes flight attendants, flight instructors, ground instructors, flight testing personnel, aircraft dispatchers, maintenance personnel, aviation security and screening personnel, and aircraft safety inspectors. *Bluestein v. Skinner*, 908 F.2d 451 (9th Cir. 1990). *AFGE v. Skinner*, 885 F.2d at 889 n.8. In 1992, two federal district courts in California considered challenges to Air Force and Navy TDPs respectively. In *AFGE v. Wilson*, 5-89-1274 (E.D.

Cal. Aug. 17, 1992), the Air Force had included an employee who made tools used by aircraft mechanics to maintain and repair their aircraft. The court held that the danger of a defective tool causing a crash was too remote to support random testing. Only Air Force employees with direct aircraft maintenance responsibilities were approved for random testing. In *AFGE v. Cheney*, C-89-4443 (N.D. Cal. Aug. 14, 1992) a different court considered several categories of employees who performed maintenance on Navy ships, submarines and planes. Those approved as TDPs were able to show a nexus between the work performed and a "compelling government interest in safety," such that small errors or momentary lapses in judgment could have "catastrophic consequences for crew members". This case highlights the principle that agencies may randomly test employees with direct and critical responsibilities for maintenance, but not those in general support roles.

## **2. Presidential Appointees Requiring Senate Confirmation (PAS)**

The second major preferred category involves presidential appointees requiring Senate confirmation (PAS). While including PAS positions as TDPs is strongly preferred, an agency head may determine that it is impractical for part-time presidential appointees who sit on commissions or boards which meet only three or four times to be included in the TDP. In this instance, the PAS may potentially qualify for an exclusion.

## **3. Front Line Law Enforcement Personnel**

The third major preferred category is front line law enforcement personnel with close proximity to criminals, drugs, or drug traffickers. These positions include guards and law enforcement personnel who have access to firearms (but do not carry weapons or otherwise meet the standards for a presumptive TDP) and those directly involved in drug interdiction duties. *Von Raab*, 109 S. Ct. at 1393-94; *Guiney v. Roache*, 873 F.2d 1557 (1st Cir.), *cert. denied*, 110 S. Ct. 404 (1989).

## **4. Drug Rehabilitation Employees**

The fourth major preferred category is drug rehabilitation or equivalent employee assistance duties that are so inimical to illegal drug use that such employees can expect inquiries into their fitness. These positions include direct service staff of alcohol and drug abuse treatment centers. *NFFE v. Cheney*, 884 F.2d 603, 614 (D.C. Cir. 1989), *cert. denied*, 493 U.S. 1056 (1990). Although, some agencies believed that all employees associated with the drug program should be included in the random testing pool, the courts have taken a narrower view. In *NFFE v. Cheney*, the court approved drug counselors with direct client contact as TDPs; however, it refused to approve either drug laboratory testing personnel or to those employees in the biochemical chain of custody. Regarding the latter two categories, the court found an insufficient nexus between a drug-related lapse and any irreparable harm. Based on the holdings of this case, only drug program employees who have direct client contact should be included as TDPs. NOTE: Unless, supervisors of drug counselors meet this test, they should not be included as



TDPs. Additionally, computer employees who help select personnel for random tests do not qualify as TDPs. The court was not persuaded that the "credibility" or "integrity" of the drug testing program justified random testing for every employee associated with drug testing.

## **5. Personnel Having Access to "Truly Sensitive Information"**

The fifth major preferred category is personnel having access to "truly sensitive information". For example, individuals with access to national security material that a "reasonable person" would consider damaging to national interests if compromised. *Von Raab*, 109 S. Ct. at 1396. Specifically, these positions include:

### **a. Top Secret and Higher Clearances**

*Harmon v. Thornburgh*, 878 F.2d 484, 492 (D.C. Cir. 1989), *cert. denied*, 110 S. Ct. 865 (1990). *AFGE Local 1533 v. Cheney*, No. 90-15834 (9th Cir. Sept. 11, 1991)

### **b. Secret Clearances**

*Hartness v. Bush*, 919 F.2d 170, 173 (D.C. Cir. 1990), *cert. denied*, 59 USLW 3865 (U.S. 1991).

### **C. Discretionary Designations**

In addition to the categories of positions identified for presumptive and preferred inclusion in agency plans, there are other agency specific sensitive positions which may warrant designation for testing. The presumptive and preferred testing categories are not exhaustive of TDPs supported by case law. For example, courts have supported testing for: confidential security clearances holders, *NTEU V. Hallet*, No. 86-3522 (E.D. LA. Feb 7, 1991); health care professionals responsible for direct patient care, and firefighters, *AFGE v. Derwinski*, 777 F. Supp. 1493 (N.D. Cal. 1991). Other federal district courts also have upheld random testing for medical doctors (except for doctors performing research or administrative duties), nurses, nursing assistants, pharmacists, and medical technicians because they were involved in direct patient care.

Given the unique agency missions, there are a number of other, non-court tested TDPs that may be appropriate for inclusion within agency plans. To the extent that agencies have identified potential TDP positions, they will be required to submit Appendix A of its plan with supporting documentation to the ICG Executive Committee for consultative review. The agency's plan must contain a statement indicating a clear nexus between the employee's duties and the feared harm to others for each TDP.

### **D. Specifically Disfavored Testing Designated Positions**

It is possible to identify positions which uniformly have been found by the courts not to warrant *random* testing. If an agency has TDPs based solely on the criteria below, exceptional justifications will be required to be submitted to the ICG Executive Committee for consultative review. These positions are:

1. Positions designated based upon the need to foster public trust or generalized requirements for integrity, honesty, or responsibility. *NTEU v. Yeutter*, 918 F.2d 968, 972 (D.C. Cir. 1990) and *Chandler v. Miller*, 502 U.S. 305 (1997) in which random testing cannot be utilized merely for "symbolic" testing. The Chandler case involved candidates for public office.

2. Positions designated based upon access to sensitive information not meeting the "truly sensitive" criteria, e.g. personnel files, budget and financial information, and grand jury information also is inadequate. *Harmon v. Thornburgh*, 878 F.2d 484, 492 (D.C. Cir. 1989), *cert. denied*, 110 S. Ct. 865 (1990). Many questions were raised about including inspector general employees because of their access to sensitive information and budget or financial employees because of their influence on large sums of money. Under current case law, neither group qualifies as a TDP. The rationale for excluding inspector general employees is contained in the *Harmon* case. In *Harmon*, the court approved employees with top secret clearances as TDPs because of their access to "truly sensitive" information, but it refused to approve as TDPs federal prosecutors or employees with access to secret grand jury proceedings. The court stated that "truly sensitive" does not include all information which is confidential or closed to public view. The rationale for excluding budget and financial employees is found in *AFGE v. Carazoes*, 721 F. Supp. 1361 (D.D.C. 1989), where the court refused to approve as TDPs a group of computer employees involved with billions of dollars of government resources who might be subjected to bribery, fraud, waste or mismanagement. The court concluded that program information which affects large sums of money does not necessarily mean the information is "truly sensitive". The clearest examples of "truly sensitive" remain information requiring a top secret clearance, where by definition, national security would be seriously damaged by an unauthorized disclosure.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, CA 94105-3901

Certified Mail No. 7016 0750 0000 6044 1322

Miguel C. Bordallo  
General Manager  
Guam Waterworks Authority  
P.O. Box 3010  
Hagatna, Guam 96932

JAN 31 2019

**RE: Termination of National Pollutant Discharge Elimination System (NPDES) Permit for  
Baza Gardens Sewage Treatment Plant (GU0020095)**

Dear Mr. Bordallo:

On January 1, 2019, you indicated that the discharge from the Baza Gardens Sewage Treatment Plant to the Togcha River had been permanently terminated by redirection of flow to another Publicly Owned Treatment Works. In accordance with 40 C.F.R. §122.64(b), EPA is hereby terminating NPDES permit GU0020095. The permit termination will be effective February 28, 2019.

If you have any questions, please contact Jamie Marincola of my staff at 415-972-3520, or by email at [Marincola.Jamespaul@epa.gov](mailto:Marincola.Jamespaul@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Tomás Torres", is written over a horizontal line.

Tomás Torres *January 31, 2019*  
Director, Water Division

cc: Guam Environmental Protection Agency [by email]





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

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

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

**Prepared By:** Paul Kemp, Vangie Lujan and John Riegel

**Update:** March 7, 2019

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

**Preface to the Corrective Action Plan**

**Reporting**

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

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

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

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

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

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

**Recommendation:**

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

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

**Action Plan:**

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

<b>Proposed Action Item Schedule</b>	<b>Task Description</b>
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
<b>Semi-annually beginning 01/2014</b>	<b>Training on SOP's Repeats Continuously, Managed for GWA by Ann Borja Supported by CDM Smith funded by EPA SRF.</b>
<b>Updates (Reporting per Preface)</b>	<b>Supported by CDM Smith funded by EPA SRF CMMS Is being implemented.</b>



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**Update:** March 7, 2019

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

<b>2. Sources—No Wellhead Protection Plan</b>	
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.	
<ul style="list-style-type: none"> <li>Potential bacteriological and/or chemical contamination of source</li> <li>Wells located near potential sources of contamination</li> </ul>	
<b>Recommendation:</b>	
<ul style="list-style-type: none"> <li>Possible sewage source upstream (Talofofo Falls Park) - Should notify owner/operators of need to notify Uguim WTP if there is a spill or discharge</li> <li>Recreational activities on the Uguim River at the intake site which currently allow people in close proximity to the intake structure should be evaluated.</li> </ul>	
<b>Action Plan:</b>	
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..
<b>06/29/2015</b>	<b>Complete</b>

<b>3. Sources Uguim— Diesel fuel storage tank containment located near intake for Uguim Water Treatment Plant (WTP) is undersized:</b>	
Diesel fuel storage tank containment located near intake for Uguim Water Treatment Plant (WTP) is undersized; spill could contaminate the Uguim River. Potential chemical contamination of source	
<ul style="list-style-type: none"> <li>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 Uguim River</li> </ul>	
<b>Comment:</b> 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.
<b>05/08/2013</b>	<b>Verification sent to EPA – Complete</b>

<b>4. Sources Well— Some wells have cracks and other openings in the well pads, well casings and improperly sealed sanitary seals.</b>	
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.	
<ul style="list-style-type: none"> <li>Cracks in well pads and well casings and improperly sealed sanitary seals</li> <li>Lack of well pads at some locations</li> </ul>	
<b>Action Plan:</b>	
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
<b>6/6/2013</b>	<b>Report sent to USEPA - Complete</b>



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**Update:** March 7, 2019

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

<b>5. Sources Well— Missing screens on well casing vents.</b> Potential contamination of source. <ul style="list-style-type: none"> <li>Missing screens on well casing vents</li> </ul>	
<b>Action Plan:</b> 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

<b>6. Sources Well— Wells have bypass lines that were routed into the ground and off-site without an air gap.</b> 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	
<b>Action Plan:</b> 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

<b>7. Sources Spring--Lack of operating flow meter at spring source makes operation (including chlorine dosing) problematic.</b> Difficulty in ensuring adequate chlorination/disinfection <b>Recommendation:</b> 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.	
<b>Action Plan:</b> 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

<b>8. Sources Spring-- Santa Rita Spring Box (Clear Well) –</b> – Gaps between corrugated metal roof and clear well walls allow entry by animals, birds and reptiles. Allow bacteriological contamination to enter source.	
<b>Action Plan:</b> Initiate repair. Document completion of repair.	
Proposed Action Item Schedule	Task Description
05/08/2013	Reported to USEPA - Complete



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**Update:** March 7, 2019

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

<b>9. <u>Treatment-- Lack of operations and maintenance (Ugum, Santa Rita Spring)</u></b>	
<b>Recommendation:</b>	
<ul style="list-style-type: none"> <li>Implement routine and corrective maintenance at all spring appurtenances—meters, valves, pumps, piping, pressure gauges, etc.</li> </ul>	
Ugum training on O&M will be regular refresher classes on annual basis.	
<b>Action Plan:</b>	
<b>Proposed Action Item Schedule</b>	<b>Task Description</b>
Santa Rita Spring (Ground Water)	
05/08/2013	Santa Rita Spring O&M training was completed and 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
<b>07/01/2014 and thereafter.</b>	<b>O&amp;M training will have annual refreshers.</b>
<b>Court Order project r</b>	<b>See Court Order Section II C. 26 Ugum SOP's - Complete</b>

<b>10. <u>Treatment-- Lack of operating turbidimeter at Santa Rita Spring source.</u></b>	
<b>Action Plan:</b>	
Initiate repair. Document completion of repair.	
<b>Proposed Action Item Schedule</b>	<b>Task Description</b>
05/08/2013	Verification submitted to USEPA - Complete

<b>11. <u>Treatment-- Plant operators do not regularly conduct jar tests and do not optimize precursor removal at Ugum WTP.</u></b>	
<b>Action Plan:</b>	
Prepare Bid or Change Order for TOC. Prepare documentation of training. Provide copies of regular reporting.	
<b>Proposed Action Item Schedule</b>	<b>Task Description</b>
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

<b>12. <u>Treatment-- Inadequate turbidity monitoring and reporting at Ugum</u></b>	
<b>Action Plan:</b>	
Address re-programming SCADA. Provide copies of daily submittals sent to GEPA and monthly submittals, and send example reports to USEPA as documentation.	
<b>Proposed Action Item Schedule</b>	<b>Task Description</b>
06/06/2013	Send documentation of conformance to USEPA
05/30/2013	Send documentation of conformance to USEPA - Complete



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

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

Guam Waterworks Authority Sanitary Survey Significant Deficiencies for the Water System

**Prepared By:** Paul Kemp, Vangie Lujan and John Riegel

**Update:** March 7, 2019

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

<b>13. Treatment-- At least one well (D-5) did not have a chlorination system in place</b>	
<b>Action Plan:</b> 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

<b>14. Treatment Well-- At least one well, the well log indicated chlorine gas had run out in the past (April 29, 2012)</b> <u>Inadequate chlorination/disinfection could result in exposure to bacteriological contamination.</u>	
<b>Action Plan:</b> 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

<b>15. Water Storage-- Severe internal/external rust and corrosion</b> including roofs, roof vents, walls, base and other welds, anchors allows contaminants to enter tanks. <b>Recommendation:</b> GWA should properly maintain facilities and grounds (remove overgrown vegetation, take away garbage, repair security breaches, etc.	
<b>Action Plan:</b> 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-In Progress

<b>16. Water Storage-- Bolts, many completely rusted through, compromise structural stability of tanks.</b> <b>Recommendation:</b> Potential for tank failure	
<b>Action Plan:</b> 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
Court Order project.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

<b>17. Water Storage-- Inadequate Site Security</b> (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.	
<b>Action Plan:</b> 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
Court Order project.	See CO Section II C Paragraph 29, Quarterly and Annual Reports

<b>18. Water Storage-- Leaking tanks.</b> <b>Recommendation:</b> Could allow contamination to enter.	
<b>Action Plan:</b> 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
Court Order project.	See CO Section II C Paragraph 29, Quarterly and Annual Reports



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**Update:** March 7, 2019

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<b>19. Water Storage-- Flooded, uncovered and unsecured valve vaults</b> Could allow contamination to enter.	
<u>Action Plan:</u> 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
Court Order project.	See CO Section II C Paragraph 29, Quarterly and Annual Reports- Complete

<b>20. Water Storage-- No screen or flapper on the storage tanks' overflows.</b> Potential for access by public and consequent contamination.	
<u>Action Plan:</u> 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
Court Order project.	See CO Section II C Paragraph 29, Quarterly and Annual Reports - Complete

<b>21. Water Storage-- Ladders not locked, allow easy potential access by vandals.</b>	
<u>Action Plan:</u> 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
Court Order project.	Repairs Complete

<b>22. Water Storage-- Ladders severely corroded or no cage will prevent adequate maintenance</b>	
<u>Action Plan:</u> 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
Court Order project.	Repairs Complete

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



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**Update:** March 7, 2019

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

<b>24. Distribution System-- Undersized water lines</b> impact water pressure and water quality and contribute to potential cross-connections. Potential for backflow/backpressure and contamination.	
<b>Action Plan:</b> 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 < <a href="http://guamwaterworks.org/wp-content/uploads/2017/04/GWA-CIP-Update-January-2017-FINAL-.pdf">http://guamwaterworks.org/wp-content/uploads/2017/04/GWA-CIP-Update-January-2017-FINAL-.pdf</a> >.

<b>25. Pumps-- No pump controls</b> 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.	
<b>Recommendation:</b> Implement routine and corrective maintenance at all spring appurtenances—meters, valves, pumps, piping, pressure gauges, etc.	
<b>Action Plan:</b> 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 < <a href="http://guamwaterworks.org/wp-content/uploads/2017/04/GWA-CIP-Update-January-2017-FINAL-.pdf">http://guamwaterworks.org/wp-content/uploads/2017/04/GWA-CIP-Update-January-2017-FINAL-.pdf</a> >.





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**Update:** March 7, 2019

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

<b>26. Pumps-- Lack of adequate backup pumps. Flooding of booster pump stations.</b>	
Results in intermittent service and supply, lower reliability and decreased pressure	
<b>Action Plan:</b> 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.
<b>Updates (Reporting per Preface)</b>	See GWA CIP at < <a href="http://guamwaterworks.org/wp-content/uploads/2017/04/GWA-CIP-Update-January-2017-FINAL-.pdf">http://guamwaterworks.org/wp-content/uploads/2017/04/GWA-CIP-Update-January-2017-FINAL-.pdf</a> >.

<b>27. Pumps-- No controls on well pumps or booster pumps.</b>	
Results in intermittent service and supply, lower reliability and decreased pressure.	
<b>Action Plan:</b> 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.
<b>Updates (Reporting per Preface)</b>	See GWA CIP at < <a href="http://guamwaterworks.org/wp-content/uploads/2017/04/GWA-CIP-Update-January-2017-FINAL-.pdf">http://guamwaterworks.org/wp-content/uploads/2017/04/GWA-CIP-Update-January-2017-FINAL-.pdf</a> >.

<b>28. Pumps-- Leaking pump seals, valves, lines, and highly rusted piping.</b>	
Results in intermittent service and supply, lower reliability and decreased pressure.	
<b>Action Plan:</b> 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
<b>Updates (Reporting per Preface)</b>	See GWA CIP at < <a href="http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf">http://guamwaterworks.org/wp-content/uploads/2016/02/GWA-CIP-2015-to-2020-CCU-102715-final-ver.pdf</a> >.





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**Update:** March 7, 2019

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

<b>30. SDWA Compliance-- Lead and Copper Rule</b> monitoring overdue.	
<b>Action Plan:</b> 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

<b>31. SDWA Compliance-- Unaddressed Stage 2 Disinfection/Disinfectant Byproducts rule (DBP) Rule MCL Violations, required public notification.</b>	
<b>Action Plan:</b> 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

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



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**Update:** March 7, 2019

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<b>33. Administration-- Hydraulic model is neither complete nor accurate enough to make operational or design decisions.</b> Results in poor design and operational decisions impacting water quality.	
<b>Action Plan:</b> 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 Court Order project	Submitted Hydraulic Model report to USEPA under CO 29(a)(2). Complete

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

<b>35. Administration-- Data are collected, but do not have the capacity to analyze the information to assist with operational decisions.</b> Lack of understanding and use of operational data can result in poor system operations and consequent risk for contamination or failure.	
<b>Action Plan:</b> 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
Updated per Preface	Creation of Management analyst positions is completed.

<b>36. Administration-- Lack of Standard Operating Procedures ("SOPs").</b>	
<b>Action Plan:</b> 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 SOPs
Updates (Reporting per Preface)	Generated by GWA Staff - Supplemented by CDM Smith - EPA SRF.

