



Regular Board Meeting
CCU Conference Room, Gloria B. Nelson Public Service Building
4:30 p.m., October 19, 2018

MINUTES

1. CALL TO ORDER

The Chairman called the CCU regular meeting of October 19, 2018 to order at 4:35 p.m. He said all four (4) Commissioners were present; Comm. Bamba was absent and excused. Others in attendance include:

Commissioners:

Joseph T. Duenas	CCU Chairman
Francis Santos	CCU Vice Chairman
Judith P. Guthertz	CCU Treasurer
Simon A. Sanchez	CCU Member

Executive Mgmt.:

John Benavente	GM / GPA
Miguel Bordallo	GM / GWA
Melinda Mafnas	AGMO / GPA
John Cruz	AGMET / GPA
Tricee Limtiaco	AGMA / GPA
John Kim	CFO / GPA
Greg Cruz	CFO / GPA
Graham Botha	Staff Attorney / GPA

Management & Staff:

Roy Topasna	GWA
Zina Pangelinan-Charfauros	Personnel Administrator / GWA, HR
Vincent Pangelinan	GWA
Gilda Mafnas	Asst. CFO / GWA, Finance
Janet Arroyo	Internal Auditor / GWA
Heidi Ballendorf	Communications / GWA
Patti Diego	Communications / GPA
Joyce Sayama	Mgmt. Analyst / GPA Ex. Office
Lou Sablan	Board Secretary / CCU

Guest:

Fred Horecky	ALJ / PUC
Manny Cruz	PDN

2. APPROVAL OF MINUTES

The Minutes of September 25, 2018 was presented for approval.

Comm. Santos motioned to approve the Minutes subject to verification and correction and second by Comm. Guthertz. There was no further discussion or objection and the motion passed.

3. COMMUNICATIONS

3.1 Public Comments - None

4. GWA

4.1 New Business

4.1.1 GM Report

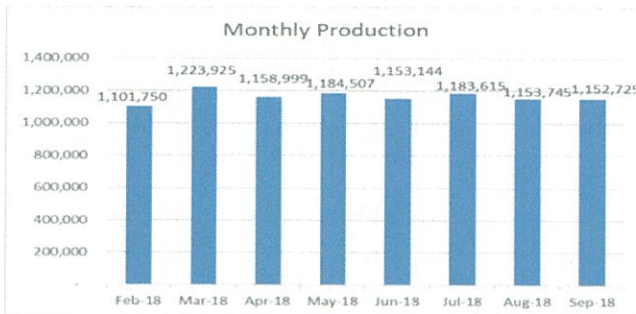
GWA GM Bordallo said there is no change on the report he gave at the GWA Work Session on 10/16. Below is a summary; a copy of the complete report is available upon request.

Operations Update

Production

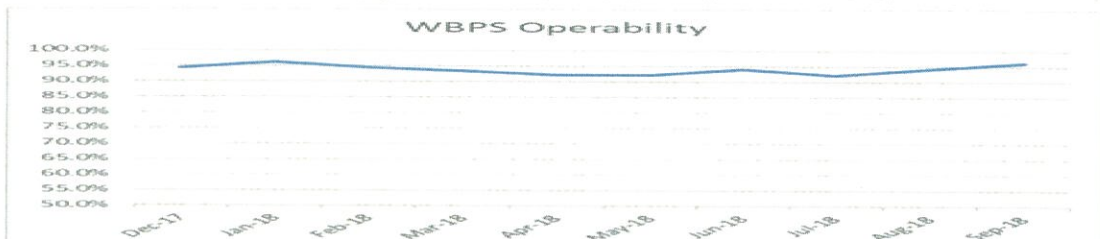
Monthly Production Summary - September 2018		
Deep Wells		35.6 MGD
Active wells =	100 of 120	
Avg days in operation =	30 days	
Total Production =	1,066,897 Kgals	
Springs		0.00 MGD
Avg days in operation =	0 days	*placed on standby
Total Production =	0 Kgals	
Ugum Surface Water Plant		1.8 MGD
Avg days in operation =	30 days	
Total Production =	54,553 Kgals	
Tumon Maui Well		1.04 MGD
Avg days in operation =	30 days	
Total Production =	31,275 Kgals	
		38.4 MGD
		1,152,725 Kgals

DW Status as of 9/30/2018	
Active	100
Grounded motor	1
Out of commission	11
Secured, PFOs	2
Standby	6
TOTAL	120



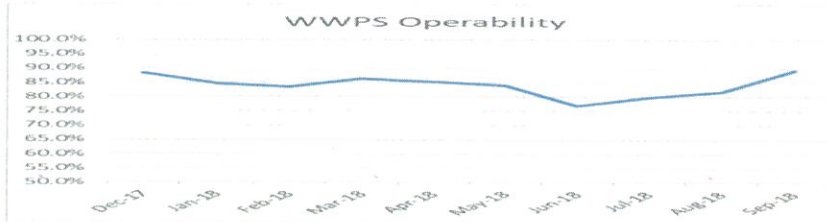
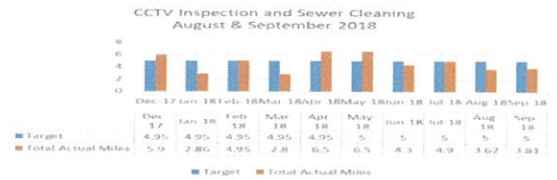
Distribution

Monthly Distribution Summary - September 2018				
Water Booster Pump Stations				
District	No. of Stations	Total Pumps	Pumps Operating	% Operational
Northern	11	21	19	90.5%
Central	7	15	15	100.0%
Southern	7	15	15	100.0%
	25	51	49	96.1%



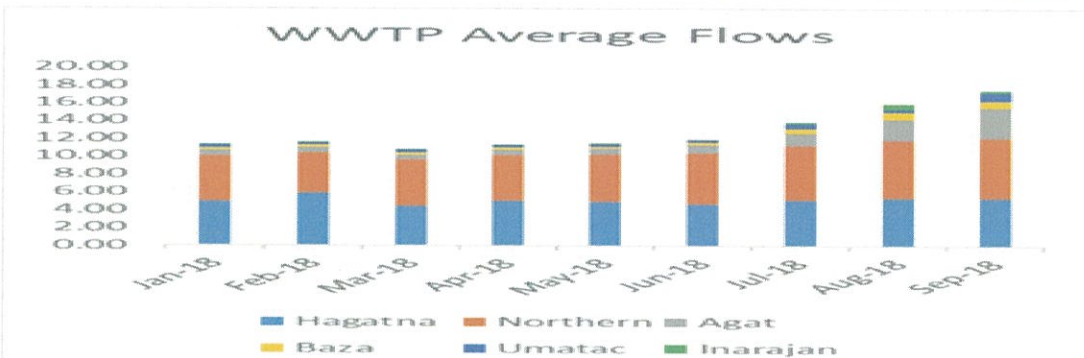
Wastewater Collections

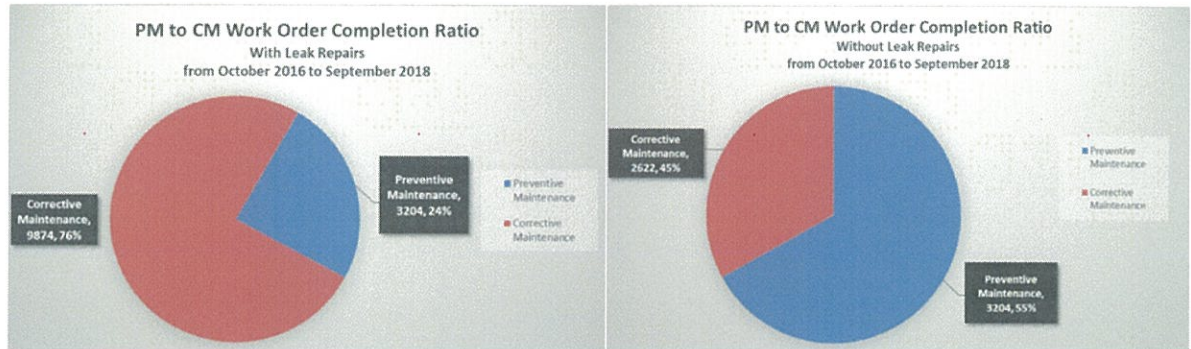
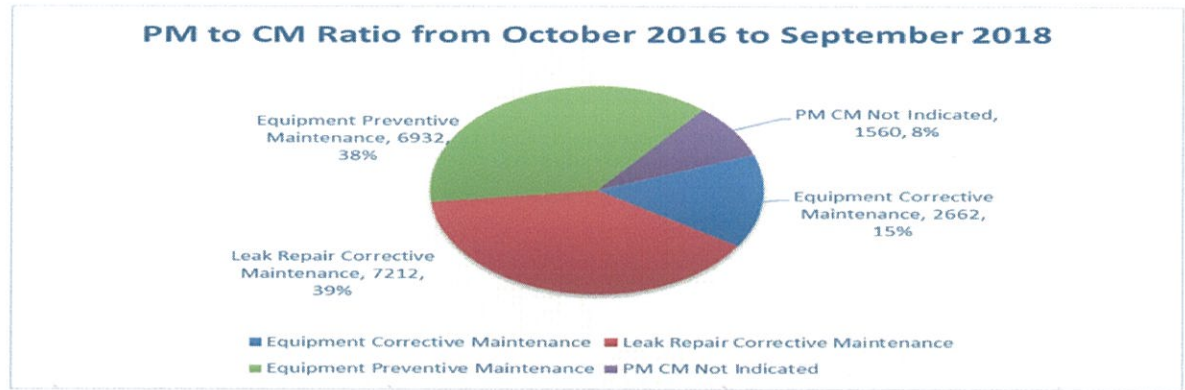
Monthly Collections Summary - September 2018				
Wastewater Pump Stations				
District	No. of Stations	Total Pumps	Pumps Operating	% Operational
Northern	22	52	48	92.3%
Central	29	65	55	84.6%
Southern	25	52	48	92.3%
Total	76	169	151	89.3%



