

# CONSOLIDATED COMMISSION ON UTILITIES

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

## **GUAM WATERWORKS AUTHORITY WORK SESSION**

CCU Conference Room 11:30 a.m., July 19, 2017

## **AGENDA**

## 1. ISSUES FOR DECISION

- 1.1 Relative to the Approval of the GPWA Zero Tolerance Drug Policy / Resolution No. 42-FY2017 (GPA Resolution No. 2017-29)
- 1.2 Relative to Increase Funding to Yigo and Astumbo Reservoir Construction Management Contract / Resolution No. 43-FY2017
- 1.3 Relative to Approval of the Route 2 Sewer Line Replacement Project with ProPacific Builders Corp. / Resolution No. 44-FY2017
- 1.4 Relative to Contract Approval for On-Site Representative/CM for the Umatac-Merizo WWTP Design Build Project / Resolution No. 45-FY2017
- 1.5 Relative to Change Order Approval to the D-Series Well Rehabilitation Project / Resolution No. 46-FY2017
- 1.6 Relative to Contract Approval for Design Services to the Northern District WWTP Secondary Treatment Upgrades / Resolution No. 47-FY2017
- 1.7 Relative to Increase Funding to the Agat-Santa Rita WWTP Construction Management Contract / Resolution No. 48-FY2017
- 1.8 Relative to Ratifying the Expenditures for the First Three Years of the Chlorine Contract in the Amount of \$2,258,853.00 and Approving the First One Year Contract Extension with Island Equipment Company for the Purchase of Liquid Chlorine / Resolution No. 49-FY2017
- 1.9 Relative to Approval of the Contract with JMI-Edison for the Additional Purchase of Membrane Modules (Filters) for the Ugum Water Treatment Plant / Resolution No. 50-FY2017
- 1.10 Relative to Authorizing the Refunding of the 2010 Series Guam Waterworks Authority Water and Wastewater System Revenue Bonds, Approving Forms of Related Documents, Agreements, and Actions, and Authorizing the Execution and Delivery Thereof / Resolution No. 51-FY2017

## 2. GM REPORT

## 3. ISSUES FOR DISCUSSION

## 4. DIVISION REPORTS

- 4.1 Communications
- 4.2 Compliance & Safety
- 4.3 Customer Service
- 4.4 Engineering
- 4.5 Finance
- 4.6 Operations

## 5. ANNOUNCEMENTS

5.1 Next CCU Meetings: GPA Work Session: 7/20/17; CCU Meeting: 7/25/17

## 6. ADJOURNMENT



Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913 Tel: (671) 300-6846

## **Issues for Decision**

## Resolution No. 43-FY2017

Relative to Increase Funding for the Yigo and Astumbo Reservoir Construction Management Contract

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

The objective of the funding increase is to provide for the additional construction management services specific to the new Yigo No. 3 reservoir which will be captured in a proposed Change Order No. 2. The reason a funding increase was needed is GWA management executed Change No. 1 to Pernix Guam, LCC's contract which "advanced" the construction of Yigo No. 3 reservoir and its associated work, in order to realize economies of scale resulting in overall cost reduction for the construction work. Construction of Yigo No. 3 was to potentially occur at a later phase once Yigo No. 1 was completed. The CM services for Yigo No. 3 was not taken into account in the initial Construction Management (CM) services scope thus GWA negotiated with its construction manager, GHD, to continue CM services for the Yigo No. 3 reservoir.

## Where is the project located?

The CM services will be at the Yigo water reservoir site along Route 1 near the entrance to Anderson Air Force Base, Yigo.

## How much will it cost?

Given there is still a balance in the current contingency fund, the additional funding increase request is Two Hundred Ninety Three Thousand Six Hundred Ninety One Dollars (\$293,691.00). GWA management also seeks a ten percent (10%) contingency to the additional fund request of Twenty Nine Thousand Three Hundred Sixty Nine Dollars and Ten Cents (\$29,369.10), to bring the additional total fund request to Three Hundred Twenty Three Thousand Sixty Dollars and Ten Cents (\$323,060.10).

With this funding increase on top of the original approval of One Million Five Hundred Twenty Six Thousand Seven Hundred Eighty Dollars and Twenty Cents (\$1,526,780.20), the increased funding total for the CM services is One Million Eight Hundred Forty Nine Thousand Eight Hundred Forty Dollars and Thirty Cents (\$1,849,840.30).

## When will it be completed?

The CM services will continue up until July 2018.