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



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<b>38. Operator Compliance-- Plant operators do not regularly conduct jar tests.</b>	
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

<b>39. Operator Compliance-- Plant operators and engineering staff did not understand the correlation between ineffective coagulant dosing.</b>	
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

<b>40. Operator Compliance-- No level 4 Operator is actually located on site at the Ugum WTP, as required.</b>	
Violation of Guam Operator Certification requirement.	
<b>Action Plan:</b> Level 4 operators are not required at Ugum, Current status requires only Level 3 operators. <b>GWA has always been in compliance.</b>	
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 July 30, 2018**

Corrective Action Plan Legend	Fill Color	No. of Items
Information and/or future steps	No Fill	
Completed – no further action-or pending EPA approval	Green	39
Court Order Managed items (some are completed- the others are on schedule)	Yellow	9
Continuous (Long Term Commitment/Reporting)	Yellow-Green	10

GWA Work Session - March 19, 2019 - DIVISION REPORTS

**GWA Utility Services Division**  
**Monthly Status Report**  
**Month ending Mar 02, 2019**

UTILITY SERVICES DIVISION ACTIVITIES:

	WEEKLY AVERAGE JAN 2018	JAN 2019 MONTHLY TOTAL	WEEK ENDING: 2/9/2019	WEEK ENDING: 2/16/2019	WEEK ENDING: 2/23/2019	WEEK ENDING: 3/2/2019	WEEKLY AVERAGE FEB 2018	FEB 2019 MONTHLY TOTAL
Collections Unit								
I. Number of accounts cut for nonpayment:	196	979	195	217	185	237	209	834
II. Number of accounts restored for nonpayment:	153	764	110	137	152	188	147	587
III. Number of No water reports responded to:	3	14	2	3	1	1	2	7
IV. Number of Secure/Unsecure valve reports responded to:	2	10	0	1	3	0	1	4
V. Number of Verify reads responded to:	0	0	0	0	0	0	0	0
VI. Number of new pay plans negotiated for <b>active</b> accounts :	222	1109	274	250	252	298	269	1074
VII. Number of active pay plans negotiated and ongoing :	2167		1904	2079	2248	2439	2168	
VIII. Number of <b>inactive</b> accounts with a payment arrangement:	0		1	0	0	0	0	
IX. Number of broken payment plans:	77	385	112	75	83	107	94	377
Customer Service Unit								
I. Service Delivery Points:								
a. GBN Public Service Building – Fadjan								
i. Total Customers Assisted :	272	1362	305	261	233	334	283	1133
ii. Total Abandoned Requests :	19	96	9	7	15	28	15	59
iii. Average Wait Time:	11 minutes		9 minutes	9 minutes	7 minutes	12 minutes	9 minutes	
iv. Average Service Time:	19 minutes		11 minutes	14 minutes	15 minutes	12 minutes	13 minutes	
v. Breakdown by request type:								
1. Apply for water	50	249	48	51	35	63	49	197
2. Restore water cut for non payment	32	161	39	38	35	40	38	152
3. Terminate Water	18	88	14	12	11	20	14	57
4. Copy of Bill	29	145	29	30	24	29	28	112
5. Billing Dispute	81	407	93	72	73	100	85	338
6. Billing Dispute follow up	7	33	6	3	1	10	5	20
7. General Questions & Other	29	143	42	26	29	40	34	137
8. Report a water leak	2	8	2	1	0	4	2	7
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	31	154	32	31	26	34	31	123
b. Julale Satellite Office – Hagatna								
i. Total Customers Assisted :	285	1423	274	250	247	329	275	1100
ii. Total Abandoned Requests :	26	130	24	13	12	19	17	68
iii. Average Wait Time:	14 minutes		11 minutes	7 minutes	7 minutes	11 minutes	9 minutes	
iv. Average Service Time:	10 minutes		9 minutes	10 minutes	10 minutes	9 minutes	10 minutes	
v. Breakdown by request type:								
1. Apply for water	49	243	48	35	40	61	46	184
2. Restore water cut for non payment	33	165	27	26	37	35	31	125
3. Terminate Water	19	94	20	16	18	31	21	85
4. Copy of Bill	50	252	58	54	40	69	55	221
5. Billing Dispute	83	415	72	74	60	66	68	272
6. Billing Dispute follow up	4	22	3	2	3	2	3	10
7. General Questions & Other	26	128	23	21	20	24	22	88
8. Report a water leak	1	4	2	0	2	2	2	6
9. Report water theft	0	0	0	0	0	0	0	0
10. Payment Arrangement	35	175	31	34	31	53	37	149
c. Upper Tumon Satellite Office – Upper Tumon								
i. Total Customers Assisted :	363	1817	409	419	348	434	403	1610
ii. Total Abandoned Requests :	22	108	34	37	25	32	32	128
iii. Average Wait Time:	15 minutes		9 minutes	17 minutes	11 minutes	14 minutes	13 minutes	
iv. Average Service Time:	12 minutes		10 minutes	16 minutes	11 minutes	10 minutes	12 minutes	
v. Breakdown by request type:								
1. Apply for water	64	319	68	92	55	86	75	301
2. Restore water cut for non payment	45	227	41	66	41	84	58	232
3. Terminate Water	32	159	26	35	33	51	36	145
4. Copy of Bill	63	315	71	58	70	66	66	265
5. Billing Dispute	118	591	156	107	100	125	122	488
6. Billing Dispute follow up	2	10	4	4	3	5	4	16
7. General Questions & Other	30	148	43	65	58	53	55	219
8. Report a water leak	4	19	2	5	4	2	3	13
9. Report water theft	0	1	0	0	1	0	0	1
10. Payment Arrangement	50	250	69	60	41	45	54	215

**GWA Utility Services Division**  
**Monthly Status Report**  
**Month ending Mar 02, 2019**

UTILITY SERVICES DIVISION ACTIVITIES:

d. Customer Call Center

i. Calls Recieved :

ii. Calls Immediately Answered :

iii. Calls Abandoned

iv. Calls Handled by Voice mail:

v. Average duration of calls answered

vi. Breakdown by request type:

1. Apply/Terminate info.

2. Automated Telephone Call

3. Balance Inquiry

4. Call Back

5. Dispatch

6. Dispute

7. Follow up

8. General Questions & Other

9. GWA Staff

10. No Water

11. Online/Phone App Help

12. Pay by Phone

13. Pay Plan

14. Restore Non-payment

15. Secure/Unsecure Valve

16. Voice Mail

17. Water leak

1715

8576

1487

1514

1575

1986

1641

6562

694

3471

737

731

813

836

779

3117

66

331

45

62

64

102

68

273

954

4769

705

720

698

1047

793

3170

5 minutes

05:38

05:18

06:19

04:59

05:34

18

90

22

26

23

18

22

89

2

10

2

1

1

3

2

7

101

505

84

99

79

116

95

378

100

498

94

60

58

83

74

295

26

131

24

26

25

44

30

119

11

57

9

18

26

15

17

68

77

387

85

76

79

80

80

320

158

788

137

127

187

170

155

621

74

371

103

92

93

103

98

391

26

131

28

22

70

23

36

143

15

73

7

21

21

20

17

69

124

619

140

113

125

149

132

527

55

277

60

69

62

58

62

249

62

312

65

74

48

67

64

254

9

47

4

7

16

12

10

39

115

576

80

69

60

141

88

350

8

38

3

5

9

4

5

21

e. Customer Emails:

i. Emails Recieved :

1. customers@guamwaterworks.org

Breakdown by request type (email):

a. Apply for water

b. Terminate Water

c. Copy of Bill

d. Billing Dispute & follow up

e. General Questions & Other

f. Report a water leak

g. Report water theft

h. Online services inquiry

2. gwaservesme@guamwaterworks.org (realtors and prop mgrs)

47

234

55

53

39

59

52

206

2

11

2

3

0

0

1

5

1

6

6

2

3

2

3

13

2

10

3

1

0

0

1

4

11

57

13

9

7

17

12

46

20

99

21

22

18

31

23

92

2

12

4

7

2

1

4

14

0

2

0

0

0

0

0

0

7

36

6

9

7

8

8

30

0

1

0

0

2

0

1

2

34

171

36

43

28

43

38

150

ii. Emails Replied (both):

AVERAGE

41

2/9/2019

2/16/2019

2/23/2019

3/2/2019

AVERAGE

58

36

CLOSED

59

51

f. Saturday Services: 9AM TO 1PM ONLY

i. VISITS: Breakdown by request type:

1. Apply for water

2. Restore water cut for non payment

3. Terminate Water

4. Copy of Bill

5. Billing Dispute

6. Billing Dispute follow up

7. General Questions & Other

8. Report a water leak

9. Report water theft

10. Payment Arrangement

4

3

3

9

12

0

4

0

0

8

12

0

CLOSED

5

6

CLOSED

1

0

CLOSED

5

CLOSED

5

CLOSED

3

5

CLOSED

0

1

CLOSED

0

0

0

CLOSED

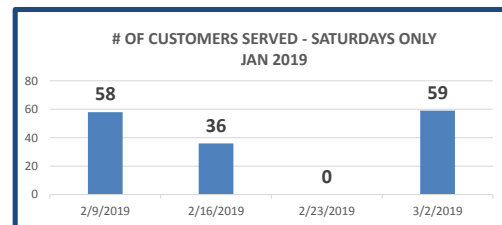
0

0

CLOSED

11

8



**GWA Utility Services Division**  
**Monthly Status Report**  
**Month ending Mar 02, 2019**

### UTILITY SERVICES DIVISION ACTIVITIES:

WEEKLY AVERAGE  
JAN 2018

JAN 2019  
MONTHLY  
TOTAL

WEEK  
ENDING:  
2/9/2019

WEEK  
ENDING:  
2/16/2019

WEEK  
ENDING:  
2/23/2019

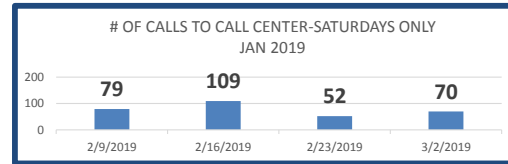
WEEK  
ENDING:  
3/2/2019

WEEKLY  
AVERAGE  
FEB 2018

FEB 2019  
MONTHLY  
TOTAL

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

2/9/2019	2/16/2019	2/23/2019	3/2/2019
79	109	52	70



### Dispute Resolution & Document Control

I. Dispute Resolution:

- Number of disputed accounts resolved:
- Number of disputed accounts under review:

II. Document Control:

- Number of field activities posted :
- Number of field activities pending:

		2/9/2019	2/16/2019	2/23/2019	3/2/2019		
24	118	8	93	31	26	40	158
1506	7529	1609	1609	1609	1643	1618	6470

358	1788	236	361	294	456	337	1347
715	3574	1157	1054	1276	950	1109	4437

### Disconnect/Reconnect Unit

I. Number of field activities received:

II. Number of field activities completed:

III. Number of field activities pending field action:

269	1345	290	242	228	292	263	1052
258	1291	410	239	259	276	296	1184
3	13	3	2	3	2	3	10

### Meter Reading Unit

I. Number of meters read:

a. Electronically Read Meters:

b. Manually Read Meters:

- Unread meters (Meters scheduled to be read but not read):
- Number of data logs received:
- Number of data logs retrieved:
- Number of data logs pending field action:
- Communication Errors/Reprogramming requests:
- Number of estimated readings (for the week):
- Reasons for Estimations:

- Cant locate meter:
- Temporary Obstruction
- Vicious Dog
- Flooded meter
- Corrective action requested (database corrections needed)
- Possible changed out meter:
- Communication/Programming error (code 92's):
- Other:
- Leaks detected on customer's private line:
- Reverse Flow Detected
- No Usage Detected
- Tamper Code

c. Electronic Read Percentage:

		2/9/2019	2/16/2019	2/23/2019	3/2/2019		
8959	41778	10265	11980	9526	5684	8959	37455
50	155	27	28	40	32	50	127
121	574	41	77	133	60	121	311
36	179	42	36	31	34	36	143
38	185	45	28	49	28	38	150
24	223	24	42	24	36	24	126
2	63	3	5	6	4	2	18
113	464	27	31	73	41	113	172

0	8	1	1	6	0	0	8
5	10	5	3	1	1	5	10
2	6	0	3	3	0	2	6
1	8	1	0	1	2	1	4
0	14	0	1	0	0	0	1
8	110	8	21	60	2	8	91
2	4	0	1	6	1	2	8
13	20	11	6	12	3	13	32
1000	5652	1337	1686	1390	613	1000	5026
122	360	169	265	202	166	122	802
28	2169	542	605	579	356	28	2082
518	104	17	27	21	16	518	81
99%		99%	99%	100%	99%	99%	

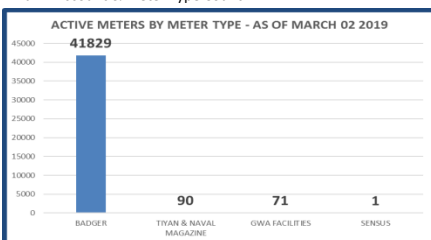
### Revenue Protection Unit

I. Number of Inactive Still Consuming Reports rec'd & investigated:

II. Number of Illegal Connection reports rec'd & investigated:

III. Meter Replacement Project – Post 2010 Metron Farmer & Sensus Status Report :

a. Account & Meter Type Count :



1	3	0	1	3	0	1	4
1	4	1	0	0	3	1	4



## **Engineering Monthly Report March 2019**

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

## Table of Contents

Section	Description	Page
A	Summary Table of 2010, 2013 and 2016 Bond	3
B	Projects Procurement	5
C	CIP Water Section	8
D	CIP Wastewater Section	13
E	CIP Engineering Support	17
F	GIS Section	18
G	Permits Section	19
H	SRF Project Status Report	20



## 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	\$ 475,709.00	123.13%	-23.13%	\$ 369,846.00	100.00%	0.00%	\$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	\$ 500,000.00	77.87%	22.13%	\$ 1,679,964.00	99.16%	0.84%	\$ -	N/A	N/A
PW 05-07	Meter Replacement Program	\$ 10,450,000.00	87.42%	12.58%	\$ 996,532.00	100.00%	0.00%	\$ 1,400,000.00	10.71%	89.29%
PW 05-08	Barrigada Tank Repair/Replacement	\$ 5,450,000.00	99.55%	0.45%	\$ 4,987,000.00	99.32%	0.68%	\$ -	N/A	N/A
PW 05-09	Leak Detection	\$ 200,000.00	100.06%	-0.06%	\$ 16,916.00	100.00%	0.00%	\$ 100,000.00	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%	\$ 876,294.00	100.00%	0.00%
PW 05-11	Implement Ground Water Rule	\$ 1,699,999.00	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	\$ 1,900,000.00	18.89%	81.11%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 05-13	Deep Well Rehabilitation	\$ 548,000.00	100.00%	0.00%	\$ 200,000.00	100.00%	0.00%	\$ 250,000.00	44.01%	55.99%
PW 05-14	New Deep Wells at Dow n Hard	\$ 485,743.00	100.00%	0.00%	\$ -	N/A	N/A	\$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	\$ 1,100,000.00	34.39%	65.61%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 05-16	Master Meters	\$ 1,489,957.00	100.00%	0.00%	\$ 712,060.00	100.00%	0.00%	\$ 2,151,539.00	7.04%	92.96%
PW 09-01	Ugum Water Treatment Plant Intake	\$ 700,000.00	96.06%	3.94%	\$ 859,801.00	51.20%	48.80%	\$ -	N/A	N/A
PW 09-02	Water Wells	\$ -	N/A	N/A	\$ 3,030,029.00	69.90%	30.10%	\$ 2,500,000.00	0.00%	100.00%
PW 09-03	Water Distribution System	\$ 3,174,748.00	100.03%	-0.03%	\$ 10,912,453.00	95.02%	4.98%	\$ -	N/A	N/A
PW 09-04	Pressure Zone Realignment	\$ -	N/A	N/A	\$ 337,110.00	104.23%	-4.23%	\$ 1,141,000.00	64.94%	35.06%
PW 09-06	Central Water Distribution System 2005	\$ 775,002.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	\$ 1,200,000.00	96.75%	3.25%	\$ 426,799.00	96.19%	3.81%	\$ -	N/A	N/A
PW 09-09	Water Reservoir Internal/External	\$ 2,150,000.00	83.72%	16.28%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ 800,000.00	100.00%	0.00%
PW 09-11	Water System Reservoirs 2005 Improvements	\$ 1,050,000.00	100.00%	0.00%	\$ 13,878,000.00	100.00%	0.00%	\$ 58,830,170.00	26.75%	73.25%
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	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	\$ 78,459.00	19.16%	80.84%	\$ -	N/A	N/A	\$ 550,000.00	70.83%	29.17%
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%	\$ 1,330,287.00	100.00%	0.00%	\$ 1,220,000.00	40.98%	59.02%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	\$ 1,848,013.00	97.57%	2.43%	\$ 11,605,000.00	100.00%	0.00%	\$ 1,822,133.00	100.00%	0.00%
PW 12-06	Tank Replacement Piti & Hyundai	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ 7,300,000.00	100.00%	0.00%
PW 12-07	Assessment of Malojaj 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	\$ 1,200,000.00	0.00%	100.00%
		\$ 42,099,789.85			\$ 53,550,914.00			\$ 81,331,136.00		

### Wastewater

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
WW 05-04	Wastewater System Planning	\$ 1,474,000.00	100.00%	0.00%	\$ 650,901.00	100.02%	-0.02%	\$ 312,983.00	100.00%	0.00%
WW 05-05	Wastewater Vehicles	\$ 235,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	\$ 250,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 09-01	Lift station upgrades	\$ -	N/A	N/A	\$ 563,148.00	118.21%	-18.21%	\$ 1,714,755.00	28.78%	69.20%
WW 09-06	Wastewater Collection System Rep/ Rehabilitation	\$ 1,001,323.00	103.40%	-3.40%	\$ 660,313.00	110.04%	-10.04%	\$ 1,055,478.00	52.63%	47.37%
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	\$ 1,488,378.00	95.67%	4.33%	\$ 9,656,874.00	99.69%	0.31%	\$ 22,663,776.00	100.00%	0.00%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	\$ 853,858.00	105.52%	-5.52%	\$ 371,699.00	100.00%	0.00%	\$ 252,105.00	100.00%	0.00%
WW 11-08	Agat/Santa Rita STP Replacement	\$ 2,217,700.00	100.06%	-0.06%	\$ 67,200,000.00	99.53%	0.47%	\$ 2,002,331.00	97.00%	3.00%
WW 12-01	Northern District WWTP Primary Treatment Upgrade	\$ 11,743,514.00	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	\$ 11,300,000.00	101.77%	0.00%	\$ 673,000.00	100.00%	0.00%	\$ -	N/A	N/A
WW 12-04	I&I SSES Southern	\$ 800,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-05	I&I SSES Central	\$ 850,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-06	I&I SSES Northern	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-07	Umatac Merizo Replacement	\$ 250,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ 20,800,000.00	99.06%	0.94%
WW 12-08	Wastewater System GIS & Mapping	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-09	Wastewater Facility Back Up Power	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-10	Wastewater System Asset Inventory	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 17-01	Wastewater Sewer System Expansion	\$ -	N/A	N/A	\$ -			\$ -		
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	\$ 1,000,000.00	94.83%	5.18%	\$ -			\$ -		
		\$ 35,813,403.00			\$ 79,775,935.00			\$ 48,801,428.00		

**Electrical Engineering Support**

CIP #	CIP Description	2010 Bond Allotment	% encumbered	% available	2013 Bond Allotment	% encumbered	% available	2016 Bond Allotment	% encumbered	% available
EE-05-02	SCADA Pilot Project	\$ 61,950.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
EE-09-01	Wastewater Pumping Station Electrical Upgrade	\$ -	N/A	N/A	\$ 99,861.00	100.14%	-0.14%	\$ -	N/A	N/A
EE-09-02	Electrical Upgrade - Water Wells	\$ 354,227.00	100.00%	0.00%	\$ 1,500,000.00	100.00%	0.00%	\$ -	N/A	N/A
EE-09-03	Electrical Upgrade - Water Booster	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
EE-09-04	Electrical Upgrade - Water Booster	\$ -	N/A	N/A	\$ 977.00	100.00%	0.00%	\$ -	N/A	N/A
EE-09-05	Electrical Upgrade - Other Water	\$ -	N/A	N/A	\$ 60,700.00	100.00%	0.00%	\$ -	N/A	N/A
EE-09-06	SCADA Improvements - Phase 1	\$ 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	\$ 24,956.00	100.00%	0.00%	\$ 722,359.00	100.00%	0.00%	\$ 1,077,497.00	70.53%	29.47%
EE-09-09	SCADA Improvements - Phase 4	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ 4,378,118.00	90.08%	9.92%
		\$ 1,748,119.00			\$ 2,383,897.00			\$ 5,455,615.00		

**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	\$ 1,171,465.00	99.89%	0.11%	\$ 1,127,000.00	100.00%	0.00%
MC-05-02	Land Survey	\$ 499,688.00	100.00%	0.00%	\$ 1,052.00	100.05%	-0.05%	\$ 1,260,524.00	100.00%	0.00%
MC-09-01	General Plant Improvements	\$ 7,241,000.00	100.00%	0.00%	\$ 2,441,737.00	32.63%	55.04%	\$ 1,543,757.00	97.07%	2.93%
MC-15-01	Information Technology Intergration Improvements	\$ -			\$ -			\$ 500,000.00	48.81%	51.19%
		\$ 7,740,688.00			\$ 3,614,254.00			\$ 4,431,281.00		

	2010 Bond Allotment	2013 Bond Allotment	2016 Bond Allotment
CIP Water	\$ 42,099,790	\$ 53,550,914	\$ 81,331,136
CIP Wastewater	\$ 35,813,403	\$ 79,775,935	\$ 48,801,428
CIP Electrical	\$ 1,748,119	\$ 2,383,897	\$ 5,455,615
CIP Miscellaneous	\$ 7,740,688	\$ 3,614,254	\$ 4,431,281
	\$ 87,402,000	\$ 139,325,000	\$ 140,019,460

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	97 **	\$82.270	94.13%	10.18
2013	\$139.325	60 **	\$135.877	97.53%	27.18
2015	\$140.019	30	\$84.237	60.16%	33.69
	* - End date November 2013 via CCU Resolution 06-FY2014				
	** - Includes month of February 2019				

## **B. Projects Procurement**

### Percentage Key:

- |               |  |
|---------------|--|
| 100%          | Approved by GM   |
| 99%           | Signature required from either Accounting/Legal/GM                   |
| 98%           | Processing engineering service or construction contract (with legal) |
| 95%           | Request for CCU approval (GM/engineering)                            |
| 90%           | A/E fee negotiation or contractor bid evaluation (engineering)       |
| 80%           | Selected A/E or Conducted bid opening (engineering)                  |
| 70%           | Advertised RFP/IFB (engineering)                                     |
| 60%           | RFP/IFB Package under legal review                                   |
| 50%           | RFP/IFB Package completed (engineering)                              |
| Less than 50% | Project Scope of work development in progress                        |
- Red text anywhere indicates a change from the last report.