Wastewater Treatment

Monthly Wastewater Treatment Summary - September 2018			
WW Treatment Plants - Flows			
Facility	Avg. Daily Flows	Sludge (lbs)	Sludge Disp. (\$)
Hagatna	5.40	333,740	\$ 30,037
Northern	6.7	711,820	\$ 64,064
Agat	3.46		
Baza	0.75		
Umatac	0.90		
Inarajan	0.24		
Total	17.45	1,045,560	\$ 94,100





Operational Issues

Production & Distribution

- Leak repair
 - Crews maintaining performance - As of October 15th, there were 17 pending repairs
 - Notice of Award has been awarded for advanced remote leak detection services
 - GWA's Line and Leak Repair Unit has been nominated for and received MAGPRO award for Cost Savings/Innovative Idea of the Year (Large Department/Agency)
- WSCC –
 - SCADA preparation on-going
 - Successfully coordinated activation of new Yigo WBPS to maintain service at Mt. Santa Rosa when Y-15 recently went down
 - Reservoir levels have been stable with very good levels maintained
- Pump and motor inventories okay; additional procurement for FY2019 is in the works
- Ugum WTP – Contractors on-site for SCADA upgrades

Wastewater Collection & Treatment

- CCTV & Collections System:
 - SSES and CCTV-based repairs to collection lines and SMHs are still on-going
 - CCTV equipment and Combination trucks need service – pending POs
- Pump stations
 - Working to address pump operability issues
 - Minimum pump and motor inventory levels finalized (similar to effort with deep-wells)
 - Critical spares and replacements procurement – awarded; initial orders pending
- Treatment Plants
 - Hagatna WWTP
 - One of two Centrifuges work needed (50% operability)
 - Clarifier – chain/flight sprocket needs repair
 - Digester aerator – gear-box issue
 - Northern WWTP
 - No. 2 centrifuge gear-box failed; new part order being prepared
 - Agat-Santa Rita WWTP
 - Critical process facilities all operating
 - UV issues being resolved

- U-M WWTP
 - Work on-going at the site
 - Significant delays have occurred because of USF&W / EPA permitting issues
 - Delay letter has been sent to USEPA
- Baza Gardens
 - Work on-going for all 3 phases
 - Last leg of gravity line to plant is on-going
 - Delay letter has been sent to USEPA

Meters for month of September 2018

COMPLETED FIELD ACTIVITY JAN 2017 THRU SEPT 2018 (POSTED IN CIS)		Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	TOTAL	COMPLETED FIELD ACTIVITIES (INVOICE 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	13875	699
GWA - Meter Exchange		393	179	220	276	482	553	501	807	1528	1039	452	259	289	1196	2120	121	121	1056	1246	1125	767	14370	146
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	2881	0
GWA - Verify Low Usage		0	0	0	2	37	36	196	488	657	202	127	612	658	1122	1055	463	19	5	3	6	6	5894	0
TOTAL:		453	312	343	743	1360	878	1351	2237	3733	2337	1095	1418	2203	3283	4505	2082	237	2362	2050	2621	2417	37020	845
REPORTS:		345	350	344	252	305	210	302	397	1013	1130	927	704	721	1041	1347	815	671	544	1159	1216	1013	14606	
# 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	1897	\$ 1,200,616.2
# OF FIELD CREW PERFORMING CHANGE OUTS:		19	10	13	9	21	21	18	24	36	28	36*	28*	5	13	2	2	2	28	17	25	25		
# 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		
# 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		
# 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		
# 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		
TOTAL:		30	18	22	22	38	37	31	45	58	50	48	48	20	32	11	10	7	47	31	34	34		

The project is on hold from 11/18/2017 thru Dec 18, 2017. During this period, 424 total 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 16, 2018 - PROJECT ON HOLD PENDING ARRIVAL OF METERS
 Project resumed June 04 2018, added 1 hrs per week (day field work on) June 18, 2018
 REMAINING ACTIVE BADGER LP MODELS AS OF SEPT 30, 2018: 12024

ACTIVE LP MODELS - PURCHASE MO & YEAR	COUNT	
2012	8774	14336 WARRANTY EXPIRED
Jan-13	2088	
Feb-13	730	
Mar-13	636	
May-13	1425	
Aug-13	683	2688 ACTIVE WARRANTY
Feb-14	66	
Mar-14	1	
Apr-14	1168	
Jun-14	70	
Aug-14	1383	

Marbo (Andy-South) Wells – Status

- Involuntary reversion appears imminent; GWA Counsel transmitted draft easement documents to GSA for consideration with DoD;
- GSA informed us late September that they are out of the loop, and referred us back to US Dept. of Education

One Guam Update

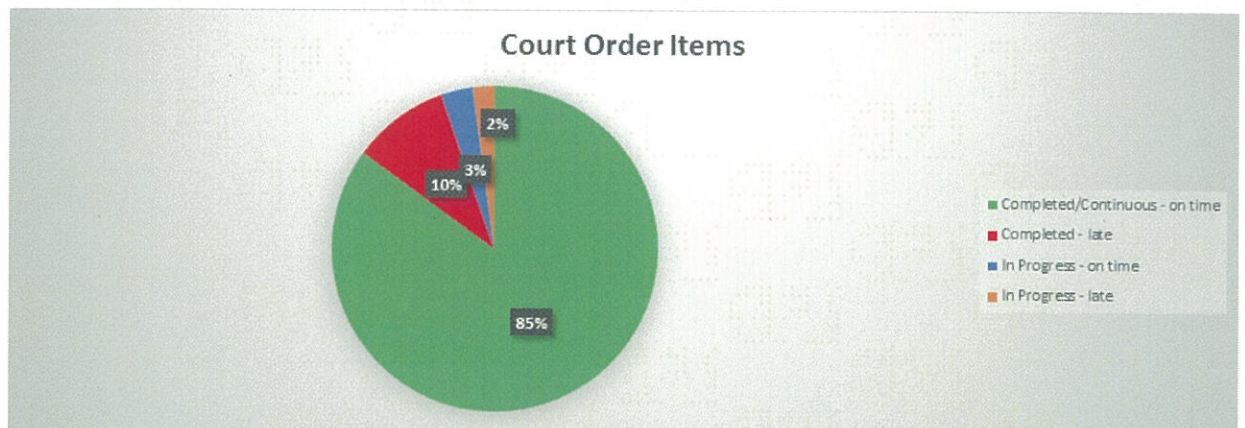
- Tumon Maui Well:
 - Repairs to damaged fence completed; Repairs to tank hatch pending.
- Santa Rosa Tank:
 - NAVFACMAR CO has briefed Andersen MSG (Missions Support Group) commander, and Civil Engineering Squad (CES) commander, and the General regarding the MOU for the Santa Rosa Tank project. Further action by GWA pending finalization of MOU.
- Agat-Santa Rita WWTP
 - Still waiting on revised letter from Navy real estate office regarding in-kind consideration for easement costs.
- OEA Projects
 - NGLA Observation Wells - Discussion with DoD’s Legal needed to nail down ownership and maintenance issues
 - Interceptor – working out coordination issues with regard to by-pass routing, GPA renewable project, and housing demo
- Training and Collaboration
 - AWWA HIWPS training for operators – waiting for DoD interest
 - CIPP training scheduled for this month Oct 22-26.

30-Other

- Utilis (satellite-based leak detection) - DOD is interested in the Utilis project.
- Data Sharing SOP/MOU - In final draft stage. Waiting on review from Air Force.
- Connection by Developer to Navy/Murray Road - Pending SHPO; Maria Lewis will keep on top of it.
- Cabras Island Water Lines – further action pending GWA review
- Navy Raw Water Lines - GWA asked about tapping into the Navy raw water lines, as this was brought up before. DOD is reviewing what cost might be for raw water based on this request.