## What is the funding source?

The funding for this project will be from the bond funds under the line item - PW 09-11 "Water System Reservoirs 2005 Improvements" and PW 12-05 "Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1".

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## CONSOLIDATED COMMISSION ON UTILITIES

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

## RESOLUTION NO. 43-FY2017

## RELATIVE TO INCREASE FUNDING FOR THE YIGO AND ASTUMBO RESERVOIR CONSTRUCTION MANAGEMENT CONTRACT

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

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

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

WHEREAS, the CCU passed Resolution No. 53-FY2016 on August 23, 2016 that approved Pernix Guam, LLC to construct the new Yigo No. 1 reservoir, new Astumbo No. 1 reservoir, and new Yigo Elevated booster pump station after which the Notice to Proceed was issued on December 2, 2016; and

WHEREAS, GWA management subsequently executed Change No. 1 to Pernix Guam, LCC that advanced the construction of Yigo No. 3 reservoir and its associated work which was stipulated in the construction contract to potentially occur as a later phase once Yigo #1 reservoir was completed; and

WHEREAS, the advancement of the construction of the new Yigo #3 reservoir was not taken into account in the initial Construction Management (CM) services scope thus GWA negotiated with GHD to continue CM services for the Yigo No. 3 reservoir in the amount of

Three Hundred Ninety Seven Thousand Five Hundred Sixty Six Dollars (\$397,566.00) (see EXHIBIT A); and

WHEREAS, GWA has already executed one Change Order to the Construction Manager contact which leaves a balance in the contingency of approximately One Hundred Three Thousand Eight Hundred Seventy Five Dollars (\$103,875.00); and

WHEREAS, GWA management seeks CCU approval of the increase in funding, on top of current available contingency fund, for the additional CM services in the amount of Two Hundred Ninety Three Thousand Six Hundred Ninety One Dollars (\$293,691.00); and

WHEREAS, as this increase is actually required for planned future construction, and not an unplanned need, GWA management seeks CCU approval of a ten percent (10%) contingency to the additional fund request of Twenty Nine Thousand Three Hundred Sixty Nine Dollars and Ten Cents (\$29,369.10), to bring the additional fund request to Three Hundred Twenty Three Thousand Sixty Dollars and Ten Cents (\$323,060.10); and

WHEREAS, CCU Resolution No. 02-FY2015 (see EXHIBIT B) approved the original funding total of One Million Five Hundred Twenty Six Thousand Seven Hundred Eighty Dollars and Twenty Cents (\$1,526,780.20) for the construction management services of the Yigo No. 1 reservoir, Astumbo No. 1 reservoir, Yigo Elevated booster pump station and associated work; and

**WHEREAS**, GWA management seeks CCU approval of the increased funding total of One Million Eight Hundred Forty Nine Thousand Eight Hundred Forty Dollars and Thirty Cents (\$1,849,840.30); and

WHEREAS, funding for this project will be from the bond funds under the line item - PW 09-11 "Water System Reservoirs 2005 Improvements" and PW 12-05 "Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1"; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities 1 does hereby approve the following: 2 3 1. The recitals set forth above hereby constitute the findings of the CCU. 4 2. The CCU finds that the terms of the fee proposal submitted by GHD are fair 5 and reasonable. 6 3. The CCU finds that the terms of the conditions set by GWA relative to 7 commencement of subsequent work activities are fair and reasonable and 8 serve as a measure of Quality Assurance/Quality Control (QA/QC). 9 4. The CCU hereby approves the funding increase of Three Hundred Twenty 10 Three Thousand Sixty Dollars and Ten Cents (\$323,060.10) for the 11 construction management of Yigo No. 3 reservoir and its associated work. 12 5. The CCU hereby approves total authorized funding amount to One Million 13 Eight Hundred Forty Nine Thousand Eight Hundred Forty Dollars and Thirty 14 Cents (\$1,849,840.30), which includes the original approve funding. 15 6. The source of funding for the additional CM services will be from the bond 16 funds under the line item - PW 09-11 "Water System Reservoirs 2005 17 Improvements" and PW 12-05 "Tank Major Repair Yigo #1, Mangilao #2, 18 Astumbo #1". 19 20 **RESOLVED**, that the Chairman certified and the Board Secretary attests to the adoption 21 of this Resolution. 22 23 **DULY AND REGULARLY ADOPTED**, this 25<sup>th</sup> day of July 2017. 24 25 Certified by: Attested by: 26 27 28 **JOSEPH T. DUENAS** J. GEORGE BAMBA 29 Chairperson Secretary 30 31 32 3