### **BOX KEY FOR PROCUREMENT:**

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

<b><u>BID PACKAGE</u></b> PW 09-02	<b>New Well Construction (AG-10-Y-8 &amp; AG-12)</b>	
<50% Complete	<b>Activities/Notes:</b> GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-12. Internal GWA discussions underway for survey and appraisal services. GWA executed Change Order with GHD to update the design plans specific to the new well locations.	
Project Description:	The project is to construct three new production wells for GWA as well as installation of a water main to connect the new production wells to the Ysengsong Reservoirs.	

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

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

<b><u>BID PACKAGE</u></b> PW 09-03, PW 09-04 AND PW 09-11	<b>Northern/Southern Tanks (Santa Rita, Santa Rosa and Sinifa) Construction</b>	
70% Complete	<b>Activities/Notes:</b> Addendum No. 2 issued extended the bid opening to April 19, 2019.	
Project Description:	The work performed under this project procurement shall consist of Construction of a 1MG Santa Rosa reservoir and booster pump station, 1MG Santa Rita reservoir and 1MG Sinifa reservoir. Some piping work off site from the reservoir is also required to ensure the reservoirs functions optimally.	

<b><u>BID PACKAGE</u></b> OEA GRANT	<b>Northern District WWTP Upgrade Clearing and Grading</b>	
100% Complete	<b>Activities/Notes:</b> Contract with Ian Corporation fully executed. NTP issued March 1, 2019.	
Project Description:	The work performed under this project procurement shall consist of clearing and grading the property, including the excavation of the ponding basin, in preparation for all vertical construction.	

<b><u>BID PACKAGE</u></b> PW 05-07	<b>Groundwater Well Production Meter Replacement Project</b>	
50% Complete	<b>Activities/Notes:</b> Design drawings and specification under review by GWA engineering.	
Project Description:	The work performed under this project procurement shall consist of replacing the production well meter and associated well head piping tree.	

<b><u>RFP</u></b> WW 12-03	<b>Hagatna Wastewater Treatment Plant (HWWTP) Interim Disinfection</b>	
70% Complete	<b>Activities/Notes:</b> RFP advertised 2/4/19 with proposals due 2/22/19.	
Project Description:	Conduct a feasibility and pilot study for the use of an interim disinfection process using Peracetic Acid (PAA) for our chemically enhanced primary treatment facility at the Hagátña Wastewater Treatment Plant (HWWTP).	

<b><u>BID PACKAGE</u></b> OEA GRANT	<b>NDWWTP Upgrade to Secondary Project</b>	
70% Complete	<b>Activities/Notes:</b> IFB advertised January 11, 2019. Step 1 due 022019, Step 2 due 051019.	
Project Description:	The work performed under this project procurement shall consist of constructing new oxidation ditches, clarifier, headworks at the newly acquired property adjacent to the NDWWTP as well as a new disinfection facility within the existing NDWWTP. Some structures at the existing NDWWTP will undergo improvements works and a 16-inch watermain will be extended to the entrance of the existing plant.	

**BOX KEY FOR PROJECT:**

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

**C. CIP Water Section**

<b>INSPECTION</b> CIP PW 05-02	<b>Inspection &amp; Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)</b>	<b>Start Date:</b> April 2010
80% Complete	<b>Activities/Notes:</b> GWA awaiting from A/E the new bid package for by-pass and repairs.	<b>Completion Date:</b> Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

<b>DESIGN</b> CIP PW 05-12	<b>Brigade II BPS Upgrade (EM Chen)</b>	<b>Start Date:</b> April 2012
100% Complete (Basis of Design) 95% (Design)	<b>Activities/Notes:</b> GWA received 100% design submittal. Review comments for specifications transmitted back to designer.	<b>Completion Date:</b> Design services during construction December 2020
N/A	Engineering design services	
Project Description:	The design project is intended to assess system water supply feed from the north as well as Ugum WTP and the water demands downstream from the Brigade BPS so as to reconfigure the piping into the BPS and resize the pumps to meet system head requirements.	

<b>DESIGN</b> CIP PW 12-05	<b>Yigo and Astumbo 2MG Tank Design Project (Lyons)</b>	<b>Start Date:</b> September 2013
99% complete	<b>Activities/Notes:</b> Design firm to provide RFI support during the construction.	<b>Completion Date:</b> January 2016
CO 9 (b)(4)	Engineering design services	
Project Description:	Develop the construction documents for two (2) 2.0 million-gallon (MG) nominal capacity concrete reservoirs in the Yigo service zones and one (1) 2.0 MG reservoir in the Astumbo service area. The design services will consist of preparation of plans, specifications, and estimates (PS&E), including Basis of Design, design calculations, construction schedule, topographical survey, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design	

	drawings in Auto CAD (latest version), and relevant permits. Other services will include construction bid support service, meetings, and response to request for interpretation/information during construction. The consultant is required to incorporate and modify existing GWA concrete reservoir specifications to meet the project objective.
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<b>DESIGN</b> PW 09-11	<b>Northern and Southern Guam Reservoir Design (TG Engineers)</b>	<b>Start Date:</b> May 2015
65% Complete	<b>Activities/Notes:</b> Santa Rosa, Sinifa and Santa Rita design to be packaged in one IFB. Package out to bid on 1/4/19. Inarajan – Land procurement second site related to new BPS's still on-going. Ugum – Escrow opened for both properties. Design of new tank started.	<b>Completion Date:</b> Update: Due to property acquisitions issues for Inarajan and Ugum, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.	

<b>DESIGN</b> PW 12-04	<b>Central Guam Reservoirs Design (GHD Inc.)</b>	<b>Start Date:</b> May 2015
65% Complete	<b>Activities/Notes:</b> Chaot #2 – Change Order with AIC on going. GWA still waiting for time extension request. Tumon #2 – tank under construction. Hyundai – tank under construction. Piti – GWA still evaluating alternative solutions to storage needs in Piti area. Manenggon – 90% design near complete. Tumon #1 – GWA still waiting for GIAA relative to land issues.	<b>Completion Date:</b> Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction. The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti & Tumon #1.	

<b>CONSTRUCTION</b> PW 09-03	<b>Line Replacement Phase IV (Giant Construction)</b>	<b>Start Date:</b> 02/14/16
92% Complete	<b>Activities/Notes:</b> Contractor working at Chalan Famha. Change Order No.4 routed for signatures that will extent the contact period further to September 30, 2019. CO #4 is a no cost Change Order.	<b>Completion Date:</b> 03/31/19 per approved Change Order.
	Construction Services	
<b>Project Description:</b>	The project is intended for a contractor to replace existing water lines that have been found by operations to be leaking and/or are causing service delivery to less than what GWA is required to provide. The project will replace water mains and ten known locations throughout the island and there is a component within the bid where line replacement work for unknown locations is accounted for.	

<b>DESIGN</b> PW 05-15	<b>Asan Spring Rehabilitation Design (HDR)</b>	<b>Start Date:</b> August 24, 2016
95% Complete	<b>Activities/Notes:</b> GWA transmitted comments for the 100% design. Property use issue remains unresolved. GWA received A/E change order proposal to assist with permitting required for use/easement of NPS property and endangered species mitigation.	<b>Completion Date:</b> Design services during construction estimated June 2020
	Engineering design services	
<b>Project Description:</b>	<ul style="list-style-type: none"> <li>- Perform site visits and condition assessment for site conditions to determine demolition and rehabilitation requirement, process equipment condition, structural condition, and electrical system. Site condition assessment shall include all disciplines to execute the project.</li> <li>- Review and validate the current property boundary information to confirm the available space for the project development.</li> <li>- Perform an environmental impact study and prepare all required permits as needed.</li> <li>- Perform an archeological and historical resources study to identify potential impact to the project, prepare all required permits as needed.</li> <li>- Coordinate with Guam Historic Resources Division State Historic Preservation Office (SHPO) on historical resources study. Prepare all necessary reports and documents as required by SHPO.</li> <li>- Coordinate with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on vegetation clearance. Prepare all necessary reports and documents required by DAWR.</li> <li>- Identify the existing and projected service area, period of design.</li> <li>- Identify and recommend conceptual water treatment system.</li> <li>- Perform a Class 4 engineering cost estimate according to the American Association of Cost Engineers (AACE) International Cost Estimate Classification System for construction fee. Cost must include all disciplines, permit, construction and administration that are necessary to execute the project. All costs will be in current dollars and escalated to the estimated midpoint of construction.</li> </ul>	



<b>CONSTRUCTION</b> PW 09-11, PW 12-05	<b>Yigo/Astumbo Tank Construction (Pernix)</b>	<b>Start Date:</b> 12/1/16
98% Complete	<b>Activities/Notes:</b> Yigo #1: tank on-line, final punch list on-going, pump station not commissioned yet. Yigo #2: tank on-line, punch list on-going. GWA received inspection report for existing 2.5MG steel tank, cost for tank repairs under evaluation. GWA working to Change Order repair work for Astumbo #2 steel tank. New Concrete Astumbo #1 was placed on line however remaining work include electrical and waterline.	<b>Completion Date:</b> 10/31/18 (LD are being totaled)
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

<b>CONSTRUCTION MANAGEMENT</b> PW 09-11, PW 12-05	<b>Yigo/Astumbo Tank Construction Management (GHD)</b>	<b>Start Date:</b> December 2016
98% complete	<b>Activities/Notes:</b> Processing submittals and on-site inspection	<b>Completion Date:</b>
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.	

<b>CONSTRUCTION MANAGEMENT</b> PW 12-04-11, PW 12-06 AND PW 09-11	<b>Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction Management (TG Engineers, PC)</b>	<b>Start Date:</b> December 2017
25% complete	<b>Activities/Notes:</b> Conducting field inspection, reviewing submittals from contractor.	<b>Completion Date:</b> Due to changes with AIC contractor CM services to extend to 04/31/20
NA	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of	

	Construction Management and Inspection Services for the construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.
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<b>CONSTRUCTION</b> PW 12-04, PW 12-06 AND PW 09-11	<b>Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction (AIC)</b>	<b>Start Date:</b> 02/8/18
25% Complete	<b>Activities/Notes:</b> Nissan tank site: foundation work complete, tank wall formwork and off-site piping work on-going. Hyundai tank site. Temporary tank in serve but by-pass line installation required. Foundation work for BPS on-going. Chaot #2 tank: permit received mobilization on-going.	<b>Completion Date:</b> 04/31/20
	Construction Services	
Project Description:	The work performed under this project procurement shall consist of Construction of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan) and 1MG Hyundai. Some piping work off site from the reservoir is also required to ensure the reservoirs function optimally.	

<b>CONSTRUCTION MANAGEMENT</b> PW 09-11	<b>Northern and Southern Tank Phase I (Santa Rosa, Sinifa, Santa Rita) Construction Management (GHD)</b>	<b>Start Date:</b> April 2018
0% Complete	<b>Activities/Notes:</b> Providing constructability review for Santa Rosa Tank.	<b>Completion Date:</b> June 2019
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of three water reservoirs; 1MG Santa Rosa, 1MG Sinifa and 1MG Santa Rita. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

<b>DESIGN</b> CIP PW 05-12	<b>Pressure Zone Realignment and Tank Repair-Replacement (GHD)</b>	<b>Start Date:</b> August 2018
10% Complete Design will be done in Phases. Phase 1 - 90% (Design)	<b>Activities/Notes:</b> GWA has reviewed the 90% submittal from the 1st Phase (six sites). GWA anticipating receiving 100% plans and specification 3/22/19. Water audit for District Metering Area (DMA) started.	<b>Completion Date:</b> Due to property acquisition issues GWA anticipate December 2020
N/A	Engineering design services	
Project Description:	The design project is intended to assess current and recommended pressure zones, and design and install control	

	valves (PRVs, PRSVs) to properly control and measure system flow between zones. Scope also includes setting up pilot DMAs; and design for new or repaired water tanks needed to complete the court order tank requirements.
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#### **D. CIP Wastewater Section**

<b><u>DESIGN</u></b> WW 11-08	<b>Agat-Santa Rita WWTP Replacement (DCA)</b>	<b>Start Date:</b> October 2014
100% Design	<b>Activities/Notes:</b> CCU approved funding increase for design services with Change Order executed 012819. Design services during construction work on-going.	<b>Completion Date:</b> Nov. 2015 (design); April 2019 (design services during construction)
CO 11	Engineering design services	
Project Description:	The engineering design consultant is required to design a new wastewater treatment facility that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility	

<b><u>CONSTRUCTION MANAGEMENT</u></b> WW 11-08	<b>Agat Santa Rita WWTP CM (GHD)</b>	<b>Start Date:</b> September 2015
100% (PH 1) 100% Complete (PH 2, Part 1) 93% Complete (PH 2, Part B)	<b>Activities/Notes:</b> CCU approved funding increase for CM services with Change Order executed 012819. CM work on-going.	<b>Completion Date:</b> Completion date to coincide with construction completion.
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 meet permit limits. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

<b><u>CONSTRUCTION</u></b> WW 11-08	<b>Agat Santa Rita WWTP Phase II (Sumitomo Construction)</b>	<b>Start Date:</b> January 2016
Part 1 of Phase II- 100% Complete Part 2 of Phase II- <b>95% complete</b>	<b>Activities/Notes:</b> Contractor still working on headworks, aerobic digester, equalization basin, admin and maintenance buildings.	<b>Completion Date:</b> Phase A: 03/15/17 Phase B: <b>current completion date is September 15, 2018. Contractor in LD period.</b>
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.
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<b>DESIGN</b> WW 09-08, WW11-03	<b>Baza Gardens Cross Island Sewer Design (DCA)</b>	<b>Start Date:</b> 02/05/16
100% Design 75% Construction Services	<b>Activities/Notes:</b> DCA providing engineering services during construction.	<b>Completion Date:</b> Delayed, April 2019 projected
CO 11	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification for a sewer conveyance from the Baza Garden WWTP to the new Agat Santa-Rite WWTP. The design will take into account growth in the Baza Gardens/Talofofo areas as wells as new connection along the Route 17 route.	

<b>DESIGN</b> WW 09-06	<b>Bayside SPS Improvements Design (EMPSCO)</b>	<b>Start Date:</b> July 29, 2016
100% Design 0% Construction Services	<b>Activities/Notes:</b> Construction bidding will commence once property issues are resolved.	<b>Completion Date:</b> Due to issue with ACOE anticipate December 2017 for design only.
	Engineering design services	
Project Description:	The intent of this project for an engineering firm to prepare design drawings and specification to upgrade the Bayside Sewer Pump Station given the facility is in major disrepair and the adjacent river is eroding away the access road to the facility which is causing maintenance challenges.	

<b>CONSTRUCTION</b> WW 09-08, WW 11-03	<b>Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)</b>	<b>Start Date:</b> October 2016
98% Complete	<b>Activities/Notes:</b> Gravity and new SPS active; Work to complete punch list items on-going. <b>GWA negotiating potential Change Order to address water seepage around SPS.</b>	<b>Completion Date:</b> January 2019
	Construction services	
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

<b>CONSTRUCTION MANAGEMENT</b> WW 09-08 WW 11-03	<b>Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)</b>	<b>Start Date:</b> December 5, 2016
80% Complete	<b>Activities/Notes:</b>	<b>Completion Date:</b>

	GWA working to execute Change Order for additional services related to Phase II delays.	September 2018 to be extended through April 2019
	Construction Management services	
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

<b>CONSTRUCTION</b> WW 09-08, WW 11-03	<b>Baza Gardens Cross Island Road Sewer Conveyance Construction Phase II (BME and Sons)</b>	<b>Start Date:</b> March 2017
<b>98% Complete</b>	<b>Activities/Notes:</b> Gravity and new SPS active; Work to complete punch list items on-going. SCADA system and comm network work on-going.	<b>Completion Date:</b> January 2019
	Construction services	
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	

<b>CONSTRUCTION</b> WW 09-08, WW 11-03	<b>Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III (Sumitomo Construction)</b>	<b>Start Date:</b> June 2017
<b>75% Complete</b>	<b>Activities/Notes:</b> New SPS active. GWA negotiating deduction in of EQ basin.	<b>Completion Date:</b> April 2019
	Construction services	
Project Description:	The work performed under this project consist of construction of, but not limited to, 10,481' of force mains and sewer pump station at existing WWTP, equalization tanks, stand-by generator, improved headworks, grit removal system, and associated equipment.	

<b>CONSTRUCTION</b> WW 11-04	<b>Umatac Merizo WWTP Design Build Improvements Project (CoreTech)</b>	<b>Start Date:</b> June 2017
100% Design <b>70% Construction</b>	<b>Activities/Notes:</b> <ul style="list-style-type: none"> <li>Headworks gates were to be embedded, but structural design did not include embedment. Contractor proposing alternate which may require chipping concrete and cutting rebar. BC gave conditional approval pending materials proposed for treating the rebar, bonding agent, and grout material.</li> <li>DN Tank completed the tank and ladders. Interior inspection performed and deficiencies noted corrected 3/4/19.</li> <li>UV structure walls poured.</li> <li>Effluent distribution piping on terraces being installed.</li> <li>Final grading on Northern terrace nearing completion.</li> </ul> <b>Change Proposals:</b>	<b>Completion Date:</b> August 2019

	<ul style="list-style-type: none"> <li>- Compensation request for multiple weather delays anticipated.</li> <li>- CO #5 - unanticipated rock excavation - evaluated, reviewed with GWA and response sent to CHL. Change Order to follow if CHL agrees with GWA decision.</li> <li>- CO #6 - unanticipated drain to capture groundwater flow in tank area and overland flow terraces - evaluated, reviewed with GWA and response sent to CHL. Change Order to follow if CHL agrees with GWA decision.</li> <li>- CO #7 - permitting, GWA delays, and delay due to rock and water infiltration - evaluated, reviewed with GWA and response sent to CHL. BC and CTHD discussed CO#7 to negotiate alterations to initial GWA position. Recommendations sent to GWA and CTHD. Change Order to follow if GWA and CHL agree with BC recommendations.</li> <li>- Additional RCOs anticipated. Will be addressed when received.</li> <li>- Payment application #10 received 3/11 and reviewed 3/12.</li> </ul>	
	Construction services	
Project Description:	The project is intended to improve the aeration basin, construct a new sewer pump station, regrade the overland field, construct a new effluent storage tank and disinfection facility. The overland percolation basin will undergo regarding work to ensure appropriate distribution of effluent through the whole basin.	

<b>CONSTRUCTION MANAGEMENT</b> WW 11-04	<b>Umatac Merizo WWTP Design Build Improvements Project (SSFM Inc)</b>	<b>Start Date:</b> September 7, 2017
65%	<b>Activities/Notes:</b> Continuing on-site inspection of field activities.	<b>Completion Date:</b> August 2019
	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

<b>DESIGN</b> WW 09-01	<b>Yigo SPS Flood Protection and Rehabilitation Design (AECOM)</b>	<b>Start Date:</b> August 2, 2018
90% Complete	<b>Activities/Notes:</b> GWA received 90% design submittal. Design under review.	<b>Completion Date:</b> June 2019
	Engineering design services	
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.
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### **E. CIP Engineering Support**

<b>DESIGN</b> EE 09-08	<b>SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)</b>	<b>Start Date:</b> June 2015
100% complete (design) 0% Services during construction	<b>Activities/Notes:</b> AECOM to provide assistance during bidding process.	<b>Completion Date:</b> November 2017 - Design January 2019 - (Bid and Construction Support)
N/A	Engineering design services	
Project Description:	The A/E firm will design an integrated, robust and secure Supervisory Control and Data Acquisition (SCADA) system for GWA's water and wastewater systems, and to provide support services during bid and construction. The 22 sites will consist of a combination of water facilities such as production wells, reservoirs, booster pump station and wastewater sites include sewer treatment plants and sewer pump stations. Executed by approved change orders, number of sites in original design scope has changed from 22 sites to 19 sites and design of High Water Alarm for 20 critical sewer pump stations has been added. Scope also includes bid and construction support of the design-build project of GPWA SCADA EMS project.	

<b>CONSTRUCTION</b> EE 09-08, EE 09-09	<b>SCADA Phase A1 Construction (G4S Security)</b>	<b>Start Date:</b> July 13, 2018
5% construction	<b>Activities/Notes:</b> GWA transmitted "conditional" letter re-establishing project period with G4S that accounts for delays past the original completion date.	<b>Completion Date:</b> December 2019
	Construction services	
Project Description:	The work performed under this project procurement shall consist of Construction of SCADA ready instrumentation at several water and waste water facilities throughout the island.	

<b>CONSTRUCTION MANAGEMENT</b> EE 09-08, EE 09-09	<b>SCADA Phase A1 Construction Management (GHD)</b>	<b>Start Date:</b> August 29, 2018
5%	<b>Activities/Notes:</b> Reviewing material submittals.	<b>Completion Date:</b> December 2019
	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the installation SCADA ready instrumentation at several water and waste water facilities throughout the island. 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.
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## **F. GIS Section**

<b><u>MAPPING</u></b> MC 05-02	<b>Island Wide Survey- (Duenas, Camacho &amp; Ass.)</b>	<b>Start Date:</b> December 2007
99% complete	<b>Activities/Notes:</b> Two maps are pending due to issues associated with the property outside of GWA control. <b>Change Order No. 2 routed for signatures that deduct about \$4k from the contract.</b>	<b>Completion Date:</b> April 2019.
	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, including the lots which are not registered under GWA's name.	