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	79	2	9	3	97.8%



Status Information

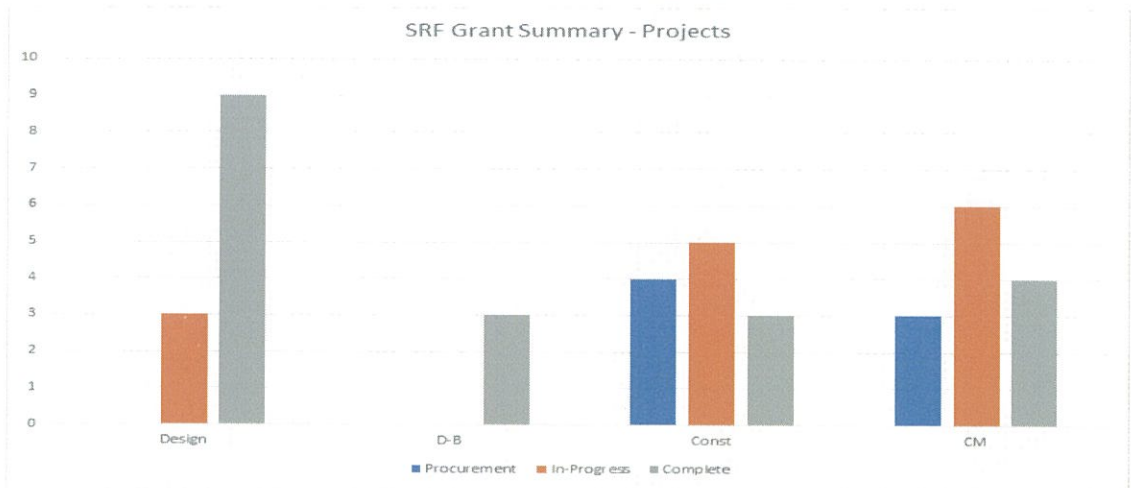
- 2 items delayed
 - Meters
 - Baza Gardens Sewer Line
- Final Date to complete all Court Order items is December 31, 2020.
- Overflow or Bypass events reported to USEPA:
 - 09/23/2018, Chalan Canton Tasi Merizo, sewer overflow (next to PS-17) Rain
 - 09/29/2018, Pump Station 14 Merizo, damaged force main
 - Umatac WWTP, Bypass 08/16 to 10/09; 2018; (ended Oct. 9th)

CIP Summary

Pending reconciliation between Engineering and Finance

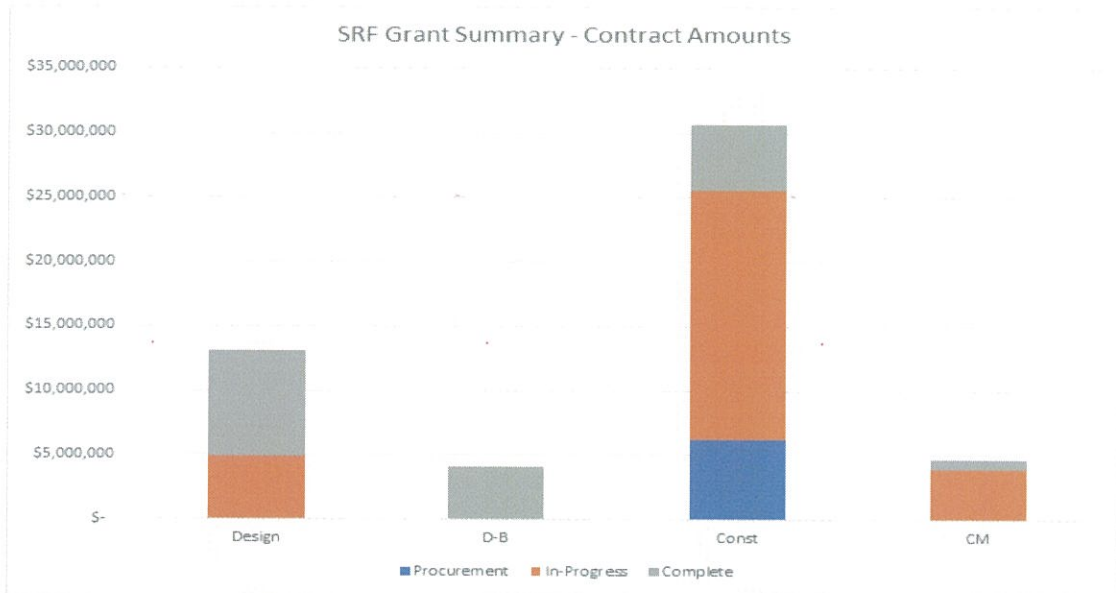
SRF Grant Summary

SRF Grant Summary - Projects (Sep 2018)					
	Procurement	In-Progress	Complete	Totals	%
Design	0	3	9	12	30%
D-B	0	0	3	3	8%
Const	4	5	3	12	30%
CM	3	6	4	13	33%
Totals	7	14	19	40	
%	18%	35%	48%		



SRF Grant Summary - Contract Amounts (Sep 2018)

	Procurement	In-Progress	Complete	Totals	%
Design	\$ -	\$ 4,892,286	8,249,328	\$ 13,141,614	25%
D-B	\$ -	\$ -	\$ 4,108,217	\$ 4,108,217	8%
Const	6,275,782	\$ 19,309,043	\$ 5,086,130	\$ 30,670,955	58%
CM	\$ -	\$ 3,877,036	\$ 802,243	\$ 4,679,279	9%
Totals	\$ 6,275,782	\$ 28,078,365	\$ 18,245,918	\$ 52,600,065	
%	12%	53%	35%		



OEA Grant Summary

- **NDWWTP Upgrades**
 - 60% design submittal received on schedule on Sep 24th.
 - Sitework bid package issued – Bids due on the 18th
 - Workshop on 60% Design – October 17th – 19th
 - Vertical bid package planned for issuance Mar 2019

- **Outfall Diffuser:**
 - Re-bid package issued
 - Bids received and currently being evaluated

- **Sewer Line Interceptor Design-Build**
 - Contract Award / NTP issued
 - Design and prep work have started
 - 30% Design submittal expected October 4th
 - 60% Design submittal expected October 18th
 - 90% Design submittal expected December 20th
 - 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% - expected Sep	On-target	Project design schedule has been revised / delayed
NEPA Analysis and Determination	Feb-17	Pending	Delayed	USEPA received SHPO concurrence; OEA to review EPA EA
Procure Construction Firm	Dec-18		On-target	Phased construction; Phase 1 expected award before Dec '18; Phase 2 award in 1 st 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	Pending response for L3 B4 T3521 for acceptance of GWA offer 09/25/18. Acceptance of Counter offer Letter for L4 B4 T3521 drafted and sent to GM for review and approval 10/09/18.
	Astumbo	Gov't. - CLTC	GWA and DLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DLM
	Piti	Private	Preliminary geotechnical investigation and archaeological investigation in the process 05/01/18
Expansion of the Northern District Wastewater Treatment Plant (NDWWTP)	Dededo	Gov't - GALC	Land acquisition completed and filed under GWA ownership 09/17/18
Deep Wells	AG-12	Dept. of Agriculture/Manhita Farms	Land Registration has been approved by Superior Court of Guam. Pending release and recordation of the Decree Establishing Title at DLM. DCA will be submitting Retracement Survey Check Print Map to DLM for review and comments 07/13/18. Right of Entry Agreement sent to Dept of AG for signature 05/24/18. 2 nd follow up sent on 09/12/18.
	Y-8	Gov't. - CLTC	Grant Deed submitted to DLM for Governor and AG signature 09/13/2018. Follow up status request sent to DLM 10/10/18.
Booster Pump Station	Agfayan	Private	3 rd follow up request to DLM Administrator on request for authorization on archeological testing for L28, B19, T3734, Inarajan 10/09/18.
Sewer Pump Stations	2 nd Adjacent Property to Southern Link	Private	Land Purchase and Sale Agreement sent to GM for review and approval 09/07/18
Asan Springs	Asan	Federal	License Agreement for Asan Springs facility that fall on Dept. of Park Services property currently under DOI review

4.1.2 Financials

CFO Cruz said there was no change to the Financial Report given at the GWA Work Session. The report was preliminary for year end for FY2018 ending Sept. 30, 2018. Revenue is short by 4% of projections. He attributes this to meters. For 2018 sales for water is about 6billion gallons but estimates is about 5.7billion which was what it's been for about 3 years. We are at 42,000 customers last year and is about the same this year. It was mentioned that the meter issue when resolved may make a difference. There was discussion on some items listed in the statement of operations.

5. GPA

5.1 New Business

5.1.1 GM Report

- **General Issues**

1. Generation System: The following summarizes the generation capacity projection for November 2018. The Cabras steam units are currently on-line but limited to about 50 MW each. MEC 8 is undergoing its major overhaul scheduled from October 15th to November 6th.