1 2 3 4		I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:  The foregoing is a full, true and accurate copy of the resolution duly adopted at a regula meeting by the members of the Guam Consolidated Commission on Utilities, duly an legally held at a place properly noticed and advertised at which meeting a quorum was
5		present and the members who were present voted as follows:
7		AYES:
9		NAYS:
10		ABSTENTIONS:
11		ABSENT:
13		
14		
15	///	
16 17		
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## Exhibit A (1 of 14)

February 3, 2017

Mr. Tom Cruz , P.E. Chief Engineer Guam Waterworks Authority Gloria B. Nelson Public Service Building 688 Route 15 Mangilao, Guam 96913

RE: Change Proposal 02 (CP-2) for Construction Management Services for PW12-05 GWA Yigo and Astumbo Replacement Reservoirs, GWA Project W13-001-BND Additional CM Services for Yigo No. 2 Reservoir Construction

Dear Mr. Cruz:

GHD is pleased to submit this proposal for an amendment to our Scope of Work and Fee for the above referenced project. This scope of work defines the construction management services that will be provided by GHD Inc. and their subconsultants for additional CM service for construction of Yigo No. 2 Reservoir. The additional scope for **CP-02** as discussed with GWA is detailed below. The original project scope will be changed on a lump sum basis per the fees in the table below.

## **SCOPE OF WORK**

**General:** GHD shall provide additional Construction Management (CM) Services for a six (6) month period, from December 5, 2017 to June 5, 2018, with final completion and closeout services to July 30, 2018 in conjunction with GWA's contract modification to construct Yigo Reservoir No. 2. The original contract completion date for CM services was for twelve (12) months after the notice to proceed for the contractor on December 5, 2016. The July 30, 2018 completion date is taken from the Contract Change Request No. 1 from Pernix.

**Details:** The Scope of Work will provide an extension of the construction phase tasks provided in the original Scope of Work that relate to the construction of Yigo Reservoir No. 2. See attached Fee Proposal for QA testing and survey service to be included.

## **Data and Assumptions:**

a. These CM Services are being provided for the construction of improvements shown on the construction plans and include in the bid schedule that was awarded to Pernix, including Tank No. 2. If additional improvements are added to the construction contract then the fees for additional CM Services will be negotiated with GWA.

Page 1 of 2



# Exhibit A (2 of 14)

- b. It is understood that the intent is for GHD to provide six (6) consecutive months (126 work days or 182 calendar days) of Resident Engineer (RE)/Project Manager (PM) services and six (6) consecutive months of full time onsite inspection. An additional full time onsite inspector is anticipated for an estimated period of two months when both Yigo 1 and Yigo 2 are under construction. RE/PM services have been estimated at 20 hours per week. This is based upon a standard 40 hour work week.
- c. GWA agrees to negotiate with GHD for change orders for additional construction phase services due to construction delays, additional work for substantial completion beyond June 5, 2018 and final completion beyond July 30, 2018, adverse weather delays, or any other reason not due to the negligent acts of GHD until final acceptance of the project is achieved.

## Our lump sum fees are summarized in the following Fee Schedule:

## FEE SCHEDULE FOR ADDITIONAL CONSTRUCTION MANAGEMENT SERVICES

TASKS	TOTALS
Original Contract Amount	\$1,387,982
Contract Amount with CO #1	\$1,422,905
Yigo No. 2 Construction Phase CM Services	\$381,663
SUBTOTAL COST	\$381,663
GUAM GRT (at 4.167%)	\$15,904
TOTAL CHANGE PROPOSAL COST	\$397,566

<sup>\*</sup> Work which exceeds the scope of this proposal will be brought to your attention for review, approval and fee adjustment. Such extra services, will be performed on a time and materials basis (per our Fee Schedule in effect at the time services are performed), or for a mutually agreed upon lump sum. Work performed will be billed monthly based on estimated percent complete. Payment is due within 30 days of receipt and acceptance of the invoice. We stand ready to provide the professional services necessary to assist GWA in this endeavor.