<b><u>MAPPING</u></b> MC 05-02	<b>Island Wide Survey PH II - (Duenas, Camacho &amp; Ass.)</b>	<b>Start Date:</b> August 30, 2017
65% complete	<b>Activities/Notes:</b> First set (25): from previous remaining 15 that were remaining, seven have been submitted to DLM, and eight back to DCA for minor revision. Second set (20): from previous remaining 10 property maps GWA still waiting for DCA to revised signatory block due to new administration. Third set (20): 20 maps submitted to GWA for review and comment.	<b>Completion Date:</b> June 2019
	Survey services	
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM	



**G. Permits Section**PERMITS  
MONTHLY REPORT 2019

	2018/2019	2019	
Description	Dec/Jan	Feb	March
Building Permit	36	2	52
Occupancy Permit	1	13	0
New Installation	20	4	28
Sewer Application	0	3	3
Sewer Inspection	1	1	3
Private Utility Acceptance	0	0	0
Relocation of Water Meter	2	1	7
Tapping-Water	13	1	11
Tapping-Sewer	1	1	9
Clearance-Water	27	11	53
Clearance-Sewer	27	11	53
Highway Encroachment	1	9	1
Verification of Utilities	19	3	24
Fire Flow Test	4	1	0
Schedule Water Outage	1	0	2

## **H. SRF Project Status Report**

- Projects listed below that are noted to be in the procurement phase will follow the “Percentage Key” below.

Percentage Key:

100%	Approved by GM
99%	Signature required from either Accounting/Legal/GM
98%	Processing engineering service or construction contract (with legal)
95%	Request for CCU approval (GM/engineering)
90%	A/E fee negotiation or contractor bid evaluation (engineering)
80%	Selected A/E or Conducted bid opening (engineering)
70%	Advertised RFP/IFB (engineering)
60%	RFP/IFB Package under legal review
50%	RFP/IFB Package completed (engineering)
Less than 50%	Project Scope of work development in progress

- Red text anywhere indicates a change from the last report.
- Cells highlighted in green        indicate contract amount certified and project active.

GWA Work Session - March 19, 2019 - DIVISION REPORTS

Project	Project Description	Project Manager	Phase		Start Date (NTP Issued)	Anticipated Completion Date	Contract Amount (+) change orders	Contractor	Status as of 3/18/19
1	Northern District SSES & I/I Study	J. Davis	Design	1	10/10/2014	2/29/2016	\$ 792,979.97	Stanley	100% Complete.
			Construction				The project does not involve construction.		
			Const. Mgmt						
2	Southern SSES Rehabilitation (Agat-Santa Rita- Umatac-Merizo)	Brown & Caldwell	Design				The design was previously completed under bond funding.		
			Construction	1	10/30/2015	2/28/2017	\$ 1,170,583.82	Reliable Builders	Warranty work complete .
			Const. Mgmt	1	11/10/2015	3/30/2017	\$ 226,980.23	TG Engineers	CM Services complete.
3	Asan-Adelup- Hagatna RT1 Sewer Line Rehabilitation and Replacement	Brown & Caldwell	Design	2	12/11/2015	3/30/2017 for Design requirements	\$ 1,780,210.00	HDR	Route 1 rebid: HDR to provide services during bid process. .
			Construction	2	11/9/2018	3/8/2020	\$6,275,782.88	InfraTech	- Contractor working through submittals for permits, in particular the bypass. - InfraTech has CIPP subcontractor on-island. Cleaning work conducted last week. - GWA Ops assisted with shutting down Piti PS and current bypassed section to allow for CCTV work. Kudos to GWA Ops crew.
			Const. Mgmt	2	8/3/2017	3/8/2020	\$ 870,610.41	DCA	o CM working with contractor to work through permitting, submittals, and schedule.
4	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Brown & Caldwell	Design	3	11/17/2015	3/30/2017 for Design requirements	\$ 316,681.00	SSFM	SSFM providing services during bidding process as well as construction phase.
			Construction	3	8/31/2017	10/1/2018	\$ 4,554,451.00	ProPacific	- PPBC still needs to complete bench/channel on SMH #8, #9 & #10. - Completed pipe between SMH #8 to 9. Last pipe remaining between SMH #9 and 10 still needs to be completed; need wye/saddle for laterals. - Discussion with adjacent home owner on installation of lateral/wye not a GWA issue; Home owner responsible for the costs. - Mandrel tests completed. No deficiencies noted. Lamp testing to be completed this week. - PPBC continues discharging/dewatering water to sewer; GWA metering discharge. GWA still has not ordered a stop. - Contractor Invoice #13 with GWA (3/4). - Contractor within LD period.
			Const. Mgmt	3	9/19/2017	10/1/2018	\$ 584,725.00	TG Engineers	• CM work on-going.

GWA Work Session - March 19, 2019 - DIVISION REPORTS

5	Brown & Caldwell Project Management	Brown & Caldwell to provide program management services and support.	T. Cruz	Design	4	3/24/2015	2/28/2019	\$ 2,640,220.00	B&C	Project underway.
				Construction				The project does not involve construction.		
				Const. Mgmt						
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	Design	5	7/6/2015	01/30/2018 (revised due to financial workshop)	\$ 2,623,300.00	B&C	Project complete
				Construction				The project does not involve construction.		
				Const. Mgmt						
7	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells to be rehabilitated are A-2, A-7, A-12, D-5, & F-3.	Brown & Caldwell	Design	6	5/27/2016	2/28/2018 (for design only)	\$ 1,758,247.00	AECOM	• Design services during construction on hold until construction IFB is issued
				Construction		8/15/2019	8/30/2020			GWA has received SRF grant 96902619 therefore GWA to work to schedule procurement for construction activities by May 2019 with actual start occurring sometime in August 2019.
				Const. Mgmt		8/15/2019	8/30/2020			• Draft CM scope submitted to GWA.
8	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaing issues where sewer overflows are known to occur in Tumon San Vitores.	Brown & Caldwell	Design	7	6/24/2016	10/30/2017 for design only	\$ 572,089.00	TG Engineers	• TGE to provide engineering services during bid process.
				Construction		12/1/2018	12/31/2019			Given that the bids received for just the Tamuning Hotspots have come in much higher than the engineers cost estimates GWA is planning to separate the bids for Tumon Hotspots from the Tamuning bids
				Const. Mgmt	See Project 15	5/31/2019	5/31/2020	See Project 15	Am Orient	Procurement 100%: Contract fully executed. CM services to be on hold until bidding restarted.
9	Critical Sewer Pump Stations (7 stations)	Rehabilitation of various components of 7 pump stations that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita, Santa Ana, Southern Link, and Route 1.	CDM	Design				The design will be incorporated into the design/build package.		
			J. Davis	Design/Build	1	8/8/2016	3/30/2018	\$ 1,542,979.01	ProPacific	Design Build complete
				Const. Mgmt	4	9/9/2016	3/30/2018	\$ 329,353.52	Stanley	CM complete
10	Sewer Pump Station High Water Alarm Systems (20 stations)	This project will design and installed telemetry equipment/SCADA type alarms that will alert when pump station failure occurs.	C. Yam	Design				The design will be incorporated into the design/build package.		
				Design	8	8/12/2016	02/30/2017	\$ 183,171.00	AECOM	Design complete
				Construction	4	4/5/2017	9/30/2017	\$ 1,444,888.00	Pacific Rim	Project complete
				Const. Mgmt	5	02/30/2017	9/30/2017	\$ 195,269.00	EMSPCO	CM work complete

GWA Work Session - March 19, 2019 - DIVISION REPORTS

11	Sewer Pump Station Backup Power (2 stations)	Construction of the housing and installation of new generators for the Casimero pump station (Mongmong) and the Namo pump station (Yona central).	B. Cruz	Design				The design will be incorporated into the design/build package.		
				Design/Build	2	6/24/2016	9/30/2017	\$ 362,692.53	ProPacif	Design Build project complete.
				Const. Mgmt				B. Cruz is the construction manager.		
12	RT4 Relief Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines that are located from Agana McDonalds to Marine Drive that have been known to overflow due to structural issues.	Brown & Caldwell	Design	9	3/1/2016	4/22/2017	\$ 794,000.00	AECOM	- AECOM to provided services during construcion.
				Construction	5	9/3/2018	12/26/2019	\$ 3,998,688.00	Insituform	- Contractor working through permitting; permit still with GEPA. - Working on submittals with CM. - Insituform working on finalizing initial schedule. - Cost proposal soon for removing laterals, and additional traffic control/bypass for the removal of the concrete plug.
				Construction	6	9/25/2018	12/19/2019	\$ 3,407,848.00	ProPacif	- Contractor working through permitting; Building permit now with DPW. - Working on submittals with CM. - Initial schedule approved and returned to contractor. - Cost proposal soon for additional time and possibly addition overhead.
				Const. Mgmt	6	11/15/2018	12/31/2019	\$ 702,678.13	EMPSCO	- Planning and coordination on-going to ensure project site managed accordingly.
13	Groundwater Wells Rehabilitation (D-3, D-17, D-18, D-22, M-9)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.	Brown & Caldwell	Design				The design was previously completed under bond funding.		
				Construction	7	8/19/2016	3/30/2018 (completion date under analysis)	\$ 6,158,240.67	Pacific Rim	<ul style="list-style-type: none"> <li>• Main issues remaining:</li> <li>• Contractor submitted a large number of Change Order Requests - approximately six hundred thousand dollars - Reviewing with EA. Some may be justified - expect a lot of them not justifiable.</li> <li>• USSI completed the harmonics testing. Report submitted to EA.</li> <li>• D-03 permit information application was completed. Waiting on update from Ron T.</li> <li>• They still need to complete the following items on D-03 per the original contract.</li> <li>- Final control check out.</li> <li>• There were more chlorine equipment issues due to backflow from the system into the regulators apparently due to a faulty injector. PRC is working to correct this issues for commissioning.</li> </ul>
				Const. Mgmt	7	3/22/2016	3/30/2018 (completion date under analysis)	\$ 1,041,722.56	EA	• CM continuing to coordinate punch list items with contractor.

GWA Work Session - March 19, 2019 - DIVISION REPORTS

14	Southern SSES Sewer Rehabilitation (Baza Gardens- Talofofo)	Rehabilitation of segments of sewer lines in Windward Hills, Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.	Brown & Caldwell	Design				The design was previously completed under bond funding.		
				Construction	8	8/2/2016	Due to issue related to Santa Rita sewer project completion under analysis.	\$ 1,189,815.00	ProPacific	<ul style="list-style-type: none"> <li>§ Lift Station Proposal: <ul style="list-style-type: none"> <li>- No -cost Change Order Documents</li> <li>- Performance specification</li> <li>o PPBC provided comments via meeting on 2/8/2019:</li> <li>§ Identified system preferences and will incorporate into documents</li> <li>o Survey task will be passed to PPBC</li> <li>- Proposed Locations</li> <li>- Evaluating two (2) locations</li> <li>- Property Owner Notification</li> <li>o Sent draft notification letter to GWA for review/comment</li> <li>o GWA developing sketch of area to include with notification letter</li> <li>- PPBC to conduct survey of easement; GWA will decide final location</li> <li>- USEPA Concurrence</li> <li>- USEPA accepts using remaining funds towards the lift station</li> <li>- NEPA required.</li> <li>o GWA planning department beginning process. Joe to follow up and assist as necessary.</li> <li>§ Baza Gardens: <ul style="list-style-type: none"> <li>- All laterals are "reinstated" and CCTV completed (per email from PPBC on 11/29/2018).</li> <li>- Post-repair CCTV videos received from PPBC on 03/14/2019.</li> <li>o BC will review and provide a response</li> </ul> </li> <li>§ Talofofo: Work is complete.</li> </ul> </li> </ul>
				Const. Mgmt	8	7/29/2016		\$ 347,945.93	EMPSCO	<ul style="list-style-type: none"> <li>- Met with EMPSCO on 1/18/2019 to discuss remaining work on the project.</li> <li>- Change Order No. 6: Additional CM services for Baza Gardens/Talofofo Closeout</li> <li>- \$6,067.66</li> <li>- Obtained EMPSCO, BC, and GWA signature. Will route for execution.</li> </ul>
15	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	Design	10	9/9/2016	10/31/2017 (for design only)	\$ 663,629.00	TG Engineers	TGE to provide engineering services during bid process.
				Construction		12/1/2018	12/31/2019			Procurement 55%; GWA received proposed bid "repackage" and is under review. This project will be "transitioned" from the PMO to GWA engineering thus transitioning plan required.
				Const. Mgmt	9	3/31/2019	3/31/2020	\$531,000.75	Am Orient	Procurement 100%: Contract fully executed. CM services to be on hold until bidding restarted.
16	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	11/30/2017	\$ 493,818.86	EMPSCO	Talofofo Pump Station design /bid package received. Final Design of Chalan Pago Pump Station project under review by GWA. Change Order related to snails to be executed.
				Construction	9	12/27/2018	4/27/2020	\$2,363,718	Giant Const.	Contractor submittals on-going. GWA received construction schedule.
				Const. Mgmt		12/1/2018	12/31/2019			GWA Engineering will management construction management tasks.

GWA Work Session - March 19, 2019 - DIVISION REPORTS

17	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	Design		8/17/2016	11/30/2017	The design will be included with the Talofofo Pump Station design project.		
				Construction		3/15/2019	3/30/2020			
				Const. Mgmt		3/15/2019	3/30/2020			
18	Water Hydraulic Model (SCADA ready instruments to update Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	Design	12	8/3/2016	3/15/2017	\$ 523,268.00	GHD	Design complete.
				Construction		6/15/2019	6/30/2020			USEPA Grant Funding FY18 in hand. Anticipate advertising construction April 2019.
				Const. Mgmt		6/15/2019	6/30/2020			USEPA Grant Funding FY18 in hand. Anticipate advertising CM April 2019.
19	Macheche Hill Sewer Rehabilitation/ Replacement	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently and is consider a high priority.	J. Davis	Design-Build	3	8/29/2016	3/30/2018	\$ 2,202,545.47	Giant Const.	Construction project complete.
				Const. Mgmt	10	9/16/2016	3/30/2018	\$ 379,994.38	Am Orient	CM work complete.
20	Asan-Adelup-Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Rehabilitation of sewer line in Asan that collapsed and which is current fitted with a temporary pumping system.	Brown & Caldwell	Design				Design cost covered under Project 3 above.		
				Construction	10	3/8/2017	12/30/2017	\$ 2,470,658.00	Pacific Rim	• Project complete. PMO to transmit project documents.
				Const. Mgmt	11	1/24/2017	12/30/2017	covered under Project 3	HDR	CM work complete.
21	Valve Maintenance Equipment Trailer (2 each)	Acquire two sets of valve exercise equipment mounted on trailers to be used to exercise existing valves in the distribution system as a means of maintaining the valves functionality so the valves to not "freeze up" and required replacement	Grants/Operations	Equipment	1			\$ 167,814.94		Complete
22	Heavy Duty Trucks to Haul Valve Maintenance Equipment Trailer (2 each)	Acquire two heavy duty trucks with extended to pull the valve exercise equipment trailer	Grants/Operations	Equipment	2			\$ 139,790.00	Triple J	Complete
23	Project Advertisement	Each IFB or RFP requires advertising	Engineering/ Procurement	MISC	1			\$ 25,172.50	PDN/Post	On-going

**GUAM WATERWORKS AUTHORITY  
FEBRUARY 28, 2019  
FINANCIAL AND RELATED REPORTS  
TABLE OF CONTENTS**

	<b>SCHEDULES</b>	<b>PAGE</b>
<b>BALANCE SHEET</b>	<b>A</b>	<b>2</b>
<b>INCOME STATEMENT MTD ACTUALS VS MTD BUDGET</b>	<b>B</b>	<b>3</b>
<b>INCOME STATEMENT MTD ACTUALS FY19 VS FY18</b>	<b>C</b>	<b>4</b>
<b>INCOME STATEMENT YTD ACTUALS VS YTD BUDGET</b>	<b>D</b>	<b>5</b>
<b>INCOME STATEMENT YTD ACTUALS FY19 VS FY18</b>	<b>E</b>	<b>6</b>
<b>SCHEDULE OF CASH RESTRICTED/UNRESTRICTED</b>	<b>F</b>	<b>7</b>
<b>AGING REPORT - GOVERNMENT RECEIVABLES</b>	<b>G</b>	<b>8</b>
<b>SYSTEM DEVELOPMENT CHARGES PROJECT STATUS</b>	<b>H</b>	<b>9</b>



**GUAM WATERWORKS AUTHORITY**  
**Balance Sheet**  
**February 28, 2019**

**SCHEDULE A**

<b>ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</b>	<b>Unaudited February 28, 2019</b>	<b>Audited September 30, 2018</b>	<b>Increase (Decrease)</b>
<u>Current Assets</u>			
Cash			
Unrestricted (Schedule G)	8,995,158	3,094,379	5,900,779
Restricted Funds (Schedule G)	65,838,343	66,805,781	(967,438)
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of \$6,414,972 at Feb 28, 2019 and \$4,669,462 at Sep 30, 2018	13,673,518	16,610,663	(2,937,146)
Other Receivable	5,075,309	5,167,946	(92,637)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of \$64,131 at Feb 28, 2019 and \$64,131 at Sep 30, 2018	2,362,288	3,342,557	(980,269)
Total Current Assets	95,944,615	95,021,326	923,289
<u>Property, Plant and Equipment</u>			
Utility plant in service			
Water system	350,496,877	348,812,303	1,684,574
Wastewater system	304,920,304	304,531,954	388,351
Non-utility property	17,454,204	17,241,496	212,708
Total property	672,871,385	670,585,753	2,285,632
Less Accumulated Depreciation	(311,814,772)	(303,019,447)	(8,795,325)
Land	3,681,120	3,681,120	-
Construction Work in Progress	207,634,697	178,443,926	29,190,771
Property, Plant and Equipment, net	572,372,431	549,691,353	22,681,078
<u>Other noncurrent assets</u>			
Restricted cash (Schedule G)	153,402,147	177,176,880	(23,774,733)
Investments (Schedule G)	43,138,106	43,097,913	40,193
Other Prepaid Expenses	933,874	677,828	256,046
Total other noncurrent assets	197,474,126	220,952,621	(23,478,494)
<b>Total Assets</b>	<b>865,791,172</b>	<b>865,665,299</b>	<b>125,872</b>
Deferred outflows of resources			
Debt defeasance due to bond refunding	12,463,118	12,810,787	(347,670)
Deferred outflows from pension	4,190,145	4,233,025	(42,880)
Deferred outflows from OPEB	9,070,814	9,070,814	-
<b>Total Assets and Deferred Outflows of Resources</b>	<b>891,515,248</b>	<b>891,779,926</b>	<b>(264,677)</b>
<b>LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET ASSETS</b>			
<u>Current Liabilities</u>			
Current maturities of long-term debt			
Series 2010 Bond	1,800,000	1,800,000	-
Series 2014 Refunding	3,620,000	3,620,000	-
Series 2017 Refunding	295,000	295,000	-
Notes Payable	3,273,277	3,203,870	69,407
Accounts Payable -Trade	5,516,896	5,442,000	74,896
Interest Payable	4,275,569	6,427,669	(2,152,099)
Accrued Payroll and Employee Benefits	1,364,566	1,608,219	(243,654)
Accrued Annual Leave	1,062,968	1,059,161	3,807
Current portion of employee annual leave	604,009	607,382	(3,373)
Contractors' Payable	14,904,731	25,680,792	(10,776,061)
Customer and Other Deposits	2,146,082	2,131,242	14,840
Other Liabilities	82,418	106,997	(24,580)
Total Current Liabilities	38,945,515	51,982,332	(13,036,817)
<u>Long Term Debt, less current maturities</u>			
Series 2010 Revenue Bond	1,895,000	1,895,000	-
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding Bond	68,900,000	68,900,000	-
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Series 2017 Refunding Bond	107,365,000	107,365,000	-
Unamortized Bond Premium/Discount	32,702,074	33,300,619	(598,545)
Notes Payable	937,703	2,325,154	(1,387,451)
Net pension liability	45,451,352	45,451,352	-
Net OPEB obligation	88,950,661	88,950,661	-
Employee Annual Leave, Less Current Portion	820,418	822,821	(2,403)
<b>Total Liabilities</b>	<b>701,907,723</b>	<b>716,932,939</b>	<b>(15,025,216)</b>
Deferred inflows of resources:			
Deferred inflows from pension	1,870,114	1,870,114	-
Deferred inflows from OPEB	8,741,900	8,741,900	-
<b>Total Liabilities and Deferred Inflows of Resources</b>	<b>712,519,737</b>	<b>727,544,953</b>	<b>(15,025,216)</b>
<b>Net Assets</b>	<b>178,995,511</b>	<b>164,234,973</b>	<b>14,760,538</b>
<b>Total Liabilities, Deferred Inflows of Resources and Net Assets</b>	<b>891,515,248</b>	<b>891,779,926</b>	<b>(264,677)</b>

GWA Work Session - March 19, 2019 - DIVISION REPORTS

GUAM WATERWORKS AUTHORITY  
Statement of Operations and Retained Earnings  
Comparative Budget vs. Actual for the period ending February 28, 2019