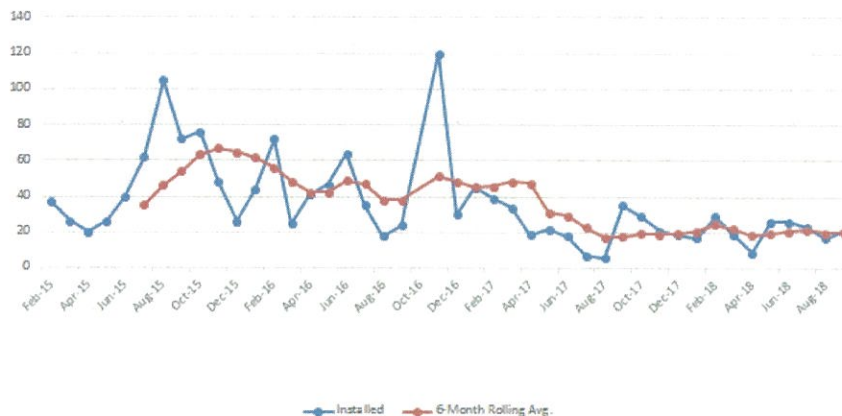
October 2018 Projected Capacity: 319 MW
October 2018 Projected Demand: 240 MW
Anticipated Reserve Margin: 79 MW

2. Net Metering Summary Ending September 2018:

Description:	Count	Kw
Active	1,771	18,823
Pending	19	241
Totals:	1,790	19,064

Service:	Count	KW	Kw/Customer
Residential	1,678	15,446	9.2
Others	93	3,377	36.3
Total:	1,771	18,823	10.6
% Residential	94.7%	82.1%	
Estimated 12 Months Revenue Impact:	\$3,521,130		

NEM Installed Monthly
as of September 2018



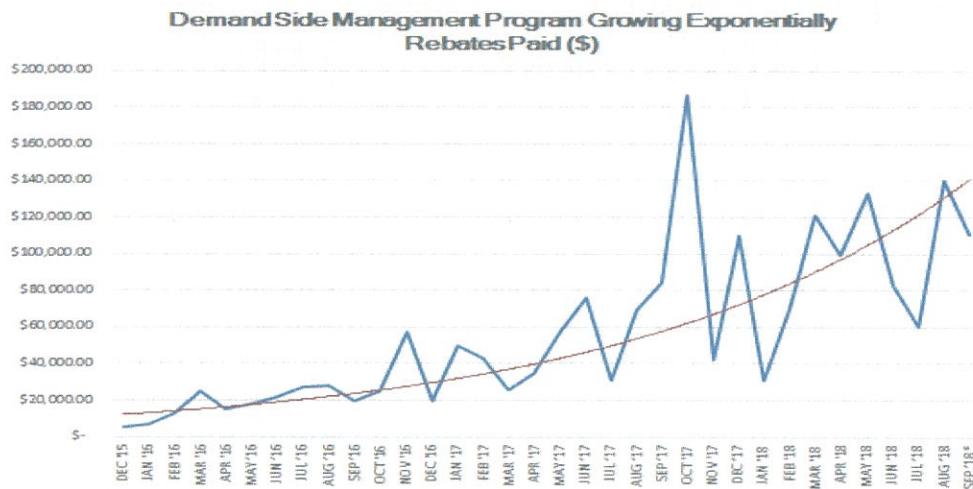
3. Demand Side Management Expenses Thru September 2018

Description	FY16	FY17	FY18 as of 9/30/2018*	Total to Date
Regular/OT Pay	\$ 11,348.80	\$ 22,256.00	\$ 20,469.95	\$ 54,074.75
Other Contractual	\$ 28,278.50	\$ 85,550.05	\$ 99,622.25	\$ 213,450.80
Bank Fees	\$ 155.00	\$ 1,032.06	\$ 1,085.08	\$ 2,272.14
Paid Rebates-Split AC	\$ 154,700.00	\$ 557,275.00	\$ 1,141,925.00	\$ 1,853,900.00
Paid Rebates- Central AC	\$ 3,400.00	\$ 8,200.00	\$ 4,400.00	\$ 16,000.00
Paid Rebates- Washer/Dryer	\$ 2,800.00	\$ 7,425.00	\$ 41,000.00	\$ 51,225.00
Total Expenses	\$200,682.30	\$681,738.11	\$1,308,502.28	\$2,190,922.69

DSM PROGRAM SUMMARY

DSM Program reduces peak demand and reduces LEAC cost for all customers at a one time fixed rebate. DSM eliminates running less efficient peaking units at peak time thereby reducing fuel cost.

DESCRIPTION	AMOUNT
Initial DSM Budget FY'16	\$ 1,806,014.00
Interest Income as of Sep 18	\$ 4,621.45
Total Expense	\$ 2,190,922.69
Ending Balance as of Sep 18	\$ (380,287.24)
Addtl. Budget: Approved (FY'18)	\$ 1,139,189.00
Total Ending Balance as of Aug 18	\$ 758,901.76



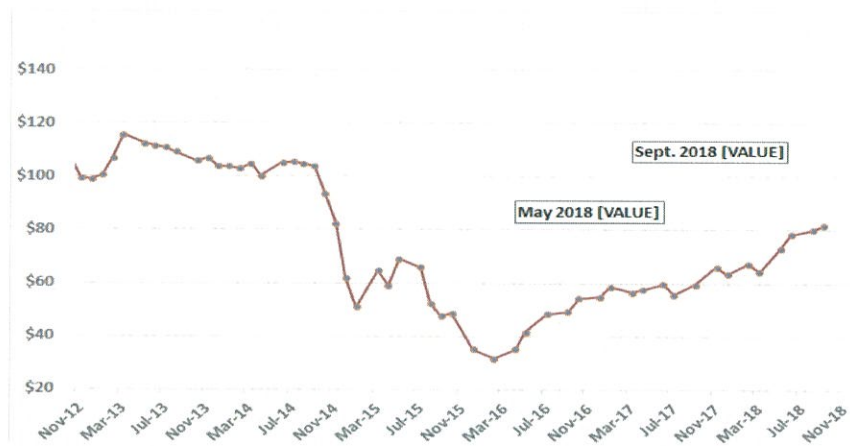
4. **PUC Dockets: Dockets on Agenda for October 25th**
 - **19-01 Bulk Storage Tanks Inspection and Refurbishment**
 - **19-02 New ULSD Pipeline System**
 - **19-03 Property Insurance Contract**
5. **New 180 MW Power Plant:** The short listed seven (7) proponents have received the technical specifications. Bid opening is scheduled for January 2019.
6. **Meetings with Mayors':** We held meetings on October 10th and 11th here at Fadian with the village Mayors. The meeting covered typhoon restoration efforts, vegetation management and other issues. Meeting was well received and we plan to hold meetings quarterly in order to keep mayors abreast with developments within GPA and as a means for improved communications with the Mayors.
7. **Meetings with Employees:** We held our semi-annual briefing of employees on October 3rd and 4th. Briefing covered the many issues GPA faced over the past several months and the near term goals GPA is pursuing. We thanked employees most especially for their excellent work during the Typhoon Mangkhut recovery.
8. **New 40 MW Energy Storage Systems:** The 16 MW and 24 MW battery systems are now scheduled for completion in December 2018. The project will improve reliability by reducing loss of a generator related outages by over 70%.
9. **New SCADA System:** The new SCADA system for Power, Water and Wastewater is scheduled for completion by October 31st 2018. We are planning the commissioning ceremony for late November 2018. The system will improve system dispatching and day to day coordination between GPA and GWA.



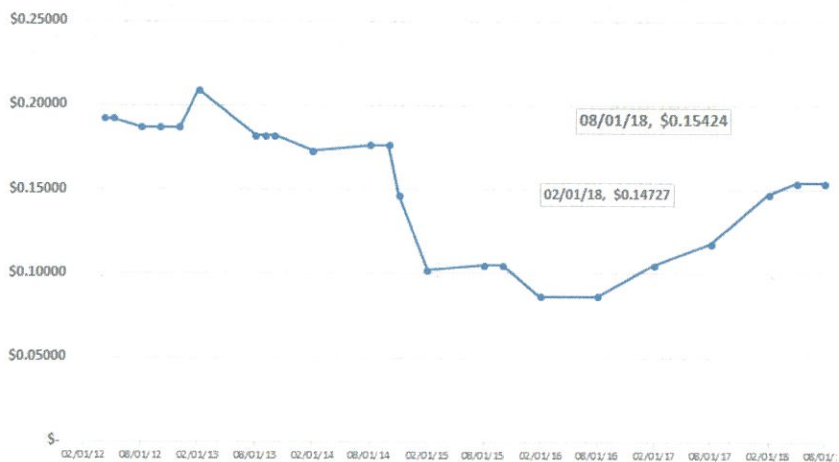
10. **\$1.25M Grant Award from Office of Insular Affairs "Energizing Insular Communities" (EIC):**
 - **GPA was awarded funding for the following two projects which will save GDOE greater than \$250K per year:**
 - \$954,685 -GUAM-EIC-2018-1, Bringing Energy Savings To (BEST) Schools, Southern High School LED Lighting Retrofit
 - \$295,315 -GUAM-EIC-2018-2, Bringing Energy Savings To (BEST) Schools, George Washington High School LED Lighting Retrofit
 - GPA will continue to apply for grants including ones under Pre-Disaster Mitigation and Hazard Mitigations Grant opportunities which became available when the President declared Guam a disaster area due to Typhoon Mangkhut in 2018. GPA intends to submit a grant proposal to provide standby generators at all the schools in order to avoid lost school day due to storms.
 - **Congratulations and Thank you to Project Manager Ms. Jessica T. Lazatin (Engineer I), Mr. Cruz, AGMET, and Mrs. Jennifer Sablan, SPORD Manager and the SPORD team for obtaining this significant grant in support of our community.**

11. **BEST Schools Study:** The Siemen's group will be in Guam in November to present their findings and recommendations on energy and water cost savings opportunities and supply options for the GDOE schools. We will be scheduling a session for the presentation. This \$250K study is funded by GPA from savings of the recent bond refinancing.
12. **LEAC Update:** Fuel prices have gone up in the past couple of months. Attached are slides showing the Historical LEAC Over (Under) Recovery and scenario model runs with the latest fuel price from Oct 10th to 15th.
13. **Key Performance Indicators:** The following are indicators thru September 2018. Key points include:
 - **Fuel oil cost continued to climb**
 - **Peak demand has dropped substantially**
 - **KWH sales continue to decline**

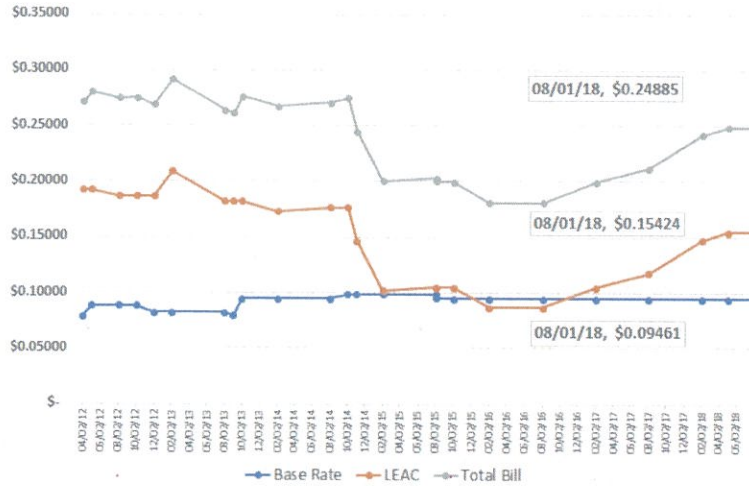
LEAC Update – GPA Fuel Purchases (Per Barrel)



Historical Residential LEAC Rate 13



Historical Residential Rate



Historical LEAC Over (Under) Recovery

LEAC Period From	LEAC Period To	Approved LEAC Rate	Actual Over (Under) Recovery
4/1/2012	7/31/2012	\$ 0.192310	\$ (3,040,418)
8/1/2012	1/31/2013	\$ 0.186834	\$ (2,494,052)
2/1/2013	7/31/2013	\$ 0.209271	\$ 1,345,259
8/1/2013	10/31/2013	\$ 0.182054	\$ 1,300,093
2/1/2014	7/31/2014	\$ 0.172986	\$ (1,137,034)
8/1/2014	10/31/2014	\$ 0.176441	\$ (4,646,872)
11/1/2014	1/31/2015	\$ 0.146666	\$ 661,428
2/1/2015	7/31/2015	\$ 0.102054	\$ 1,757,878
8/1/2015	1/31/2016	\$ 0.104871	\$ (2,467,151)
2/1/2016	7/31/2016	\$ 0.086613	\$ (2,668,603)
8/1/2016	1/31/2017	\$ 0.086613	\$ (9,915,360)
			\$ (5,315,360) a
2/1/2017	7/31/2017	\$ 0.105051	\$ (14,050,504)
8/1/2017	01/31/2018	\$ 0.117718	\$ (16,775,982)
2/1/2018	4/30/2018	\$ 0.147266	\$ (13,005,689)
5/1/2018	7/31/2018	\$ 0.154242	\$ (8,422,674)
8/1/2018	1/31/2019	\$ 0.154242	\$ (11,841,650) Estimate

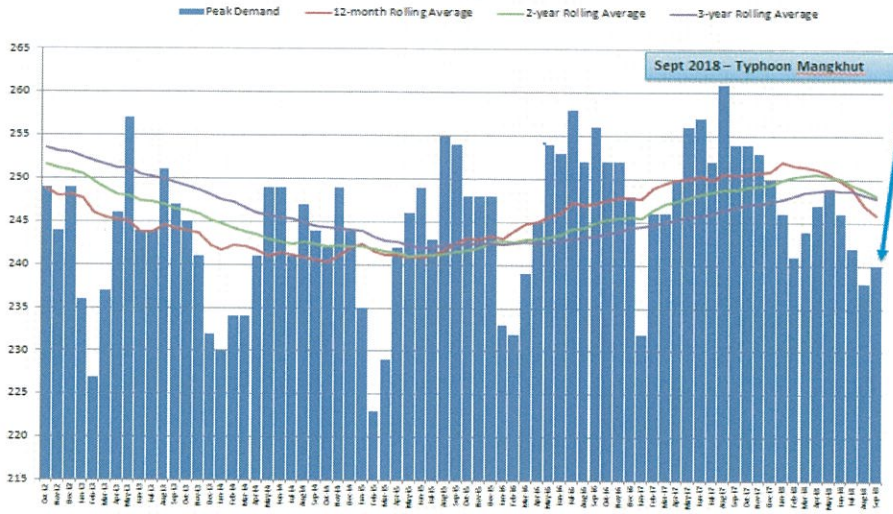
LEAC Update – Scenario Model Runs

Proposed Effective 02/01/2019	Fuel Price (Oct 10-15, 2018)		
	@ Zero Cost Recovery	@ 50% Recovery	@ Full Cost Recovery
1 Average Price per BBL-RFO	\$ 85.64	\$ 85.64	\$ 85.64
2 Average Price per Gal-Diesel	\$ 105.02	\$ 105.02	\$ 105.02
3 Proposed LEAC Rate	\$ 0.154242	\$ 0.169659	\$ 0.185078
4 Monthly Increase/(Decrease) - 1000 kWh	\$ -	\$ 15.42	\$ 30.84
5 % Increase/(Decrease) in LEAC	0.00%	10.00%	19.99%
6 % Increase/(Decrease) in Total Bill	0.00%	6.2%	12.39%
7 Fuel Cost (Over) Under Recovery at the end of the period	\$20.0M	\$10.0M	\$ -

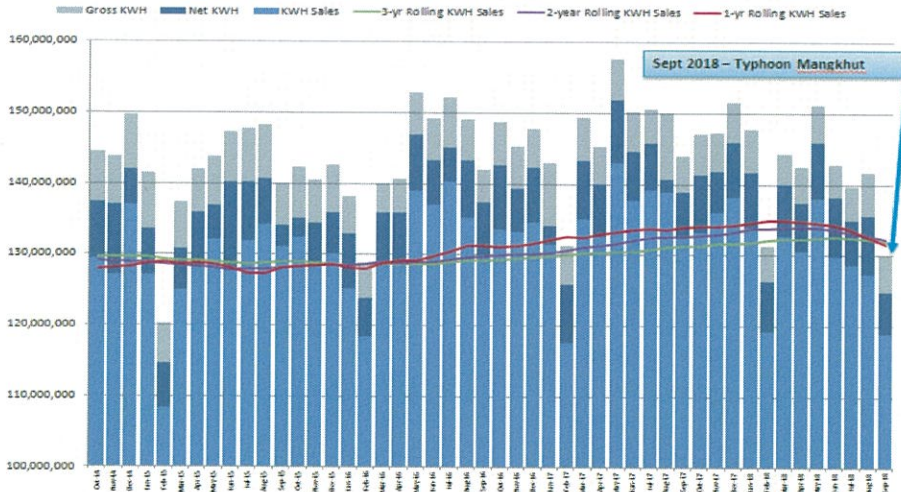
LEAC Update – Billing Illustrations

	@ Zero Recovery		@ 50% Recovery		@ Full Recovery	
	Effective 2/1/19		Effective 2/1/19		Effective 2/1/19	
KWH		1,000		1,000		1,000
Monthly Charge	15.00	15.00	15.00	15.00	15.00	15.00
Non-Fuel Energy Charge						
First 500 KWH	0.06955	\$ 34.78	0.06955	\$ 34.78	0.06955	\$ 34.78
Over 500 KWH	0.08687	\$ 43.44	0.08687	\$ 43.44	0.08687	\$ 43.44
Emergency Water-well charge	0.00279	\$ 1.40	0.00279	\$ 1.40	0.00279	\$ 1.40
Insurance Charge		\$ -		\$ -		\$ -
Working Capital Fund Surcharge		\$ -		\$ -		\$ -
Roll-Back Credit		\$ -		\$ -		\$ -
Total Electric Charge before Fuel Recovery Charges		\$ 94.61		\$ 94.61		\$ 94.61
Fuel Recovery Charge	0.154242	154.24	0.169659	169.66	0.185078	185.08
Total Electric Charge		\$248.85		\$264.26		\$279.68
Increase (Decrease) in Total Bill		\$0.00		\$15.42		\$30.84
% Increase (Decrease) in Total Bill		0.00%		6.20%		12.39%
% Increase (Decrease) in LEAC		0.00%		10.00%		19.99%
Cents/kWh		\$ 0.2488		\$ 0.2643		\$ 0.2797