SCHEDULE B

	Month to Date		Variance
	Budget	Actual (Unaudited)	Favorable /
	February-19	February-19	(Unfavorable)
<b>OPERATING REVENUES</b>			
Water Revenues	5,813,246	5,122,717	(690,529)
Wastewater Revenues	3,247,265	3,083,668	(163,597)
Legislative Surcharge	294,667	263,157	(31,510)
Other Revenues	38,254	62,707	24,453
System Development Charge	97,773	73,503	(24,270)
<b>Total Operating Revenues</b>	<b>9,491,205</b>	<b>8,605,751</b>	<b>(885,454)</b>
<b>OPERATING AND MAINTENANCE EXPENSES</b>			
Water Purchases	687,577	599,697	87,880
Power Purchases	1,231,315	1,231,315	0
Total Utility Costs	1,918,892	1,831,012	87,881
Salaries and Wages	1,782,365	1,549,224	233,141
Pension and Benefits	562,238	478,549	83,689
Total Salaries and Benefits	2,344,603	2,027,772	316,831
Capitalized Labor and Benefits	(308,333)	(308,333)	(0)
Net Salaries and Benefits	2,036,269	1,719,439	316,830
<b>Administrative and General Expenses</b>			
Sludge removal	123,771	120,412	3,359
Chemicals	185,801	185,026	775
Materials & Supplies	120,606	119,909	697
Transportation	38,648	38,018	629
Communications	15,054	14,483	571
Claims	1,417	473	944
Insurance	75,461	75,209	252
Training & Travel	8,417	7,616	801
Advertising	10,000	7,464	2,536
Miscellaneous	69,632	69,537	94
Regulatory Expense	12,529	12,147	383
Bad Debts Provision	144,148	169,344	(25,196)
Total Administrative and General Expense	805,483	819,638	(14,154)
<b>Depreciation Expense</b>	<b>1,759,065</b>	<b>1,759,065</b>	<b>(0)</b>
<b>Contractual Expense</b>			
Audit & Computer Maint.	57,783	56,718	1,066
Building rental	38,361	35,211	3,150
Equipment rental	133,980	133,038	941
Legal	512	-	512
Laboratory	25,862	25,196	666
Other	338,458	335,973	2,485
Total Contractual Expense	594,956	586,136	8,820
Retiree Supp. Annuities and health care costs	249,871	235,740	14,131
Contribution to Government of Guam	51,975	50,000	1,975
Total Retiree Benefits	301,846	285,740	16,106
<b>Total Operating Expenses</b>	<b>7,416,512</b>	<b>7,001,030</b>	<b>415,482</b>
<b>Earnings (Loss) from Operations</b>	<b>2,074,693</b>	<b>1,604,721</b>	<b>(469,972)</b>
Interest Income-2010/13/14/16/17 Series Bond	84,943	370,239	285,296
Interest Income-Other Funds	13,856	72,321	58,465
Interest Income-SDC	2,072	12,169	10,097
Interest Expense- 2010/13/14/16/17 Series Bond	(2,387,785)	(2,137,785)	250,000
Interest Expense- ST BOG	(19,762)	(18,676)	1,086
Federal Expenditures	-	-	-
Loss on Asset Disposal	-	-	-
AFUDC	1,157,306	1,157,306	0
Amortization of Discount, Premium and Issuance Costs	(17,798)	119,709	137,507
Defeasance due to bond refunding	(16,201)	(69,534)	(53,333)
Deferred outflows from pension	-	(8,931)	(8,931)
Prior Year Adjustment	-	(289)	(289)
Total non-operating revenues (expenses)	(1,183,369)	(503,470)	679,899
<b>Net Income (Loss) before capital contributions</b>	<b>891,324</b>	<b>1,101,252</b>	<b>209,928</b>
<b>Capital Contributions</b>			
Grants from US Government	5,533,205	3,495,637	(2,037,568)
Grants from GovGuam & Others	-	51,879	51,879
Total Capital Contributions	5,533,205	3,547,516	(1,985,689)
<b>Change in Net Assets</b>	<b>6,424,529</b>	<b>4,648,768</b>	<b>(1,775,761)</b>
<b>Debt Service Calculation</b>			
Earnings From Operations	2,074,693	1,604,721	
System Development Charge	(97,773)	(73,503)	
Retiree COLA	51,975	50,000	
Interest/Investment Income	13,856	72,321	
Depreciation	1,759,065	1,759,065	
<b>Balance Available for Debt Service per Section 6.12</b>	<b>3,801,817</b>	<b>3,412,604</b>	
Working Capital Reserve Available for Debt Service	934,811	952,508	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
<b>Balance Available for Debt Service inclusive of reserves</b>	<b>4,736,628</b>	<b>4,365,113</b>	
<b>Debt Service</b>			
Principal	476,250	476,250	
Interest	2,137,785	2,137,785	
<b>Total</b>	<b>2,614,035</b>	<b>2,614,035</b>	
<b>Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)</b>	<b>1.45</b>	<b>1.31</b>	
<b>Debt Service Coverage (1.75X) inclusive of reserves (PUC)</b>	<b>1.81</b>	<b>1.67</b>	

GWA Work Session - March 19, 2019 - DIVISION REPORTS

GUAM WATERWORKS AUTHORITY  
Statement of Operations and Retained Earnings  
Comparative for the period ending February 28, 2019 and 2018

SCHEDULE C

	Month to Date		Variance
	Actual (Unaudited) February-19	Actual (Audited) February-18	Favorable / (Unfavorable)
<b>OPERATING REVENUES</b>			
Water Revenues	5,122,717	5,531,297	(408,580)
Wastewater Revenues	3,083,668	3,191,784	(108,116)
Legislative Surcharge	263,157	289,209	(26,052)
Other Revenues	62,707	43,294	19,412
System Development Charge	73,503	89,249	(15,746)
<b>Total Operating Revenues</b>	<b>8,605,751</b>	<b>9,144,833</b>	<b>(539,082)</b>
<b>OPERATING AND MAINTENANCE EXPENSES</b>			
Water Purchases	599,697	723,748	124,051
Power Purchases	1,231,315	1,223,874	(7,441)
Total Utility Costs	1,831,012	1,947,622	116,610
Salaries and Wages	1,549,224	1,464,423	(84,800)
Pension and Benefits	478,549	376,266	(102,283)
Total Salaries and Benefits	2,027,772	1,840,689	(187,083)
Capitalized Labor and Benefits	(308,333)	(296,147)	12,186
Net Salaries and Benefits	1,719,439	1,544,542	(174,897)
<b>Administrative and General Expenses</b>			
Sludge removal	120,412	125,638	5,226
Chemicals	185,026	182,625	(2,401)
Materials & Supplies	119,909	180,995	61,086
Transportation	38,018	64,001	25,983
Communications	14,483	14,756	273
Claims	473	10,803	10,331
Insurance	75,209	76,005	796
Training & Travel	7,616	22,652	15,036
Advertising	7,464	14,226	6,762
Miscellaneous	69,537	84,564	15,027
Regulatory Expense	12,147	22,121	9,975
Bad Debts Provision	169,344	180,246	10,901
Total Administrative and General Expense	819,638	978,632	158,994
<b>Depreciation Expense</b>	<b>1,759,065</b>	<b>1,606,687</b>	<b>(152,378)</b>
<b>Contractual Expense</b>			
Audit & Computer Maint.	56,718	58,815	2,097
Building rental	35,211	36,603	1,392
Equipment rental	133,038	89,207	(43,832)
Legal	-	-	-
Laboratory	25,196	34,529	9,333
Other	335,973	200,567	(135,406)
Total Contractual Expense	586,136	419,721	(166,415)
Retiree Supp. Annuities and health care costs	235,740	662,581	426,840
Contribution to Government of Guam	50,000	49,833	(167)
Total Retiree Benefits	285,740	712,414	426,674
<b>Total Operating Expenses</b>	<b>7,001,030</b>	<b>7,209,618</b>	<b>208,589</b>
<b>Earnings (Loss) from Operations</b>	<b>1,604,721</b>	<b>1,935,215</b>	<b>(330,493)</b>
Interest Income-2010/13/14/16/17 Series Bond	370,239	255,374	114,865
Interest Income-Other Funds	72,321	45,645	26,676
Interest Income-SDC	12,169	13,852	(1,682)
Interest Expense- 2010/13/14/16/17 Series Bond	(2,137,785)	(2,177,468)	39,683
Interest Expense- ST BOG	(18,676)	(30,702)	12,026
Federal Expenditures	-	(62,220)	62,220
Loss on Asset Disposal	-	(162,136)	162,136
AFUDC	1,157,306	1,041,766	115,540
Amortization of Discount, Premium and Issuance Costs	119,709	(42,691)	162,400
Defeasance due to bond refunding	(69,534)	(62,043)	(7,490)
Deferred outflows from pension	(8,931)	32,592	(41,523)
Prior Year Adjustment	(289)	13,219	(13,508)
Total non-operating revenues (expenses)	(503,470)	(1,134,813)	631,343
<b>Net Income (Loss) before capital contributions</b>	<b>1,101,252</b>	<b>800,402</b>	<b>300,850</b>
<b>Capital Contributions</b>			
Grants from US Government	3,495,637	1,244,712	2,250,925
Grants from GovGuam & Others	51,879	22,681	29,199
Total Capital Contributions	3,547,516	1,267,392	2,280,124
<b>Change in Net Assets</b>	<b>4,648,768</b>	<b>2,067,794</b>	<b>2,580,974</b>
<b>Debt Service Calculation</b>			
Earnings From Operations	1,604,721	1,935,215	
System Development Charge	(73,503)	(89,249)	
Retiree COLA	50,000	49,833	
Interest/Investment Income	72,321	45,645	
Depreciation	1,759,065	1,606,687	
<b>Balance Available for Debt Service per Section 6.12</b>	<b>3,412,604</b>	<b>3,548,131</b>	
Working Capital Reserve Available for Debt Service	952,508	945,164	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
<b>Balance Available for Debt Service inclusive of reserves</b>	<b>4,365,113</b>	<b>4,493,295</b>	
<b>Debt Service</b>			
Principal	476,250	433,333	
Interest	2,137,785	1,794,910	
<b>Total</b>	<b>2,614,035</b>	<b>2,228,243</b>	
<b>Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)</b>	<b>1.31</b>	<b>1.59</b>	
<b>Debt Service Coverage (1.75X) inclusive of reserves (PUC)</b>	<b>1.67</b>	<b>2.02</b>	

GWA Work Session - March 19, 2019 - DIVISION REPORTS

**GUAM WATERWORKS AUTHORITY**  
**Statement of Operations and Retained Earnings**  
**Comparative Budget vs. Actual for the period ending February 28, 2019**

**SCHEDULE D**

	<b>Year to Date</b>		<b>Variance</b>
	<b>Budget</b>	<b>Actual (Unaudited)</b>	<b>Favorable /</b>
	<b>February-19</b>	<b>February-19</b>	<b>(Unfavorable)</b>
<b>OPERATING REVENUES</b>			
Water Revenues	29,066,232	27,682,192	(1,384,040)
Wastewater Revenues	16,236,325	15,793,509	(442,816)
Legislative Surcharge	1,473,334	1,469,051	(4,283)
Other Revenues	191,269	221,267	29,998
System Development Charge	488,863	265,732	(223,131)
<b>Total Operating Revenues</b>	<b>47,456,023</b>	<b>45,431,750</b>	<b>(2,024,273)</b>
<b>OPERATING AND MAINTENANCE EXPENSES</b>			
Water Purchases	3,437,886	2,522,238	915,648
Power Purchases	6,156,575	6,055,239	101,337
Total Utility Costs	9,594,461	8,577,477	1,016,985
Salaries and Wages	8,911,825	8,172,664	739,161
Pension and Benefits	2,811,189	2,583,248	227,941
Total Salaries and Benefits	11,723,014	10,755,912	967,102
Capitalized Labor and Benefits	(1,541,667)	(1,541,665)	(2)
Net Salaries and Benefits	10,181,347	9,214,247	967,101
<b>Administrative and General Expenses</b>			
Sludge removal	680,856	624,797	56,059
Chemicals	929,007	819,332	109,676
Materials & Supplies	813,028	752,573	60,455
Transportation	243,238	215,161	28,077
Communications	75,271	55,387	19,884
Claims	37,083	35,899	1,185
Insurance	377,304	375,896	1,408
Training & Travel	92,083	76,713	15,370
Advertising	50,000	32,148	17,852
Miscellaneous	478,159	461,568	16,591
Regulatory Expense	77,645	64,255	13,390
Bad Debts Provision	720,741	898,848	(178,107)
Total Administrative and General Expense	4,574,415	4,412,576	161,839
<b>Depreciation Expense</b>	<b>8,795,325</b>	<b>8,795,325</b>	<b>(0)</b>
<b>Contractual Expense</b>			
Audit & Computer Maint.	318,917	232,158	86,759
Building rental	241,805	176,054	65,751
Equipment rental	534,898	472,925	61,973
Legal	2,560	-	2,560
Laboratory	137,312	136,993	319
Other	1,192,288	1,176,328	15,960
Total Contractual Expense	2,427,780	2,194,458	233,321
Retiree Supp. Annuities and health care costs	1,249,354	1,185,539	63,815
Contribution to Government of Guam	259,875	250,000	9,875
Total Retiree Benefits	1,509,229	1,435,539	73,690
<b>Total Operating Expenses</b>	<b>37,082,558</b>	<b>34,629,623</b>	<b>2,452,935</b>
<b>Earnings (Loss) from Operations</b>	<b>10,373,465</b>	<b>10,802,127</b>	<b>428,662</b>
Interest Income-2010/13/14/16/17 Series Bond	424,715	1,752,915	1,328,200
Interest Income-Other Funds	69,281	333,577	264,296
Interest Income-SDC	10,359	68,021	57,662
Interest Expense- 2010/13/14/16/17 Series Bond	(11,938,923)	(10,688,923)	1,250,000
Interest Expense- ST BOG	(98,810)	(92,641)	6,169
Federal Expenditures	-	-	-
Loss on Asset Disposal	-	-	-
AFUDC	5,786,528	5,786,530	2
Amortization of Discount, Premium and Issuance Costs	(88,990)	598,545	687,534
Defeasance due to bond refunding	(81,005)	(347,670)	(266,665)
Deferred outflows from pension	-	(44,653)	(44,653)
Prior Year Adjustment	-	(26,185)	(26,185)
Total non-operating revenues (expenses)	(5,916,845)	(2,660,484)	3,256,360
<b>Net Income (Loss) before capital contributions</b>	<b>4,456,621</b>	<b>8,141,643</b>	<b>3,685,023</b>
<b>Capital Contributions</b>			
Grants from US Government	27,666,025	6,567,016	(21,099,009)
Grants from GovGuam & Others	-	51,879	51,879
Total Capital Contributions	27,666,025	6,618,895	(21,047,130)
<b>Change in Net Assets</b>	<b>32,122,646</b>	<b>14,760,538</b>	<b>(17,362,107)</b>
<b>Debt Service Calculation</b>			
Earnings From Operations	10,373,465	10,802,127	
System Development Charge	(488,863)	(265,732)	
Retiree COLA	259,875	250,000	
Interest/Investment Income	69,281	333,577	
Depreciation	8,795,325	8,795,325	
<b>Balance Available for Debt Service per Section 6.12</b>	<b>19,009,083</b>	<b>19,915,297</b>	
Working Capital Reserve Available for Debt Service	4,674,056	4,762,542	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
<b>Balance Available for Debt Service inclusive of reserves</b>	<b>23,683,139</b>	<b>24,677,839</b>	
<b>Debt Service</b>			
Principal	2,381,250	2,381,250	
Interest	10,688,923	10,688,923	
<b>Total</b>	<b>13,070,173</b>	<b>13,070,173</b>	
<b>Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)</b>	<b>1.45</b>	<b>1.52</b>	
<b>Debt Service Coverage (1.75X) inclusive of reserves (PUC)</b>	<b>1.81</b>	<b>1.89</b>	

GWA Work Session - March 19, 2019 - DIVISION REPORTS

GUAM WATERWORKS AUTHORITY  
Statement of Operations and Retained Earnings  
Comparative for the period ending February 28, 2019 and 2018

SCHEDULE E

	Year to Date		Variance
	Actual (Unaudited) February-19	Actual (Audited) February-18	Favorable / (Unfavorable)
<b>OPERATING REVENUES</b>			
Water Revenues	27,682,192	27,656,485	25,707
Wastewater Revenues	15,793,509	15,958,919	(165,410)
Legislative Surcharge	1,469,051	1,446,045	23,005
Other Revenues	221,267	216,470	4,796
System Development Charge	265,732	446,244	(180,512)
<b>Total Operating Revenues</b>	<b>45,431,750</b>	<b>45,724,164</b>	<b>(292,414)</b>
<b>OPERATING AND MAINTENANCE EXPENSES</b>			
Water Purchases	2,522,238	3,618,739	1,096,501
Power Purchases	6,055,239	6,119,369	64,130
Total Utility Costs	8,577,477	9,738,108	1,160,632
Salaries and Wages	8,172,664	7,322,117	(850,548)
Pension and Benefits	2,583,248	1,881,330	(701,918)
Total Salaries and Benefits	10,755,912	9,203,447	(1,552,465)
Capitalized Labor and Benefits	(1,541,665)	(1,480,735)	60,930
Net Salaries and Benefits	9,214,247	7,722,712	(1,491,535)
<b>Administrative and General Expenses</b>			
Sludge removal	624,797	628,189	3,392
Chemicals	819,332	913,127	93,796
Materials & Supplies	752,573	904,974	152,401
Transportation	215,161	320,004	104,843
Communications	55,387	73,778	18,390
Claims	35,899	54,017	18,119
Insurance	375,896	380,025	4,129
Training & Travel	76,713	113,261	36,548
Advertising	32,148	71,129	38,981
Miscellaneous	461,568	422,820	(38,748)
Regulatory Expense	64,255	110,606	46,351
Bad Debts Provision	898,848	901,229	2,381
Total Administrative and General Expense	4,412,576	4,893,159	480,583
<b>Depreciation Expense</b>	<b>8,795,325</b>	<b>8,033,437</b>	<b>(761,888)</b>
<b>Contractual Expense</b>			
Audit & Computer Maint.	232,158	294,075	61,917
Building rental	176,054	183,015	6,961
Equipment rental	472,925	446,034	(26,891)
Legal	-	-	-
Laboratory	136,993	172,644	35,651
Other	1,176,328	1,002,837	(173,491)
Total Contractual Expense	2,194,458	2,098,605	(95,853)
Retiree Supp. Annuities and health care costs	1,185,539	3,312,903	2,127,364
Contribution to Government of Guam	250,000	249,167	(833)
Total Retiree Benefits	1,435,539	3,562,070	2,126,530
<b>Total Operating Expenses</b>	<b>34,629,623</b>	<b>36,048,091</b>	<b>1,418,468</b>
<b>Earnings (Loss) from Operations</b>	<b>10,802,127</b>	<b>9,676,073</b>	<b>1,126,055</b>
Interest Income-2010/13/14/16/17 Series Bond	1,752,915	1,276,871	476,044
Interest Income-Other Funds	333,577	228,224	105,352
Interest Income-SDC	68,021	69,259	(1,238)
Interest Expense- 2010/13/14/16/17 Series Bond	(10,688,923)	(10,887,339)	198,416
Interest Expense- ST BOG	(92,641)	(153,511)	60,870
Federal Expenditures	-	(311,102)	311,102
Loss on Asset Disposal	-	(810,679)	810,679
AFUDC	5,786,530	5,208,832	577,698
Amortization of Discount, Premium and Issuance Costs	598,545	(213,456)	812,001
Defeasance due to bond refunding	(347,670)	(310,217)	(37,452)
Deferred outflows from pension	(44,653)	162,960	(207,613)
Prior Year Adjustment	(26,185)	66,095	(92,280)
Total non-operating revenues (expenses)	(2,660,484)	(5,674,064)	3,013,579
<b>Net Income (Loss) before capital contributions</b>	<b>8,141,643</b>	<b>4,002,009</b>	<b>4,139,634</b>
<b>Capital Contributions</b>			
Grants from US Government	6,567,016	6,223,559	343,457
Grants from GovGuam & Others	51,879	113,403	(61,523)
Total Capital Contributions	6,618,895	6,336,961	281,934
<b>Change in Net Assets</b>	<b>14,760,538</b>	<b>10,338,970</b>	<b>4,421,568</b>
<b>Debt Service Calculation</b>			
Earnings From Operations	10,802,127	9,676,073	
System Development Charge	(265,732)	(446,244)	
Retiree COLA	250,000	249,167	
Interest/Investment Income	333,577	228,224	
Depreciation	8,795,325	8,033,437	
<b>Balance Available for Debt Service per Section 6.12</b>	<b>19,915,297</b>	<b>17,740,657</b>	
Working Capital Reserve Available for Debt Service	4,762,542	4,725,819	
Transfer to Working Capital- Debt Service Reserve	-	-	
Transfer to Working Capital- O&M Reserve	-	-	
<b>Balance Available for Debt Service inclusive of reserves</b>	<b>24,677,839</b>	<b>22,466,476</b>	
<b>Debt Service</b>			
Principal	2,381,250	2,166,667	
Interest	10,688,923	8,974,550	
<b>Total</b>	<b>13,070,173</b>	<b>11,141,217</b>	
<b>Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)</b>	<b>1.52</b>	<b>1.59</b>	
<b>Debt Service Coverage (1.75X) inclusive of reserves (PUC)</b>	<b>1.89</b>	<b>2.02</b>	