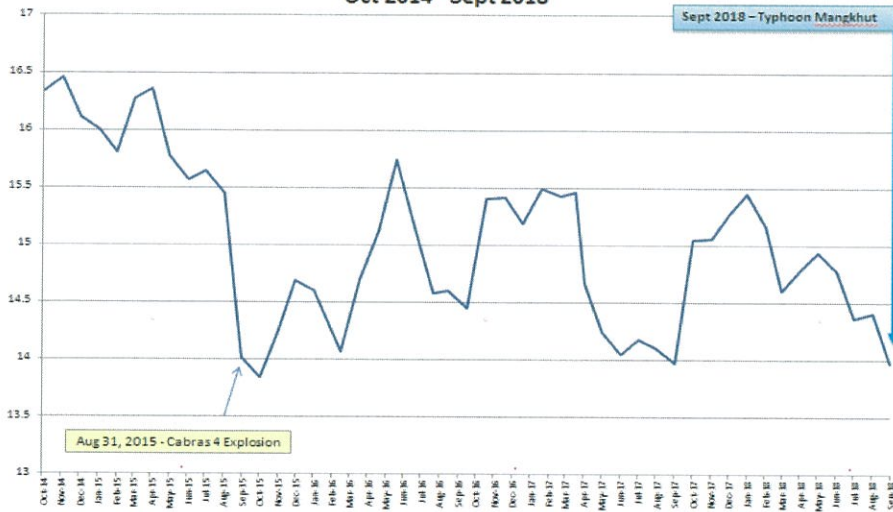
Historical Monthly Peak Demand
Oct 2012 - Sept 2018



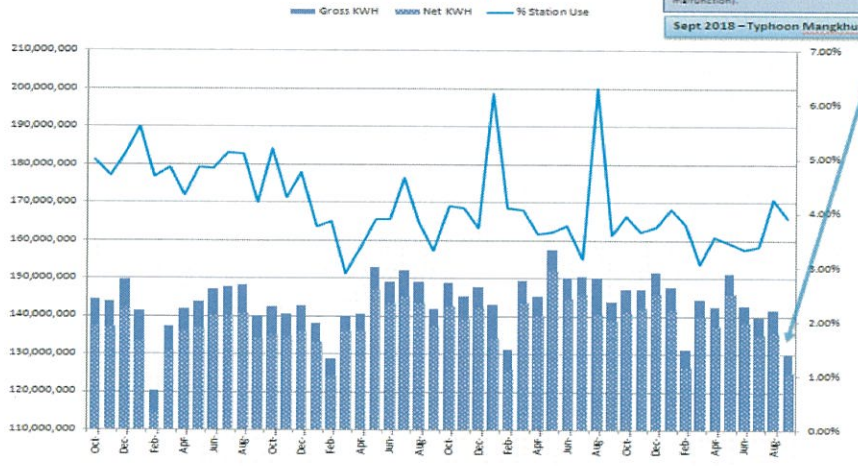
Historical KWH Sales
Oct 2014 - Sept 2018



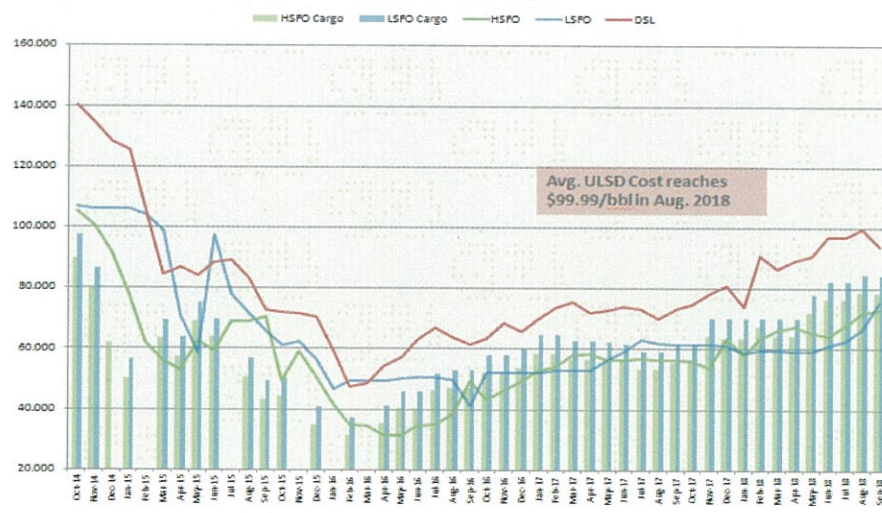
**SYSTEM GROSS HEAT RATE
(KWH/Gal)
Oct 2014 - Sept 2018**



**Gross and Net Generation (KWH)
Oct 2014 - Sept 2018**



**Fuel Cargo and Fuel Consumption Costs (\$/bbl)
Oct 2014 - Sept 2018**



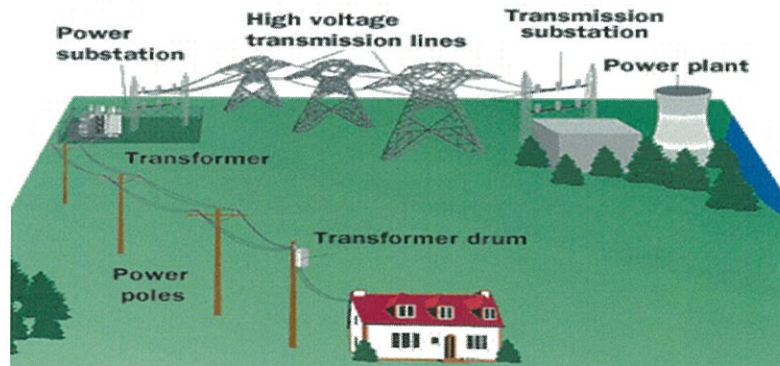
- PUC Docket 19-05 Standby Generators

GWA CRITICAL Water, and Wastewater ASSETS WIDESPREAD
Difficult to recover immediately After Storms!!!



HOW POWER IS DELIVERED

Substantial Repairs Need to be done before Customer Receives Power



T&D SYSTEM

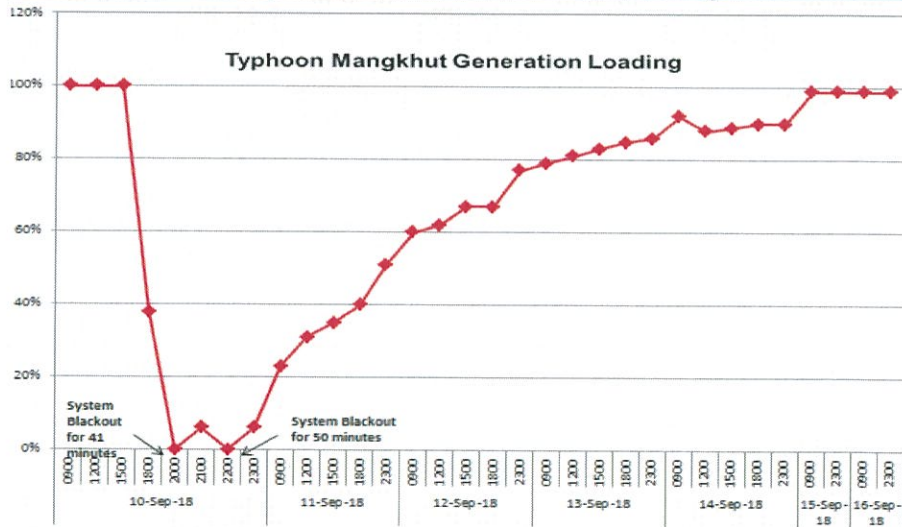
Description	Overhead Miles	Underground Miles	TOTAL Miles
Transmission Lines	154	35	189
Distribution Lines	1,331	307	1,638
Substations	29		
Distribution Feeders	67		
GPA Customers Served	50,763		

Sector	# of Feeders	Transmission Lines (mi)	Distribution Lines (mi)
North	33	72	790
Central	23	47	552
South	11	70	296

GPA CUSTOMERS

Northern Villages		28,056 Customers	Central Villages		16,130 Customers
Dededo		12,528	Agana Hts.		1,142
Tamuning-Tumon-Harmon		10,248	Asan-Maina		724
Yigo		5,280	Barrigada		2,988
			Chalan Pago-Ordot		2,201
			Hagatna		798
			Mangilao		4,490
			Mongmong-Toto-Maite		2,261
			Piti		647
			Sinajana		879
Southern Villages		7,160 Customers			
Agat		1,478			
Inarajan		766			
Merizo		528			
Santa Rita		1,170			
Talofoto		1,016			
Umatac		196			
Yona		2,006			

System Loading



Restoration Delays are Costly to GPA Typhoon Mangkhut Revenue Loss Almost a \$1M

Pre-Typhoon Period			Post-Typhoon Period			VARIANCE (KWH)	Projected Sales Loss
Date	Day	Net KWH	Date	Day	Net KWH		
3-Sep	Mon	4,459,346	10-Sep	Mon	3,023,541	1,435,805	\$ 136,799
4-Sep	Tue	4,476,709	11-Sep	Tue	1,358,717	3,117,992	\$ 297,072
5-Sep	Wed	4,505,685	12-Sep	Wed	2,878,520	1,627,165	\$ 155,031
6-Sep	Thu	4,487,488	13-Sep	Thu	3,701,117	786,371	\$ 74,923
7-Sep	Fri	4,565,742	14-Sep	Fri	4,107,311	458,431	\$ 43,678
8-Sep	Sat	4,614,858	15-Sep	Sat	4,463,970	150,888	\$ 14,376
9-Sep	Sun	4,595,994	16-Sep	Sun	4,454,821	141,173	\$ 13,450
TOTAL:		31,705,821			23,987,997	7,717,824	\$ 735,328

* Based on the August Revenue Reports average base rate

Water Service Crucial to Health and Wellness of Island Community and Typhoons on Guam Impact Water Service; GPA's Top Priority is to Restore Power to Water Wells and Wastewater Stations; Without Standby Generators Recovery to Customers Substantially Delayed Six Major Typhoons Impacted Guam Between 1988 to 1992