**GUAM WATERWORKS AUTHORITY**  
**Restricted and Unrestricted Cash Summary**  
**FY2019**

**SCHEDULE F**

Description	Unaudited February 28, 2019	Audited September 30, 2018	Increase (Decrease)
<b>UNRESTRICTED</b>			
Change Fund	2,000	2,000	-
Petty Cash	5,000	5,000	-
BOG - Deposit Accounts	8,988,158	3,087,379	5,900,779
<b>Sub-total Unrestricted</b>	<b>8,995,158</b>	<b>3,094,379</b>	<b>5,900,779</b>
<b>RESTRICTED</b>			
ANZ Bank	97	(0)	97
Bank Pacific	7,321	11,864	(4,543)
Bank of Hawaii	128,286	189,144	(60,859)
Community First FCU	3,915	4,392	(478)
First Hawaiian Bank	11,553	22,105	(10,552)
Bank Pacific Surcharge	729,906	298,898	431,009
Bank Pacific Escrow Deposit	660,587	660,254	334
BOG Customer Refunds	(0)	1,860,120	(1,860,121)
BOG Emergency Reserve Fund	6,232	6,229	3
BOG Sewer Hookup Revolving Fund	66,175	65,499	675
BOG Subord. Sec. Fund	859,233	859,233	-
BOG Operation and Maintenance Fund	3,083,482	3,083,482	-
BOG Revenue Trust	289,098	360,569	(71,471)
BOG Revenue Trust Fund	9,369,613	6,535,779	2,833,834
BOG Capital Improvement Revenue Fund	3,475,987	1,582,278	1,893,709
BOG O & M Reserve	13,772,304	13,666,109	106,194
BOG Debt Service Reserve	11,430,101	11,341,967	88,134
BOG CAPEX Fund	11,466,029	16,073,011	(4,606,982)
	<b>55,359,919</b>	<b>56,620,933</b>	<b>(1,261,015)</b>
BOG SDC Deposit	1,228,424	2,934,848	(1,706,424)
BOG SDC CDs	9,250,000	7,250,000	2,000,000
<b>Total Restricted</b>	<b>65,838,343</b>	<b>66,805,781</b>	<b>(967,438)</b>
<b>Reserve Funds</b>			
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	-
BOG Series 13 Construction Fund	26,363,979	36,222,062	(9,858,084)
BOG Series 14 Refunding Construction Fund	747,660	741,895	5,765
BOG Series 16 Construction Fund	102,108,026	116,036,000	(13,927,974)
BOG Series 17 Refunding Construction Fund	6,759,269	6,753,709	5,560
<b>Total Restricted - Held by Trustee</b>	<b>153,402,147</b>	<b>177,176,880</b>	<b>(23,774,733)</b>
USB Series 2013 Debt Service Fund	1,603,301	2,360,451	(757,150)
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	-
USB Series 2014 Refunding Debt Service Fund	3,061,200	1,833,235	1,227,965
USB Series 2014 Refunding Debt Service Reserve Fund	7,698,328	7,972,243	(273,915)
USB Series 2016 Debt Service Fund	1,224,116	1,805,556	(581,440)
USB Series 2016 Debt Service Reserve Fund	7,591,999	7,594,603	(2,603)
USB Series 2010 Debt Service Fund	1,244,105	503,751	740,353
USB Series 2017 Refunding Debt Service Reserve Fund	7,566,460	7,566,460	-
USB Series 2017 Debt Service Fund	1,116,909	1,429,927	(313,017)
<b>Total Investments</b>	<b>43,138,106</b>	<b>43,097,913</b>	<b>40,193</b>
<b>Total Restricted and Unrestricted Cash</b>	<b>271,373,753</b>	<b>290,174,953</b>	<b>(18,801,199)</b>

**Guam Waterworks Authority**  
**Accounts Receivable - Government**  
**As of February 28, 2019**

**SCHEDULE G**

<b>AGING</b>								
<b>Customer Name</b>	<b>No of Accounts</b>	<b>Current</b>	<b>31-60 days</b>	<b>61-90 days</b>	<b>91-120 days</b>	<b>Over 120 days</b>	<b>Total</b>	
Guam Int'l Airport Authority	8	\$ 51,533	\$ 30,122	\$ 31,534	\$ 32,130	\$ 229,323	\$	374,641
Guam Memorial Hospital Authority	3	28,392	40,374	34,117	39,391	-		142,274
Guam Power Authority	25	102,251	26,590	-	-	-		128,841
University of Guam	44	7,197	-	-	-	-		7,197
Guam Housing & Urban Renewal Authority	9	1,609	-	-	-	-		1,609
Port Authority of Guam	5	213	-	-	-	-		213
Guam Housing Corporation	1	34	-	-	-	-		34
	<b>95</b>	<b>\$ 191,226</b>	<b>\$ 97,085</b>	<b>\$ 65,652</b>	<b>\$ 71,521</b>	<b>\$ 229,323</b>	<b>\$</b>	<b>654,807</b>
Department of Education	53	\$ 227,247	\$ 181,447	\$ 53,756	\$ 5,691	\$ 6,962	\$	475,103
Department of Public Health & Social Services	8	7,486	887	797	387	103,799		113,356
Mayors Council of Guam	61	26,309	22,461	9,412	328	91		58,601
Department of Public Works	11	13,974	-	-	-	-		13,974
Office of the Governor	2	4,487	7,847	-	-	-		12,333
Department of Chamorro Affairs	7	9,886	2,421	-	-	-		12,308
Guam Fire Department	11	6,936	-	-	-	-		6,936
Department of Parks & Recreation	17	2,754	-	-	-	-		2,754
Office of Civil Defense	2	627	614	517	492	-		2,250
Department of Agriculture	6	1,953	-	-	-	-		1,953
Guam Solid Waste Authority	2	1,496	-	-	-	-		1,496
Sanctuary Inc	1	1,340	-	-	-	-		1,340
Department of Military Affairs/GUARNG	1	1,252	-	-	-	-		1,252
Guam Police Department	7	911	-	-	-	-		911
Division of Senior Citizens, DPH&SS	2	356	164	150	37	-		707
The Office of the Dededo Mayor	1	180	148	171	-	-		500
Department of Customs & Quarantine	1	389	-	-	-	-		389
Department of Mental Health	2	368	-	-	-	-		368
Department of Administration	2	230	-	-	-	-		230
Guam Veterans Affairs Office	2	167	-	-	-	-		167
Guam Public Library	6	135	-	-	-	-		135
Guam Energy Office	1	38	79	-	-	-		117
Merizo Mayor	1	38	41	35	-	-		113
Department of Corrections	8	107	-	-	-	-		107
Department of Youth Affairs	3	93	-	-	-	-		93
	<b>218</b>	<b>\$ 308,760</b>	<b>\$ 216,110</b>	<b>\$ 64,839</b>	<b>\$ 6,934</b>	<b>\$ 110,852</b>	<b>\$</b>	<b>707,495</b>
<b>Total as of Feb 28, 2019</b>	<b>313</b>	<b>\$ 499,986</b>	<b>\$ 313,195</b>	<b>\$ 130,490</b>	<b>\$ 78,455</b>	<b>\$ 340,175</b>	<b>\$</b>	<b>1,362,301</b>
<b>Total as of Sep 30, 2018</b>	<b>326</b>	<b>\$ 793,948</b>	<b>\$ 424,797</b>	<b>\$ 324,413</b>	<b>\$ 190,444</b>	<b>\$ 975,977</b>	<b>\$</b>	<b>2,709,580</b>
	<b>-4%</b>	<b>-37%</b>	<b>-26%</b>	<b>-60%</b>	<b>-59%</b>	<b>-65%</b>		<b>-50%</b>

**Guam Waterworks Authority**  
**System Development Charges Project Status**  
**As of February 28, 2019**

**SCHEDULE H**

PROJECT NAME	Available Project Funds	Total Expenditures	Total Outstanding Encumbrances	Total Expenditures and Encumbrances	Total Unobligated Funds
<b><u>SDC - Water</u></b>					
Central Guam Reservoirs		-	280,040	280,040	
Line Replacement Phase IV		-	256,937	256,937	
South Paulino Heights Waterline Upgrade		22,079	95,706	117,785	
	<b>\$ 5,726,262</b>	<b>\$ 22,079</b>	<b>\$ 632,683</b>	<b>\$ 654,762</b>	<b>\$ 5,071,500</b>
<b><u>SDC - Wastewater</u></b>					
Agat-Santa Rita Wastewater Treatment Plant Replacement		160,335	1,041,672	1,202,006	
Baza Gardens Wastewater Cross Island Pumping & Conveyance		390,908	641,978	1,032,886	
Route 4 Relief Sewerline Rehab & Replacement		-	399,869	399,869	
Northern WWTP (Land Purchase)		1,000,000	-	1,000,000	
Talofofo Sewer Improvement		-	241,142	241,142	
Umatac-Merizo Wastewater Treatment Plant Upgrade		-	248,979	248,979	
	<b>\$ 5,849,168</b>	<b>\$ 1,551,242</b>	<b>\$ 2,573,639</b>	<b>\$ 4,124,881</b>	<b>\$ 1,724,287</b>
<b>Grand Totals</b>	<b>\$ 11,575,430</b>	<b>\$ 1,573,321</b>	<b>\$ 3,206,322</b>	<b>\$ 4,779,643</b>	<b>\$ 6,795,787</b>

<b>Future planned projects</b>	<b>2019</b>
Water Wells	\$ 1,850,000
Water Dist Sys Pipe Replacement & Upgrades	1,850,000
WWTP Priority 1 Upgrades	1,000,000
Umatac Merizo STP Replacement	1,000,000
Wastewater Sewer System Expansion	1,000,000
	<b><u>\$ 6,700,000</u></b>





WASTEWATER COLLECTIONS  
MONTHLY REPORT  
FEBRUARY 2019



## CCTV INSPECTIONS AND SEWER CLEANING FEBRUARY 2019

<b>Feb.01- Feb.07</b>	Team #1	Team #2	Vendor	Total
Feet Scheduled	6,535			6,535
Feet Completed	6,709.10			6,709.10
Percent%	102.66%			102.66%

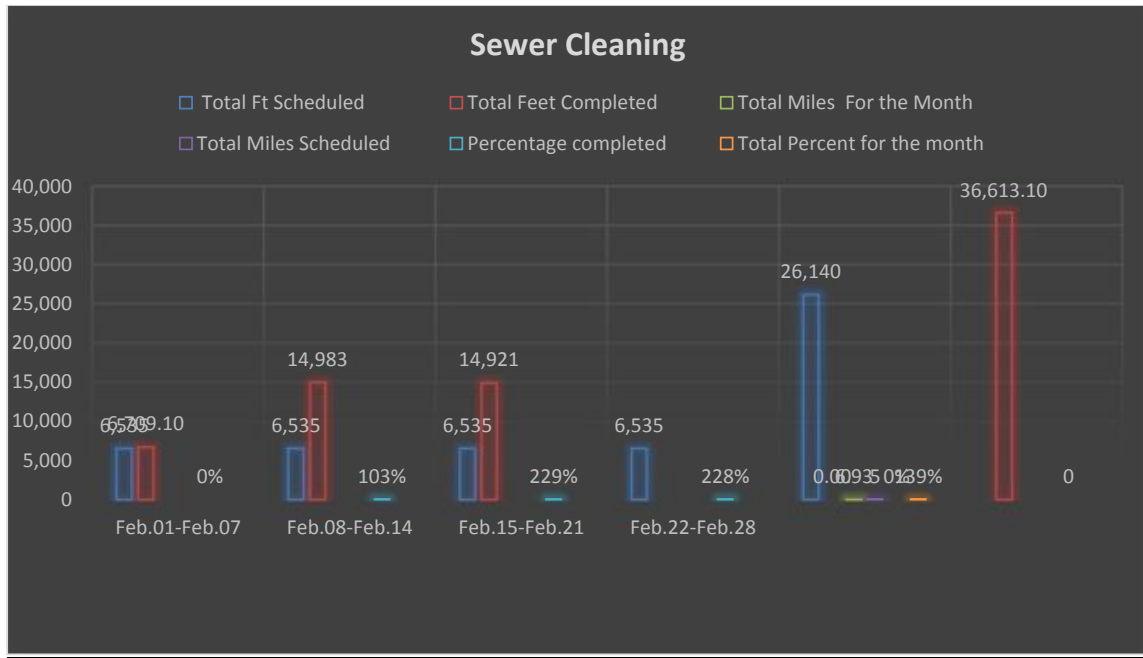
<b>Feb.08 - Feb.14</b>	Team #1	Team #2	Vendor	Total
Feet Scheduled	6,535			6,535
Feet Completed	14,983			14,983
Percent%	228%			228%

<b>Feb.15 – Feb.21</b>	Team #1	Team #2	Vendor	Total
Feet Scheduled	6,535			6,535
Feet Completed	14,921			14,983
Percent%	228%			228%

<b>Feb.22 – Feb. 28</b>	Team #1	Team #2	Vendor	Total
Feet Scheduled	6,535			6,535
Feet Completed	0			0
Percent%				

	Team #1	Team #2	Vendor	Total
Feet Scheduled	6,535			6,535
Feet Completed	0			0
Percent%	0%			0%

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	EOY
SEWER CLEANING	5.20	6.93											



# PUMPING STATION TROUBLE CALLS 2019

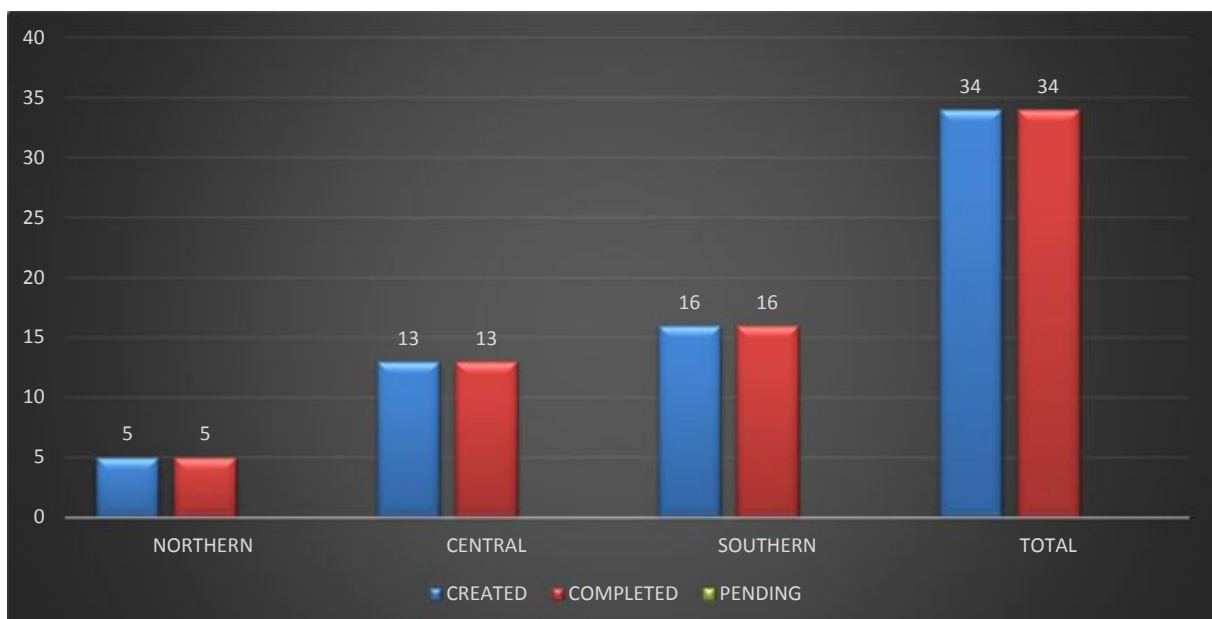
<b>Feb. 01 - Feb. 07</b>	<b>CREATED</b>	<b>COMPLETED</b>	<b>PENDING</b>
NORTHERN	2	2	0
CENTRAL	3	3	0
SOUTHERN	3	3	0
<b>TOTAL</b>	<b>8</b>	<b>8</b>	<b>0</b>

<b>Feb. 08 – Feb. 14</b>	<b>CREATED</b>	<b>COMPLETED</b>	<b>PENDING</b>
NORTHERN	0	0	0
CENTRAL	1	1	0
SOUTHERN	0	0	0
<b>TOTAL</b>	<b>1</b>	<b>1</b>	<b>0</b>

<b>Feb.15 – Feb. 21</b>	<b>CREATED</b>	<b>COMPLETED</b>	<b>PENDING</b>
NORTHERN	1	1	0
CENTRAL	2	2	0
SOUTHERN	2	2	0
<b>TOTAL</b>	<b>5</b>	<b>5</b>	<b>0</b>

<b>Feb. 22 – Feb. 28</b>	<b>CREATED</b>	<b>COMPLETED</b>	<b>PENDING</b>
NORTHERN	2	2	0
CENTRAL	7	7	0
SOUTHERN	11	11	0
<b>TOTAL</b>	<b>20</b>	<b>20</b>	<b>0</b>

<b>Feb.1-Feb.28</b>	<b>CREATED</b>	<b>COMPLETED</b>	<b>PENDING</b>
NORTHERN	5	5	0
CENTRAL	13	13	0
SOUTHERN	16	16	0
<b>TOTAL</b>	<b>34</b>	<b>34</b>	<b>0</b>



## MAINTENANCE PREVENTIVE AND CORRECTIVE CALL OUTS

<b>Feb.01 2019</b>	PREVENTIVE	CORRECTIVE
NORTHERN	0	1
CENTRAL	0	0
SOUTHERN	0	0
TOTAL	0	1

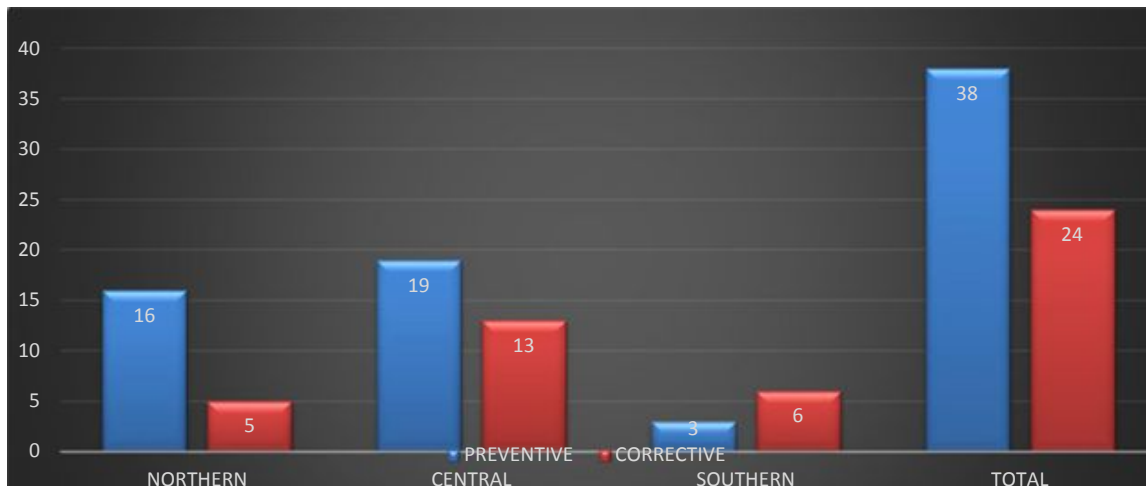
<b>Feb.04-Feb.08</b>	PREVENTIVE	CORRECTIVE
NORTHERN	14	0
CENTRAL	0	4
SOUTHERN	0	1
TOTAL	14	5

<b>Feb.11-Feb.15</b>	PREVENTIVE	CORRECTIVE
NORTHERN	1	2
CENTRAL	6	3
SOUTHERN	0	4
TOTAL	7	9

<b>Feb.18-Feb.22</b>	PREVENTIVE	CORRECTIVE
NORTHERN	1	1
CENTRAL	6	3
SOUTHERN	0	1
TOTAL	7	5

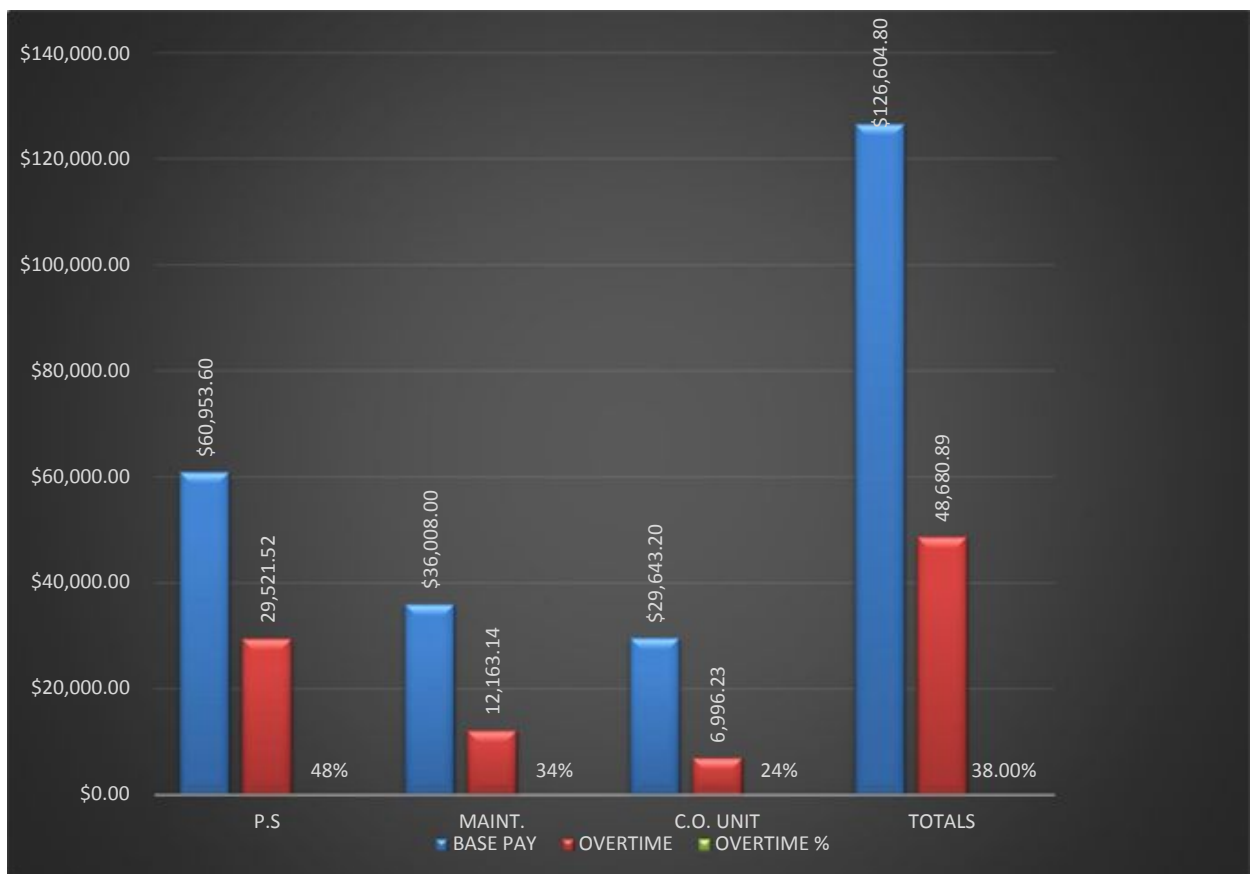
<b>Feb.25-Feb.28</b>	PREVENTIVE	CORRECTIVE
NORTHERN	0	1
CENTRAL	3	3
SOUTHERN	0	0
TOTAL	3	4