Date	Typhoon	Estimated Winds MPH	Estimated Damages
11-Nov-62	KAREN	175 to 185	\$250M
21-May-76	PAMELA	150	\$500M
12-Jan-88	ROY	100 to 130	\$28M
21-Apr-89	ANDY	80 to 100	
20-Dec-90	RUSS	120 to 150	\$120M
27-Nov-91	YURI	90 to 115	\$33M
28-Aug-92	OMAR	135 to 150	\$457M
23-Nov-92	GAY	100	No Data
16-Dec-97	PAKA	145 to 185	\$500M
28-Jun-02	CHATAAN	110	\$60M
8-Dec-02	PONGSONA	144 to 173	\$700M
15-May-15	DOLPHIN	80 to 106	\$10M
Sept 8, 2018	MANGKHUT	80 to 100	

Typhoons Typically Causes Substantial Water Outages

Without Standby Generators Water Restoration to all Customers will be Substantially Delayed Causing Hardship to the Community

Date	Typhoon	Days of Significant Water Issues (Source: PDN Articles)
11-Nov-1962	KAREN	???
21-May-1976	PAMELA	???
12-Jan-1988	ROY	10 days
21-Apr-1989	ANDY	*no major structural damage/only crop damage
20-Dec-1990	RUSS	8 days
27-Nov-1991	YURI	6 days
28-Aug-1992	OMAR	17 days
23-Nov-1992	GAY	*little additional destruction/Omar earlier
16-Dec-1997	PAKA	15 days
28-Jun-2002	CHATA'AN	25 days
8-Dec-2002	PONGSONA	30 days
15-May-2015	DOLPHIN	12 days to Restore Affected 11% of GWA Customers
8-Sep-2018	MANGKHUT	5 days for <1% of GWA Customers

GPA Installed 143 STANDBY GENERATORS in 1993

Generators Were Installed with \$13M of GPA 1992 Bond Funds to Insure Water Wells and Wastewater Facilities Had Electricity after Typhoons so that GPA could Effectively and Efficiently Restore All Power Customers

- About 145 Water and Wastewater Assets in 1993
- Generators were installed in typhoon proof buildings
- Generators installed with automatic transfer switches and fuel tanks adequate for running several days without refueling
- From 1993 to 2015 GWA added more water and wastewater assets including about 90 standby generators
- 89% of GWA customers had water during and after Typhoon Dolphin in 2015
- GPA took responsibility for 90 GWA generators in November 2015
- During and after Typhoon Mangkhut, greater than 99% of GWA customers had water service because of the GPWA Standby Generator Partnership
- GPWA Continues Working Towards Having All GWA Assets With Generators

STANDBY GENSETS AT GWA SITES

GWA Water Wells, Water Booster Pump Stations, Wastewater Pump Stations and Wastewater Lift and Ejector Stations

- About 88 % of Operating Water and Wastewater Assets have standby generators installed
- Uninterrupted water service to the South throughout Typhoon Mangkhut, except for high elevation areas which had boosters
 - GPA installed 800 kW generator at Ugum in November 2017
 - GWA upgraded Ugum plant membranes to process higher turbidity water
- GPA to begin replacement program of standby generators over 10 years. Units are mostly 25 years old now and near end of useful life
- More portable generators need to be procured for emergencies
- Planning underway to implement short term solutions to small water booster stations and wastewater lift stations which suffered prolong power interruptions causing no water service to high elevation customers and sewage spills to customers in low areas
- About 27 Operating Asset Sites Without Generators and will Require Capital Investments to Installed Concrete Building to House Generator, Automatic Transfer Switch and 7 Days of Fuel Supply

STANDBY GENSETS AT GWA SITES

GWA TOTAL OPERATING ASSETS			
	With Generator	No Generator	TOTAL
Booster Pumps	20	11	31
Waterwells	100	5	105
Wastewater	70	11	81
Laboratory	1		1
TOTAL	191	27	218
Percentage With Generators:	87.6%		

STANDBY GENSETS AT GWA SITES

GENERATOR AVAILABILITY			
	Operational	Down	Availability
Booster Pumps	20	0	100.0%
Waterwells	97	3	97.0%
Wastewater	65	5	92.9%
Laboratory	1	0	100.0%
TOTAL	183	8	95.8%

STANDBY GENSETS AT GWA SITES

Lack of generators at small water booster pump stations caused interrupted water service to about 150 Customers; GWA customers total about 42,000

Because water service continued thru the typhoon, sewage spills occurred at small lift stations because no generators available

The following pictures show some locations which lack standby generators and mainly consist of water booster stations and wastewater lift and ejector systems

GPA Surcharge Chronology

- Public Law 21-133 directed GPA to procure and install standby generators to be used for the operation of Public Utilities of Guam (PUAG) water wells, water booster pumps and wastewater pump stations
- Approximately \$13 million from the 1992 30-Year Revenue Bond funded these generators. Original number of generators to be installed was at 143 locations based on the Docket 92-010 when Rate Schedule E was created.
- In Docket 92-010, GPA's application for tariff Rate Schedule E was approved by PUC on March 30, 1994 and became effective on April 1, 1994
- Rate Schedule E was applicable to PUAG to pay for the (1) Debt Service of the generators (2) Capital expenditures (3) Operations and Maintenance and (4) Fuel and fuel related charges
- At the end of FY 96, GPA's receivable from PUAG under tariff Rate Schedule E was approximately \$7.2 million. PUAG did not make a single payment since the creation of the tariff.
- In Docket 95-001, GPA's 1996 base rate case, PUAG's non-payment of tariff Rate Schedule E was discussed
- In Docket 96-004, PUC established the water well surcharge to be collected from all civilian ratepayers beginning June 1, 1996. The regulatory asset of \$7.2 million was set up and the water well surcharge rate was established at \$0.00477/kWh
- In Docket 97-002, the \$5 million Tariff E regulatory asset was extended, which would expire by order on 9/30/1997. The surcharge was at \$0.00719/kWh. An additional surcharge of \$2.8 million was established to fund FY 1997 Tariff E charges to be recovered from March 1, 1998 until October 1, 1999 at the rate of \$0.00242/kWh.
- Subsequently, GPA petitioned PUC for the Tariff E surcharge creating annual revenues of about \$2.8 million and the regulatory asset creating annual revenues of about \$5 million be embedded into base rates and that the tariff be rescinded.

- The stipulation in Docket 97-002 dated May 8, 1998 states that the revenue stream associated with Tariff E (\$5 million regulatory asset) effective June 1, 1998 be added to civilian base rates in anticipation of significant new expenses arising from GPA's contract obligations under the IPP contracts and to avoid another base rate increase in FY 1999. It also states that the additional Tariff E surcharge (\$2.8 million revenues) should continue in force and in effect until further Commission order to provide a revenue stream to support Tariff E related expenses.
- In the last several rate cases, this surcharge was included in the total revenue requirement of GPA. So in any adjustment of the base rates, the surcharge was also increased by the same approved % increase. In the 2012 base rate case, the PUC staff Georgetown Consulting Group recommended that the water well surcharge be embedded in the base rates, but this change has not yet been implemented.
- Water Service is of Paramount Priority to the Community
- From 1988 to 1992 Major Storms Impacted Guam Resulting in GPA Constantly Having to Isolate Customers in Order to Quickly Restore Power to Water and Wastewater Facilities
- GPA installed 143 Standby Generators at PUAG Sites in 1993 in Order to Effectively and Efficiently Restore Power Service to All Customers
- Generators Installed in 1993 Continue to Maintain High Availabilities
- Disconnecting Customers in Order to Restore Water Service was Ineffective and Inefficient Causing Significant Burdens on GPA customers
- Delayed Restoration of GPA Customers Results in Substantial Revenue Losses
- Surcharge was Established by the PUC for GPA to be Able to Pay Debt Service and Expenses of the Generators because PUAG Refused to Pay for the Service
- The Surcharge was and is not a Restricted Account and is not similar to the Restricted Accounts Like the Self-Insurance Fund and the Working Capital Fund
- It was Recommended to Merge the Surcharge Revenue into the Base Rate. We Recommend it be Done in the Next Rate Case
- The Generators will need to be Replaced Over the Next Few Years since They are Mostly 25 Years of Age.
- The CCU Merged All Standby Generator Asset Responsibilities of GPWA to GPA in 2015
- Funding for about 27 New Standby Generator Systems need to be Identified
- All GPA Generators installed in 1993 need to be replaced over a 10 Year Period
- In the Interim GPA needs to Purchase More Portable Generators for use during Emergency Failures
- GWA Continues to Add New Generators on Various Sites and on All New Infrastructure
- GPWA will Continue to Work on its Goal to Continuously Serve Water to All Customers During Storm Periods

At the end of the GM Benavente's presentation, there was discussion about where to go from here. Comm. Sanchez said it is good that management did the historical research so that correct information could be given the PUC to shed light on how the surcharge originated. However going forward, he recommended to the Commission to task management to develop 10-year projection on what it would

cost to fund the remaining 11% of wells equipped with standby generators and to repair and retrofit the existing 89% of assets and the maintenance cost for all assets going forward. It was also mentioned that it would be a good idea to make this review a standard procedure.