<b>MONTHLY TOTAL</b>	PREVENTIVE	CORRECTIVE
NORTHERN	16	5
CENTRAL	19	13
SOUTHERN	3	6
TOTAL	38	24



## BASE PAY VS OVERTIME

As of February, 2019	BASE PAY	OVERTIME	OVERTIME %
PUMPING STATION	\$60,953.60	29,521.52	48%
MAINTENANCE	\$36,008.00	12,163.14	34 %
COURT ORDER UNIT	\$29,643.20	6,996.23	24 %
TOTALS	\$126,604.80	48,680.89	38%



## GWA Work Session - March 19, 2019 - DIVISION REPORTS

Guam Waterworks Authority		Date: 3/1/2019	 GUAM WATERWORKS AUTHORITY WASTEWATER FACILITIES REPORT
Time:			
REVIEWS			
TOTAL PUMPS INSTALLED	169	OVERAL AVERAGE	87%
TOTAL PUMPS OPERATIONAL	147	% OF OPERATING PUMPS	87%
TOTAL PUMP STATIONS	76		

Northern District													
NO:	FACILITY	PRIORITY LISTED	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	FUJITA	1	4	4	100%	OP	A	pump 3 secured.		Line 3 Suction valve damaged. Awaiting PO for pumper truck to do changeout.		ongoing	
2	SOUTHERN LINK	1	4	2	50%	OP	A	Pump 2 awaiting VFD to be installed. Pump 4 burnt, removed for rewinding.		Line 4 discharge clogged.			
3	ROUTE 16	1	4	3	75%	OP	OP	PUMP 1 SECURED DUE TO soft starter issues					
4	YPAO	1	2	2	100%	OP	A	Pump 2 removed due to leakage from housing (in for welding); utilizing machanao pump and volute on line.					
5	YIGO	1	3	2	67%	OP	A	Pump 3 removed, water inside due to flooding in pump room. In for re-bake.					
6	HARMON	2	2	2	100%	OP	M						
7	MACHECHE	2	2	2	100%	GPA	A						
8	LATTE DOUBLE TROUBLE	2	2	2	100%	GPA	A						
9	LATTE SUBMARINE	2	2	2	100%	GPA	A						
10	MACHANAO	2	2	1	50%	OP	M	pump and volute utilized at lpao					
11	YPAOPAO ESTATES	1	3	2	67%	GPA	A	pump 3 burnt, removed for rewinding					
12	PGD	2	2	1	50%	NO	A	pump 2 burnt, removed for rewinding					
13	LATTE PLANTATION	2	2	2	100%	GPA	A						
14	PASEO DE ORO	2	2	2	100%	OP	A						
15	ASTUMBO #1	2	2	1	50%	OP	A	pump 2 at Asan by-pass					
16	ASTUMBO #2	2	2	1	50%	OP	A	pump 1 awaiting impeller					
17	FEMA '96	2	2	2	100%	OP	A						
18	LATTE SUN RISE	2	2	2	100%		A						
19	HAFA ADAI	2	2	2	100%	NO	A						

GWA Work Session - March 19, 2019 - DIVISION REPORTS

20	PACIFIC LATTE	2	2	1	50%	OP	A	pump at JMI for repair					
21	SANTA ANA	2	2	2	100%		M						
22	ZERO DOWN	2	2	2	100%	NO							
TOTAL = 22			52	48	92%								
pump availability = no of operational pumps/no of pumps *100%													

Central District													
NO:	FACILITY	PRIORITY LISTED	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	AGANA MAIN	1	4	3	75%	OP	A	pump 2 burnt, removed for rewinding. Pump 4 on line 2		line 4 clogged riser			
2	CHAOT	1	3	3	100%	OP	A						
3	MAMAJANAO	1	3	2	67%	MANUAL	A	pump 1 awaiting refit.					
4	BARRIGADA	1	2	2	100%	GPA	A						
5	BAYSIDE	1	1	1	100%	Op	A						
6	TAI MANGILAO	1	3	3	100%	GPA	A						
7	MONGMONG/TOTO	2	2	2	100%	OP	A						
8	PAGO DOUBLE	1	3	2	67%	M	A	PUMP #1 IN NEED OF REPLACEMENT.		CIP WRITE UP COMPLETED & NOW UNDERGOING PROCESS FOR SIGNATURES			
9	MANGILAO	1	2	1	50%	GPA	A	Pump 1 @ washland for rewinding					
10	PITI	1	2	1	50%	GPA	A	pump 2 @ washland for rewinding					
11	ASAN	1	2	2	100%	GPA	A						
12	SINAJANA	2	2	1	50%	GPA	A	pump 2 removed to be used at Gaan By-pass					
13	DAIRY ROAD	1	2	2	100%	OP	A	pump 1 burnt, removed for rewinding. Utilizing Station 15 pump.					
14	FLORA GARDENS	2	2	2	100%	INOP	A						
15	ORDOT	2	2	1	50%	INOP	A	pump 2 awaiting new wires due to length					
16	CHALAN PAGO #5	2	2	2	100%	INOP	A						
17	COMMERCIAL PORT	1	3	2	67%	OP	A	pump put on stand-by for Mangilao P/S.					
18	CHALAN PAGO #3	2	2	2	100%	OP	A						
19	CABRAS ISLAND	1	2	2	100%	PORTABLE	M						



GWA Work Session - March 19, 2019 - DIVISION REPORTS

20	ALUPANG COVE	1	2	2	100%	OP	A						
21	MAITE EJECTOR	1	2	2	100%	GPA	A						
22	TOTO GARDENS	2	2	1	50%	NONE	A	Pump 1 @ washland for rewinding, pump 2 awaiting rewinding, new pump installed on 1					
23	NAMO	2	1	1	100%	NONE	NONE						
24	CASIMERO	2	2	2	100%	NONE	NONE						
25	LEYANG	2	2	2	100%	OP							
26	SAGAN BONITA 1	2	2	2	100%	OP							
27	SAGAN BONITA 2	2	2	2	100%	OP	A						
28	FADIAN	2	2	2	100%	OP	A						
30	Asan By-pass	1	1	1	100%								
31	DERO ROAD	2	2	2	100%	OP							
Total=29			65	55	85%								
pump availability =no of operational pumps/no of pumps*100%													

Southern District													
NO:	FACILITY	PRIORITY LISTED	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	GAAN #1	1	4	4	100%	Op	A						
2	TIPALEO	1	3	3	100%	Op	M						
6	PUMP STATION #11	1	2	2	100%	GPA	A	pump 2 removed due to low amperage. Utilizing Station 16 pump.					
5	PUMP STATION #12	2	2	1	50%	GPA	A	pump 1 @ JMI due to seal failure; pump 2 burnt, removed for rewinding.					
3	PUMP STATION #13	1	2	2	100%	GPA	A	pump 2 removed for rewinding. Utilizing new pump.					
7	PUMP STATION #14	2	2	1	50%	GPA	A	pump 2 @ washland for rewinding					
4	PUMP STATION #15	2	2	1	50%	GPA	A	pump 2 @ washland for rewinding					
8	PUMP STATION #16	2	2	1	50%	GPA	A	Pump #2 removed / BEING UTILIZED AT STATION 11					
9	PUMP STATION #17	2	2	2	100%	GPA	A						
10	PUMP STATION #18	2	2	1	50%	GPA	A	pump 2 removed due to burnt motor					
11	INARAJAN MAIN	1	2	1	50%	OP	A	pump burnt, removed for rewinding					

GWA Work Session - March 19, 2019 - DIVISION REPORTS

12	INARAJAN LIFT	1	2	2	100%	OP	M						
13	TALAFOFO	1	2	1	50%	OP	A	pump removed due to burnt motor					
14	PAGACHAO	2	2	2	100%	PORTABLE	A						
15	CHALIGAN	2	2	2	100%	Op	A	CONTROL PANEL IN NEED OF REPAIRS / PUMP OPERATING ON HIGH AND LOW LEVEL FLOATS		UST REPAIRS REQUIRED. OR29652 CREATED 12/29/16 PENDING RELEASE TO PO			
16	EJECTOR #2	2	2	2	100%	no	ATS						
17	EJECTOR #3	2	2	2	100%	no	ATS						
18	EJECTOR #4	2	2	2	100%	OP	M						
19	EJECTOR #5	2	2	2	100%	PORTABLE	M						
20	EJECTOR #6	2	2	2	100%	OP	M						
21	EJECTOR #7	2	2	2	100%	OP	M						
22	NORTH REYES	2	2	1	50%	OP	M	Pump 2 in for rewinding and new power cable.					
23	LEYON #3	2	2	2	100%	OP	A			Defective controller. Sunday 3/18/19 Pump #1 off-line. VFD taken from Layon #4 pump #1 to attempt to get pump #1 on line. Fixed out that day.			
24	LEYON #4	2	2	2	100%	OP	A						
25	MTL PUMP STATION	1	1	1	100%	OP	ATS						
Total=25			52	44	85%								
pump availability =no of operational pumps/no of pumps*100%													

## GWA Work Session - March 19, 2019 - DIVISION REPORTS

Guam Waterworks Authority		Date: 2/1/2019	 WASTEWATER FACILITIES REPORT
		Time:	
REVIEWS			
TOTAL PUMPS INSTALLED	171	OVERALL AVERAGE 82%	
TOTAL PUMPS OPERATIONAL	140	% OF OPERATING PUMPS 82%	
TOTAL PUMP STATIONS		78	

Northern District (Updated 02/01/2019)											
NO.	FACILITY	Priority Listing	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	Pump NO.	Pump Brand	Action Required	Ref. No./Date	PUMP UNIT REMARKS	Additional Remarks
1	FUJITA		4	4	100%	1	FLYGT				
						2	FLYGT				
						3	FLYGT	Pump #3 suction valve broken (unable to close). 4.12.18 found replacement valve in the warehouse, working with engineers on the OMCP to shut down the station to make change out to the valve. Pumper trucks OR's awaiting approval.			
						4	FLYGT				
2	Southern Link		4	2	50%	1	FLYGT				
						2	FLYGT	pump removed for rewinding (9-18-2018); VFD repair	OR# 33017 (HES-parts), OQ#33276 (Washland-labor), OQ#		
						3	FLYGT				
						4	FLYGT	pump removed for rewinding; Line#4 suction clogged	OQ# 34178 - Pump #4		VFD place on CIP funding awaiting approval 11/16/17
3	Route #16		4	4	100%	1	FLYGT	Pump #1 installed on 8/03/18 but awaiting electrical hook up. Pump #1 still secured as of 8/10/18 due to Soft Starter issue.	OQ# 33066		
						2	FLYGT				
						3	SULZER				
						4	SULZER				
4	HARMON		2	2	100%	1	FLYGT				
						2	FLYGT				
5	MACHECHE		2	2	100%	1	ABS				
						2	ABS	utilizing PS #20 pump			
6	LATTE DOUBLE TROUBLE		2	2	100%	1	ABS				
						2	ABS				
7	LATTE SUBMARINE		2	2	100%	1	ABS				
						2	ABS				
8	MACHANAO		2	1	50%	1	ABS				
						2	FLYGT	Pump and Volute removed and placed at Ypao #2			
9	YPAOPAO ESTATES		3	2	67%	1	FLYGT				
						2	FLYGT				
						3	FLYGT	Pump #3 removed due motor short circuiting and dropped off at Washland on 7/10/18.	OQ # 32872 7/10/18		
10	PGD		2	1	50%	1	ABS				
						2	ABS	Pump #2 removed 11.26.18 @ WASHLAND	PO#302480		

GWA Work Session - March 19, 2019 - DIVISION REPORTS

11	LATTE PLANTATION		2	2	100%	1	BARNES				
						2	BARNES				
12	PASEO DE ORO		2	2	100%	1	FLYGT				
						2	FLYGT				
13	ASTUMBO #1		2	1	50%	1	ABS				
						2	ABS	Pump #2 removed on 8/25/18 to be utilized at the Asan bypass.			
14	ASTUMBO #2		2	1	50%	1	ABS	pump awaiting impeller			
						2	ABS				
15	FEMA '96		2	2	100%	1	ABS				
						2	ABS				
16	LATTE SUNRISE		2	2	100%	1	ABS				
						2	ABS				
17	HAFA ADAI		2	2	100%	1	ABS				
						2	ABS				
18	PACIFIC LATTE		2	1	50%	1	ABS	pump removed. Needs rewinding.	OQ# 34181		
						2	ABS				
19	SANTA ANA		2	2	100%	1	Barnes				
						2	Barnes				
20	ZERO DOWN		2	2	100%	1	ABS				
						2	ABS				
21	Yigo PS		3	3	100%	1	ABS				
						2	ABS				
						3	ABS	Pump #3 awaiting discharge valve changeout. Shutdown of station needed. Awaiting to schedule/weather permitting. 7/06/18	PO 301754		
22	Ypao PS		2	1	50%	1	ABS	Removed due to leakage from housing @ New MW	PO# 302978		
						2	ABS	Pump removed due to siezed impeller. Machanao pump and volute installed for usage.			
	Northern TP							Awaiting SCADA system part for solenoid. Still awaiting on PO as of 7/06/18.	OQ#32361 / OR #32335		awaiting for vendor's feed back. JMI / Frontiers
	TOTAL = 22		52	43	83%						
Central District (Updated 02/01/2019)											
NO.	FACILITY	Priority Listing	NO OF INSTALLED	NO OF OPERATIONAL	PUMP AVAILABILITY	Pump NO.	Brand	Action Required	Ref. No./Date	PUMP UNIT REMARKS	Additional Remarks
1	AGANA MAIN		4	2	50.00%	1	FLYGT				
						2	ABS	pump at washland for rewinding	OR#33604		
						3	FLYGT				
						4	ABS	pump at JMI; discharge line clogged	PO# 302875		

GWA Work Session - March 19, 2019 - DIVISION REPORTS

2	CHAOT		3	3	100.00%	1	FLYGT			
						2	FAIRBANKS			
						3	FAIRBANKS	discharge line clogged		
3	MAMAJANAO		3	2	66.67%	1	FLYGT	Off-line awaiting eccentric reducer.	OQ#31721 (12/07/18) OR #31551(12/14/17)	looking at flygt pump on there new horizontal installation. And replacing the
						2	ABS			
						3	ABS			
4	BARRIGADA		2	2	100.00%	1	ABS			
						2	ABS			
	BAYSIDE		1	1	100.00%	1	FLYGT			
6	TAI MANGILAO		3	3	100.00%	1	FLYGT	installed 01.04.2019		
						2	FLYGT			
						3	FLYGT			
7	MONGMONG/TOTO		2	2	100.00%	1	ABS			
						2	ABS			
8	PAGO DOUBLE		3	2	66.67%	1	FAIRBANKS	secured & needs to be replaced/CIP approved pending final review from finance.		
						2	FAIRBANKS			
						3	FAIRBANKS			
	MANGILAO		2	1	50.00%	1	ABS	installed		
						2	ABS	pump @ Washland 01.18.19	OR# 33599	
10	PITI		2	1	50.00%	1	ABS			
						2	ABS	Pump #2 @ washland	OQ# 34087	
11	ASAN		2	2	100.00%	1	ABS			
						2	ABS			
12	SINAJANA		2	1	50.00%	1	ABS			
						2	ABS	removed to be used at Gaan By-pass		
13	DAIRY ROAD		2	2	100.00%	1	SULZER			
						2	SULZER			
14	FADIAN		2	2	100.00%	1				
						2				

GWA Work Session - March 19, 2019 - DIVISION REPORTS

15	FLORA GARDENS		2	2	100.00%	1	ABS				
						2	ABS				
16	ORDOT		2	1	50.00%	1	ABS				
						2	ABS	(Barnes Sn. 472699-1293) pump extracted on 8/22/18 for repairs. Awaiting wires.	OQ#333360		
17	CHALAN PAGO #5		2	1	50.00%	1		Pump #1 at @ Washland for rewinding.	OQ# 34105		
						2	ABS				
18	COMMERCIAL PORT		3	3	100.00%	1	ABS				
						2	ABS				
						3	ABS				
19	CHALAN PAGO #3		2	2	100.00%	1	ABS				
						2	ABS				
20	CABRAS ISLAND		2	2	100.00%	1	ABS				
						2	ABS				
21	ALUPANG COVE		2	2	100.00%	1	FLYGT				
						2	FLYGT				
22	MAITE EJECTOR		2	2	100.00%	1					
						2					
23	TOTO GARDENS		2	1	50.00%	1	ABS	pump at washland 12.26.2018; new pump installed	OQ# 34185		
						2	ABS	awaiting rewinding	OQ# 34081		
24	CASIMERO		2	2	100.00%	1	BARNES				
						2	BARNES				
25	LEYANG		2	2	100.00%	1	FLYGT				
						2	FLYGT				
26	SAGAN BONITA 1		2	2	100.00%	1	SULZER				
						2	SULZER				
27	SAGAN BONITA 2		2	2	100.00%	1	SULZER				
						2	SULZER				
28	Namo		1	1	100.00%	1	(M) RELIANCE (C) QUINCY				
29	DERO ROAD		1	1	100.00%	1	FLYGT				
						2	FLYGT				
								mixer and turbine motor needs rewinding.	OQ# 34180; OQ# 34132		
								Primary Clarifier #3 flights not moving. Clarifier being drained and therefore will be assessed. 7/09/18			

GWA Work Session - March 19, 2019 - DIVISION REPORTS

	Hagatna WWTP							Digester #3 aerator gear box installed and online as of 8/09/18. Digester #3 secured due to making load noise. Gear box taken back to New M.W. Corp for assessment/repair on 8/22/18. On 9/05/18 Said installed and started on 9/07/18 due to weather.			
	Total=29		62	52	83.87%						
SOUTHERN DISTRICT (Updated 02/01/2019)											
NO.	FACILITY	Priority Listing	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	Pump No.	Brand	Action Required	Ref. No./Date	PUMP UNIT REMARKS	Additional Remarks
1	PUMP STATION #11		2	1	50%	1	ABS	Pump #1 removed due to seal leaking. Sta. #16 pump #2 being temporarily utilize on line #1. 4/28/18	OQ:34182, 34131; OR33602		
						2	ABS	Pump #2 low amping			
2	PUMP STATION #12		2	1	50%	1	ABS	Pump #1 removed 8/31/18 due to damaged impeller & seal failure. (Sn 0008639)			
						2	ABS	Pump #2 was removed for bearing issue (SN: 0023800) New pump for installed temporarily			
3	PUMP STATION #13		2	2	100%	1	ABS				
						2	ABS				
4	PUMP STATION #14		2	1	50%	1	ABS	Pump #1 installed at Bayside on 5/20/18. Burnt at Bayside on 5/23/18. Taken to Washland for repairs.			
						2	ABS				
5	PUMP STATION #15		2	1	50%	1	ABS				
						2	ABS	pump at washland			
6	PUMP STATION #16		2	1	50%	1	ABS				
						2	ABS	Pump #2 removed and being utilized on Sta. #11 line #1. 4/28/18.			
7	PUMP STATION #17		2	2	100%	1	ABS				
						2	ABS				
8	PUMP STATION #18		2	1	50%	1	ABS				
						2	ABS	10-17-2018, Pump removed due to burnt motor.	OQ# 34113		
9	PUMP STATION #19		2	1	50%	1	FLYGT	removed Nov 27, 2018	Parts OQ#33830; Labor OQ#33842		
						2	FLYGT				
10	PUMP STATION #20		1	0	0%	1		Undergoing refurbishment of by contractor (Sumitomo).			
11	GAAN		4	2	50%	1		Line #1 not in service/no pump installed			
						2	ABS	Pump #2 was removed by contractor due to motor being burnt.			
						3	ABS				
						4	ABS				
						5	ABS	seal leak awaiting repairs.			
12	TIPALEO		3	3	100%	1					
						2					
						3					
13	CHALIGAN		2	2	100%	1	FLYGT				
						2	FLYGT				
14	PAGACHAO		2	2		1	ABS				
						2	ABS				

GWA Work Session - March 19, 2019 - DIVISION REPORTS

				100%						
15	INARAJAN MAIN		2	2		1	ABS			
				100%		2	ABS			
16	INARAJAN LIFT		2	2		1	PACO RELIANCES			
				100%		2	ABS			
17	TALAFOFO		2	1		1	ABS			
				50%		2	ABS	pump burnt 12.26.2018	OQ# 34088	
18	NORTH REYES		2	1		1	BARNES			
				50%		2	BARNES	Splicing on wire connecting to pump broken.	OQ# 34107	
19	MTL PUMP STATION		1	1		1	ABS			
20	EJECTOR #2		2	2		1				
				100%		2				
21	EJECTOR #3		2	2		1				
				100%		2				
22	EJECTOR #4		2	2		1				
				100%		2				
23	EJECTOR #5		2	2		1				
				100%		2				
24	EJECTOR #6		2	2		1	(M)MARATHO N (C) QUINCY			
				100%		2	(M)MARATHO N (C) QUINCY			
25	EJECTOR #7		2	2		1	(M)MARATHO N (C) QUINCY			
				100%		2	(M)MARATHO N (C) QUINCY			
26	LEYON #3 (Dandan)		2	2		1	SULZER	Defective controller. Sunday 3/18/18 Pump #1 off-line. VFD taken from Layon #4 pump #1 to attempt to get pump #1 on-line. Found out that the fan on said VFD is not operating. So a contactor was installed temporarily in place of the VFD and is on-line as of Monday 3/19/18. As per Jason	OQ#31920/OR#31756 OQ#31921/OR#31763 PO #301932	
				100%		2	SULZER	Off-line VFD defective (Vendor still waiting on order as of 4/06/18).		
27	LEYON #4 (Rt. 4)		2	2		1	SULZER			
				100%		2	SULZER			
	Agat WWTP									
	Baza WWTP									
	Inarajan WWTP									
	Umatac WWTP									
	Pumpin Station Total = 27		57	45	79%					

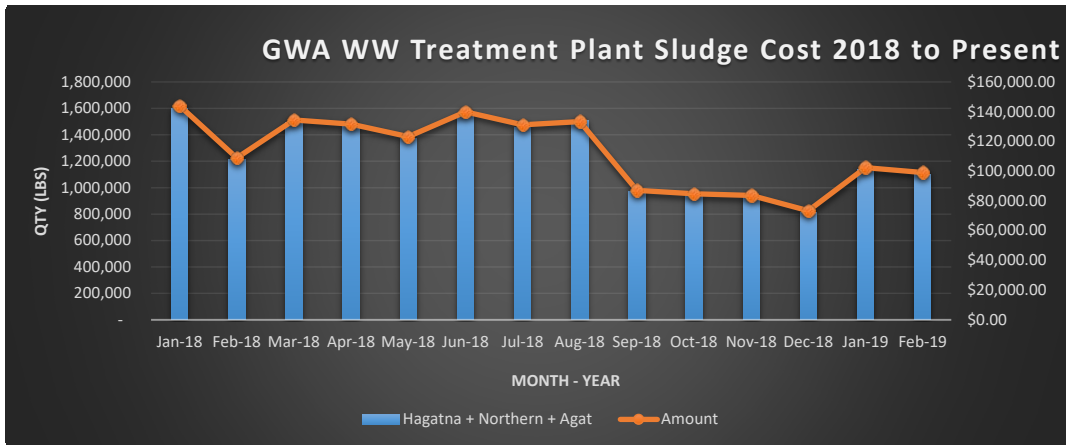
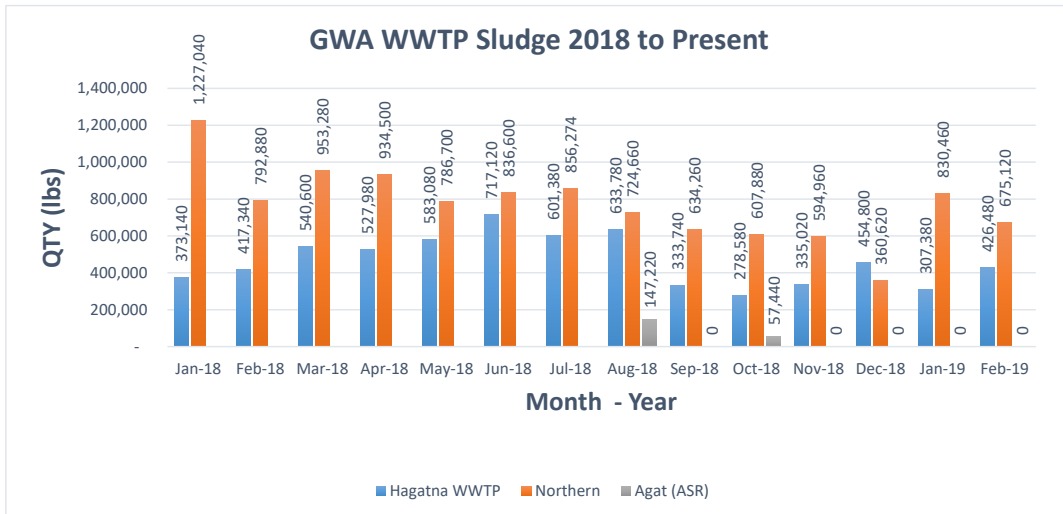


GWA Work Session - March 19, 2019 - DIVISION REPORTS

	ASR WWTP		Northern		Hagatna and Northern	
2018	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	\$	lbs	\$	lbs	\$
Jan-18	247,440	\$22,269.60	1,283,000	\$115,470.00	1,530,440	\$137,739.60
Feb-18	282,180	\$25,396.20	920,480	\$82,843.20	1,202,660	\$108,239.40
Mar-18	497,660	\$44,789.40	880,780	\$79,270.20	1,378,440	\$124,059.60
Apr-18	577,246	\$51,952.14	796,560	\$71,690.40	1,373,806	\$123,642.54
May-18	660,840	\$59,475.60	859,260	\$77,333.40	1,520,100	\$136,809.00
Jun-18	505,160	\$45,464.40	913,760	\$82,238.40	1,418,920	\$127,702.80
Jul-18	462,420	\$41,617.80	1,423,168	\$128,085.12	1,885,588	\$169,702.92
Aug-18	694,420	\$62,497.80	690,200	\$62,118.00	1,384,620	\$124,615.80
Sep-18	341,020	\$30,691.80	981,280	\$88,315.20	1,322,300	\$119,007.00
Oct-18	474,020	\$42,661.80	846,180	\$76,156.20	1,320,200	\$118,818.00
Nov-18	500,020	\$45,001.80	968,260	\$87,143.40	1,468,280	\$132,145.20
Dec-18	584,809	\$52,632.81	810,960	\$72,986.40	1,395,769	\$125,619.21
Grand Total	5827235	\$524,451.15	11373888	\$1,023,649.92	17201123	\$1,548,101.07

	Hagatna WWTP		Northern		Agat (ASR)		Hagatna + Northern + Agat	
2018	Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	\$	lbs	\$	lbs	\$	lbs	\$
Jan-18	373,140	\$33,582.60	1,227,040	\$110,433.60			1,600,180	\$144,016.20
Feb-18	417,340	\$37,560.60	792,880	\$71,359.20			1,210,220	\$108,919.80
Mar-18	540,600	\$48,654.00	953,280	\$85,795.20			1,493,880	\$134,449.20
Apr-18	527,980	\$47,518.20	934,500	\$84,105.00			1,462,480	\$131,623.20
May-18	583,080	\$52,477.20	786,700	\$70,803.00			1,369,780	\$123,280.20
Jun-18	717,120	\$64,540.80	836,600	\$75,294.00			1,553,720	\$139,834.80
Jul-18	601,380	\$54,124.20	856,274	\$77,064.66			1,457,654	\$131,188.86
Aug-18	633,780	\$57,040.20	724,660	\$63,469.35	147,220	\$12,894.25	1,505,660	\$133,403.80
Sep-18	333,740	\$30,036.60	634,260	\$57,083.40	0	\$0.00	968,000	\$87,120.00
Oct-18	278,580	\$25,072.20	607,880	\$54,709.20	57,440	\$4,992.61	943,900	\$84,774.01
Nov-18	335,020	\$30,151.80	594,960	\$53,546.40	0	\$0.00	929,980	\$83,698.20
Dec-18	454,800	\$40,932.00	360,620	\$32,455.80	0	\$0.00	815,420	\$73,387.80
Grand Total	5,796,560	\$521,690.40	9,309,654	\$836,118.81	204,660	\$17,886.86	15310874	#####

	Hagatna WWTP		Northern		Agat (ASR)		Hagatna + Northern + Agat	
2019	Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	\$	lbs	\$	lbs	\$	lbs	\$
Jan-19	307,380	\$27,664.20	830,460	\$74,741.40	0	\$0.00	1,137,840	\$102,405.60
Feb-19	426,480	\$38,383.20	675,120	\$60,760.80	0	\$0.00	1,101,600	\$99,144.00
Mar-19		\$0.00		\$0.00		\$0.00	-	\$0.00
Apr-19		\$0.00		\$0.00		\$0.00	-	\$0.00
May-19		\$0.00		\$0.00		\$0.00	-	\$0.00
Jun-19		\$0.00		\$0.00		\$0.00	-	\$0.00
Jul-19		\$0.00		\$0.00		\$0.00	-	\$0.00
Aug-19		\$0.00		\$0.00		\$0.00	-	\$0.00
Sep-19		\$0.00		\$0.00		\$0.00	-	\$0.00
Oct-19		\$0.00		\$0.00		\$0.00	-	\$0.00
Nov-19		\$0.00		\$0.00		\$0.00	-	\$0.00
Dec-19		\$0.00		\$0.00		\$0.00	-	\$0.00
Grand Total	733,860	\$66,047.40	1,505,580	\$135,502.20	-	\$0.00	2239440	\$201,549.60

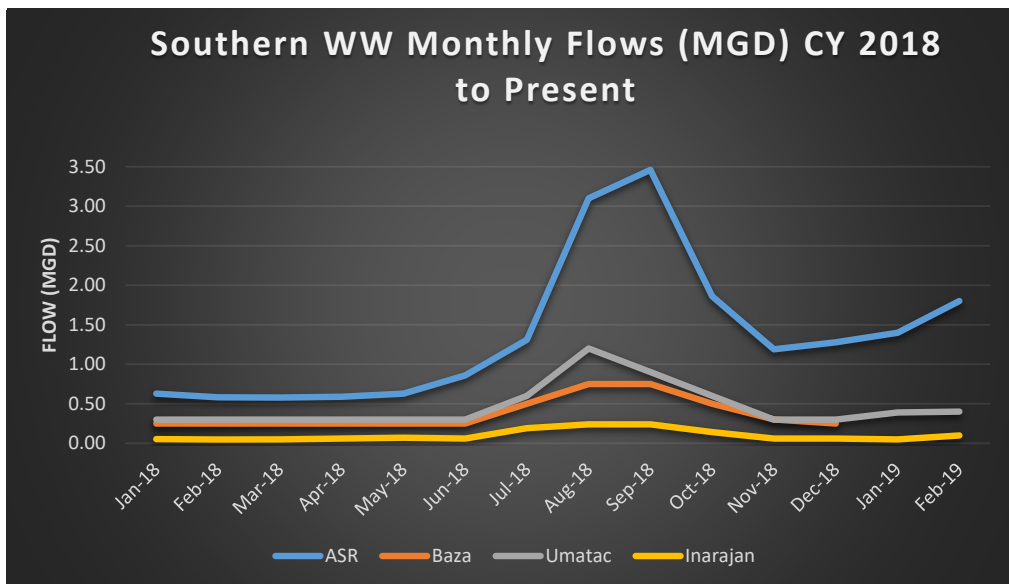
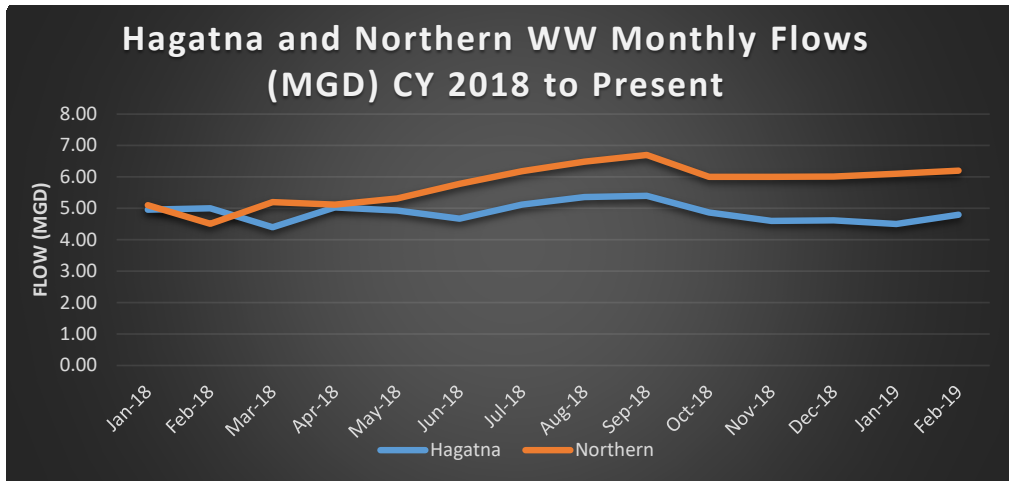


## Wastewater Treatment Plant Average Monthly Flows Million Gallons Per Day

2017	Hagatna	Northern	ASR	Baza	Umatac	Inarajan
Jan-17	6.00	5.69	0.89	0.31	0.35	0.09
Feb-17	6.00	5.61	0.76	0.24	0.30	0.09
Mar-17	6.00	5.62	0.78	0.24	0.30	0.06
Apr-17	6.00	5.58	0.95	0.24	0.30	0.08
May-17	5.59	5.26	0.86	0.25	0.30	0.06
Jun-17	6.00	5.36	0.77	0.23	0.30	0.05
Jul-17	5.94	5.33	0.74	0.25	0.30	0.05
Aug-17	6.57	5.77	1.16	0.29	0.30	0.08
Sep-17	6.23	5.84	2.08	0.25	0.30	0.12
Oct-17	6.82	5.96	2.05	0.25	0.30	0.23
Nov-17	6.01	5.78	0.85	0.25	0.30	0.07
Dec-17	5.49	5.79	0.73	0.25	0.30	0.06
<b>2017 Average MGD</b>	<b>6.05</b>	<b>5.63</b>	<b>1.05</b>	<b>0.25</b>	<b>0.30</b>	<b>0.09</b>
<b>2017 Total MGY</b>	<b>2,210</b>	<b>2,056</b>	<b>384</b>	<b>93</b>	<b>111</b>	<b>32</b>

2018	Hagatna	Northern	ASR	Baza	Umatac	Inarajan
Jan-18	4.96	5.10	0.63	0.25	0.30	0.05
Feb-18	5.00	4.51	0.58	0.25	0.30	0.05
Mar-18	4.40	5.20	0.58	0.25	0.30	0.05
Apr-18	5.03	5.12	0.59	0.25	0.30	0.06
May-18	4.93	5.32	0.63	0.25	0.30	0.07
Jun-18	4.67	5.78	0.86	0.25	0.30	0.06
Jul-18	5.12	6.18	1.31	0.50	0.60	0.19
Aug-18	5.36	6.49	3.10	0.75	1.20	0.24
Sep-18	5.40	6.70	3.46	0.75	0.90	0.24
Oct-18	4.87	6.00	1.86	0.50	0.60	0.14
Nov-18	4.60	6.00	1.19	0.30	0.30	0.06
Dec-18	4.62	6.01	1.28	0.25	0.30	0.06
<b>2018 Average MGD</b>	<b>4.91</b>	<b>5.70</b>	<b>1.34</b>	<b>0.38</b>	<b>0.48</b>	<b>0.11</b>
<b>2018 Total MGY</b>	<b>1,793</b>	<b>2,081</b>	<b>489</b>	<b>138</b>	<b>173</b>	<b>39</b>

2019	Hagatna	Northern	ASR	Baza	Umatac	Inarajan
Jan-19	4.50	6.10	1.40		0.39	0.05
Feb-19	4.80	6.20	1.80		0.40	0.10
Mar-19						
Apr-19						
May-19						
Jun-19						
Jul-19						
Aug-19						
Sep-19						
Oct-19						
Nov-19						
Dec-19						
<b>2018 Average MGD</b>	<b>4.65</b>	<b>6.15</b>	<b>1.60</b>		<b>0.40</b>	<b>0.08</b>
<b>2018 Total MGY</b>	<b>1,697</b>	<b>2,245</b>	<b>584</b>	<b>-</b>	<b>144</b>	<b>27</b>





## Guam Waterworks Authority

## VEHICLE FLEET STATUS

3/12/2019

EQUIPMENT STATUS					SUMMARY						
Description	Number of Equipment	Number of Equipment Available	Number of Equipment Not Available	Percentage	Operational	Operational w/Rprs Pending	In Shop-Accident Repairs	In Shop-Assessment Pending	In Shop-Repairs Pending	In Shop-Vendor Repairs	Recommend Survey
Backhoe	4	0	4	0%	0	0	0	0	2	1	1
Bobcat	1	0	1	0%	0	0	0	0	0	0	1
Boom Truck	2	1	1	50%	1	0	0	0	0	0	1
Crane	1	0	1	0%	0	0	0	0	1	0	0
Dump Truck	3	1	2	33%	1	0	0	1	0	1	0
Flat Bed	0	0	0	#DIV/0!	0	0	0	0	0	0	0
Forklift	6	6	0	100%	6	0	0	0	0	0	0
Fuel Tanker	1	1	0	100%	1	0	0	0	0	0	0
Heavy Duty	8	6	2	75%	6	0	0	0	1	1	0
Hoist Rig	1	0	1	0%	0	0	0	0	1	0	0
Light	155	109	46	70%	105	4	0	6	10	5	25
Mini Backhoe	4	1	3	25%	1	0	0	0	2	1	0
Pumper Truck	1	0	1	0%	0	0	0	0	1	0	0
Skidster	1	0	1	0%	0	0	0	0	1	0	0
Sludge Truck	5	3	2	60%	3	0	0	0	1	1	0
Tow	0	0	0	0%	0	0	0	0	0	0	0
Tractor	2	2	0	100%	1	1	0	0	0	0	0
Tractor Mower	1	1	0	100%	1	0	0	0	0	0	0
Trailer	15	11	4	73%	11	0	0	0	0	3	1
Trencher	1	1	0	100%	1	0	0	0	0	0	0
Vaccon	1	1	0	100%	1	0	0	0	0	0	0
Vacuum Truck	3	0	3	0%	0	0	1	1	0	1	0
Water Buffalo	2	2	0	100%	2	0	0	0	0	0	0
Water Tanker	4	4	0	100%	4	0	0	0	0	0	0
Compressor	1	1	0	100%	1	0	0	0	0	0	0
Total	252	176	72		176	5	1	8	20	14	29

Guam Waterworks Authority		Date: 3/13/2019	 <b>WATER DISTRIBUTION FACILITIES REPORT</b>
		Time:	
<b>REVIEWS</b>			
TOTAL PUMPS INSTALLED	50	OVERALL AVERAGE	94%
TOTAL PUMPS OPERATIONAL	47	% OF OPERATING PUMPS	94%
TOTAL BOOSTER PUMP STATIONS	25		

Northern District													
NO.	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY %	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL, STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1	Gaynero	20	2	2	100%	OP	A						
2	Malagauc	25	2	2	100%	OP	A						
3	Santa Rosa	15	2	2	100%	OP	A						
4	Huandai	40	2	1	50%	OP	A	Pump # 1 requires pump and motor.					
5	Access	60	2	2	100%	OP	A						
6	Chin, Palauan	5	2	1	50%	N/A				waiting to switch to new BPS		CIP required for new unit and electrical for generator	
7	Nimitz Hill	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
8	Adawag	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
9	Pale Kiren	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
10	Ulloa/Untalan	1	2	2	100%	OP	A						
11	Latte Heights	15	2	2	100%	OP	A						
<b>TOTAL = 11</b>			<b>20</b>	<b>18</b>	<b>90%</b>								
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	3	100%	OP	A	All pumps operational.					
2	Brigade	60	3	3	100%	OP	A	All pumps operational.					
3	Windward Hills	200 / 75	3	3	100%	OP	A						
4	Santa Rita Spring	40	2	1	50%	OP	A	Pump #1 using submersible deep well pump waiting for availability of crane for new pump installation		Scheduling replacement w/ Submersible			
5	Santa Ana (Lower)	25	2	2	100%	N/A		Pump # 1 needs discharge valve and check valve replaced. Pump operational.		Valve has to be operated manually prior to start up of pump.		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	Tenono	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
<b>Total=7</b>			<b>15</b>	<b>14</b>	<b>93%</b>								
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	Maloloi Line	125 / 50	3	3	100%	OP	A	All pumps operational.					
2	Gaus	25	2	2	100%	OP	A						
3	Pigua	7.5	2	2	100%	N/A						CIP required for new unit and electrical for generator	
4	Toguan	25	2	2	100%	OP	A	Pump #1 bearings starting to make unusual noise. Need to make					
5	WBP-2	25	2	2	100%	OP	A						
6	WBP-1	5	2	2	100%	OP	A						
7	Maloloi Elevated	15	2	2	100%	OP	A						
<b>Total=7</b>			<b>15</b>	<b>15</b>	<b>100%</b>								
pump availability =no of operational pumps/no of pumps*100%													