It was mentioned that if these numbers are not sufficient to be covered by the surcharge being collected now that PUC may need to revisit the rates every 5 years so that this fund would be sufficient for continual maintenance for another decade. GM Benavente said it is possible to come up with the numbers by the November meeting since this matter is being currently reviewed anyway.

Comm. Duenas agreed with Comm. Sanchez but added that relative to the movement of the surcharge / rates, he would leave that for PUC to determine the process. It is important to give the PUC the data to show them the need.

Comm. Sanchez said there was accusation by the public that the funds were not being used as intended to buy generators, fix buildings, house generators but that is exactly what it was used for. Do we still need it? Once the data is available, it will be easier to justify the need for the revenue.

The last comment mentioned came from ALJ Horecky who was present. He said that it is unusual how the surcharge was handled and whether it was the best or most appropriate way – that is the question.

5.1.2 Financials

CFO Kim said there's no change to the financials discussed yesterday. Below is snippet of what report submitted.

Summary

The increase in net assets for the month ended was \$0.8 million as compared to the anticipated net increase of \$0.5 million projected at the beginning of the year. The total kWh sales for the month were 8.44% less than projected and non-fuel revenues were \$1.1 million less than the estimated amount. O & M expenses for the month were \$5.9 million which was \$0.5 million less than our projections for the month. Other expenses for the month such as interest expense, IPP costs, (net of interest income and other income) totaled to \$3.2 million, which was \$0.8 million less than the projected amounts. There were no other significant departures from the budget during the period.

Analysis

Description	Previous Month	Current Month	Target
Quick Ratio	2.48	2.62	2
Days in Receivables	39	38	52
Days in Payables	29	20	30
LEAC (Over)/Under Recovery Balance -YTD	\$8,422,674	\$7,313,081	\$8,722,838
T&D Losses	5.03%	5.08%	<7.00%
Debt Service Coverage	1.80	1.78	1.75
Long-term equity ratio	17%	17%	30 – 40%
Days in Cash	172	199	60

The Quick Ratio has been a challenge for GPA historically. However, over the last two fiscal years, the influx of cash from insurance proceeds continued to improve this ratio. GPA has current obligations of approximately \$64 million and approximately \$168 million in cash and current receivables. Debt Service Coverage ratio is calculated using the methodology in use before the Fiscal Year 2002 change in accounting practice.

5.1.3 Resolution 2018-23 Authorizing Funds for the DSM Rebate Program

This resolution seeks approval to fund the DSM Program under LEAC for the following reasons:

The DSM Program is experiencing exponential growth. Although perhaps not truly unexpected, this DSM Program exponential growth is volatile: subject or characterized by rapid change. The LEAC decoupling from base rates addresses expenses like fuel that have a volatile nature.

DSM rebate expenses may likely double every year and would soon place pressure on GPA base rate funding affecting GPA Debt Service Coverage requirements. At that point, GPA would have to curtail the growth of the DSM rebate program. This curtailment would not comport with CCU and PUC policy and their mutual desire to reduce customer energy consumption, demand, and cost.

Like renewable energy, a major rationale behind DSM is predicated on the avoidance of fuel costs and the need for capacity additions. Furthermore, unlike renewable energy without energy storage, DSM provides reductions to future power system capacity expansion costs.

The PUC has allowed GPA to recover its Utility Scale Renewable Energy Program costs under the LEAC; and therefore, may use this precedent to treat DSM Program Expenses in a similar fashion.

PUC approval of GPA's recommendation results in DSM expenses being revenue neutral and will be implemented immediately upon approval.

After lengthy discussion on matter of funding source - if it should be placed as part of LEAC or distinctly separate, it was decided to table this resolution pending further review. GM agreed to table but said he strongly recommended that the program be continued.

5.1.4 Resolution 2018-24 Upgrade JDE One World to Enterprise One (E1)

GPA purchased Enterprise Resource Planning (ERP) software from JDEdwards World Solution company in the late 1990 and the contract included a license for an upgrade to the software. Oracle Corporation has purchased JDEdwards contracts including GPA. Oracle Corporation developed Enterprise One (E1) and agreed to recognize GPA license right to E1 software package. Oracle Corporation has disclosed its intention to discontinue support of JDE One World software in 2022. GPA has determined that upgrading to E1 will improve the system's functionality, ease of use by user, and greater reporting capability and that the Authority should move to E1 software offered by Oracle.

GPA also intends to move forward to purchase and support of E1 ERP system and modules currently not covered by GPA's license to improve the functionality and replace other existing software. GPA is requesting authorization for expenditure to purchase additional licenses, support, and professional services from Oracle Corporation and DXC. With resolution 2018-24, management is asking for an additional \$1.2M to current cost with estimated completion of August 2019. The funding source is identified as revenue funds.

CFO Kim gave a short presentation and in discussion it was mentioned that this scenario applies only to GPA. CCU wanted clarification on other modules that could be added on in the future and some that

were mentioned were an HR component and one for project management, to name a few. Also brought up was what the cost savings would be by getting GWA involved.

Comm. Sanchez motioned to approve resolution 2018-24 second by Comm. Santos. There was no further discussion or objection and the motion passed.

5.1.5 Resolution 2018-25 EPCM Contract Increase

Stanley Consultants was contracted in March 2017 through GPA RFP-17-001 as the Engineering, Procurement and Construction Management (EPCM) Contractor for the New 120-180 MW Power Plant in March 2017. The plant will be located adjacent to the Harmon Substation. As the EPCM, Stanley is providing the technical and contractual support in the new IPP procurement and will be GPA Owner’s Engineer during construction and commissioning. The increase in contract cost is projected to cover services through plant commissioning in 2022.

GPA is requesting a \$2.6M increase for technical services to develop procurement documents and support procurement activities. The total costs are within 1-3% of projected new power plant construction costs and is within typical percentages for this size of a project as shown in table below:

New Plant Costs (\$M)	EPCM Cost % of Total New Plant Costs
\$200	2.0%
\$250	1.6%
\$300	1.3%
\$350	1.1%
\$400	1.0%

GPA has projected initial commissioning of the new power plant for late 2021 and full commissioning by 2022. And the funding source was identified to be the Cabras 3&4 Insurance Proceeds and 2014 Bond Funds – LNG Initial Startup

The Commission asked up to what phase will this increase take the project to and in response management said this action will cover future phases up to commissioning and will include pipeline, tanks and collateral equipment.

Comm. Sanchez motioned to approve resolution 2018-25 second by Comm. Guthertz. There was no further discussion or objection and the motion carried.

5.1.6 Resolution 2018-26 Authorizing Purchase of Three (3) Bucket Trucks

If approved, this resolution will allow the retirement of aged bucket trucks (see list below) and to provide reliable equipment to allow line crews to conduct repairs and maintenance on the transmission and distribution system in an efficient and cost effective manner. Unreliable equipment translates to extended outages and longer response times.

Official #	Equipment Number	Year	Replacement Age	Type	Make/Model	Vin/Serial Number
4661	132652	1995	23	Bucket Truck	INTERNATIONAL, 4700	1HTSCABP8SH625205
5058	132601	1998	20	Bucket Truck	IHC, 4700 MAT'L HANDLR,42'	1HTSCABN2WH519157
4577	2713119	2006	15	Flatbed	INTERNATIONAL 4x2/65	1HTMKAAN07H395047

The cost for (3) 55' bucket trucks is \$771,897 with funding source being the FY19 General Plant Capital Improvement Project. There were 2 bidders and of the two, Morrico Equipment was deemed to be most prudent and economical. Delivery is set at 360-days after notice to proceed.

In discussion it was mentioned that this purchase will increase GPA's bucket truck inventory to 25. GM Benavente said that expedient storm recovery is dependent on the number of trucks available. This will make it easy to get human help from CNMI and other region utilities and will significantly shorten the timeframe for recovery after a storm. Chairman Duenas agreed that asset management is necessary and supports this resolution.

Comm. Sanchez motioned to approve resolution 2018-26 second by Comm. Santos. There was no further discussion or objection and the motion passed unanimously.

6. ANNOUNCEMENTS

6.1 Next CCU Meetings

The Chairman announced that the next meeting would be a GWA work session on Nov. 13; a GPA Work Session on Nov. 15 and the regular CCU meeting on Nov. 20.

He also announced that there are personnel and litigation matters for discussion in Ex. Session and announced a 5-minute recess before start of session. It was 6:10 p.m.

7. EXECUTIVE SESSION

7.1 Personnel Matter

7.2 Litigation Matter

Both matters noted above werediscussed in executive session. At 6:30 p.m. meeting was moved back to regular session and Chairman Duenas said he would entertain a motion.

Comm. Sanchez motioned to approve GWA Resolution 01-FY2019 as discussed in executive session second by Comm. Santos. There was no further discussion or objection and the motion passed.

For the record GWA Resolution 01-FY2019 was relative to a government claim and because of possible litigation was discussed in Executive Session and not listed under New Business in the Agenda.

8. ADJOURNMENT

With nothing further to discuss, the meeting adjourned at 6:40 p.m.

\\s\\

Bls

Attested:



JOSEPH T. DUENAS, Chairman



J. GEORGE BAMBA, Secretary