Sincerely,

Aaron Sutton

Construction Manager

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Attachments: GHD Change Proposal Fee dated 02/01/17

Cc: file

CHANGE PROPOSAL 2 2-01-2017 Exhibit A (3 of 14) GWA Yigo Tank 2 CM

Phase Letter and Task Number	Task Description	Principal Engineer (Paul/Jeff)	PM/Resident Engineer (Bryan/Aaron)	Asst. PM (Aaron)	Prestress Structural Specialty (Eric Magee)	Civil Engineer/CQA (Briankeith/Andre)	Structural/Special Inspector (Briankeith/Andre)	SR Electrical Engineer (EMCE)	Electrical Engineer (EMCE)	CM Safety Officer (Mark)	Civil Inspector/Structural (Briankeith/Andre)	Civil Inspector (Peter/Paul)	Electrical Inspector (EMCE)	P6 Scheduler (Larry Matson)	Submittal/RFI Manager (Briankeith/Andre)	Estimating Support (Emile Roux of RLB)	Project Manager Ass't (Bobbie)	Admin (Bobbie)	Amount
	HOURLY LABOR RATES	245	205	160	165	110	110	160	125	95	115.6	90.6	125	150	90	110	60	60	
А	PRECONSTRUCTION PHASE TASKS																		
L.,	0 1 1 1 1																		
A1 A2	Construction Management Plan	-	-	-	-							-	-				-	-	
A2 A3	Constructability Review (90% (x2) & Final) Value Engineering (90% (x2) & Final)	-	-	-			-	-	-			-	-				-	-	
	Biddability Review & Contract Bidding (90% (x2))	-	-	-		-	_	-				-	-					-	
A4	Biddability Review & Contract Bidding (90 % (X2))		-																
	PRECONSTRUCTION PHASE HOURS SUBTOTAL	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	
	PRECONSTRUCTION PHASE SUBTOTAL  PRECONSTRUCTION PHASE SUBTOTAL	-	-	-		-	-	-		-	-			-	-	-	-	-	
-	PRECONSTRUCTION PHASE SUBTOTAL  PRECONSTRUCTION PHASE EXPENSES SUBTOTAL	_					_			_	_			_	_	_		-	
	PRECONSTRUCTION PHASE EXPENSES SUBTOTAL  PRECONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	-	-	-	_	-	-	-		-	-	_	_	-	_	-	_	-	
	PRECONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	_		_	-				-	_	_			_	_	_			
	CONSTRUCTION PHASE TASKS																		
	Implement & Maintain Project Controls																		
	Project Correspondence (see Task B2.1 to 2.4)																		
B2.1	Daily Construction Reports (assumes 5 days/wk @ 26 wks = 130 logs)	-	33	65							45	167					-	8	37,977
B2.2	Material Testing Logs		5	52							13	13	13				-	23	15,031
B2.3	Progress Photo Log																-	-	
B2.4	Videography & Live Video Feed										26							20	4,206
	Submittals & Shop Drawings (assumes 200)			40	8		25		20		25	65			200			1	39,809
B3.1	Contractor Project Schedules (assumes 6 ea.)		4	7										50					9,440
B3.2	CM Master project Schedule	3	3	4										8					3,190
B4.0	Payment Requests (assumes 6)		-	12													-		1,920
B4.1	Payroll Reports (assumes 6)			3								6					-		1,024
B5.0	Project Meetings (see tasks B5.1 to B5.4)											_							440
B5.1	Pre-construction Conference	- 45	-	-					- 1^	<b></b>	2	2	40				-		412
B5.2 B5.3	Progress Meetings (26 x 2 hours each plus prep & minutes) As-built Drawing Reviews	15	36	60				8	13		26	52 12	13						32,902 1.337
		_		12				2	2			12	- 2				-		4,700
B5.4 B6.0	Other Meetings (assumes 6 total @ 2.0 hrs ea)  Request for Information (assumes 37 RFIs at 2 hours each)	4	6	45	4		8	2	4			-	- 4		50				16,680
B6.0 B7.0	General Compliance Monitoring	4	4	45	4		8	4	4			-	4		50				10,000
B7.0 B7.1	Labor Laws (see Task B4.1)											<b>-</b>							
B7.1	Permit Compliance																		
B7.2	Insurance (see Task A5)																-		
B8.0	Claims and Disputes (see Tasks B8.1 to B8.7)																		
B8.1	Claim Records (assumes 3 potential claim incidents)																		
B8.2	Claims Reviews & Interpretations	5	4	20	4		4	2	2								_		6,915
B8.3	Change Order Review (assumes 3 CO's)	5	4	20					2							50			10.995
B8.4	Design Changes (assumes 1 design changes)	-	4	15		12	12		4										6,360
B8.5	Design Change/Verification Request (DCVR)	3	4	10													-		3,155
B8.6	Change Order Negotiation with Contractor	5		20															5,245
B8.7	Change Order Documents (see task 9.0)	Ť																	2,210
	Project Records & Document Management/Communication																-	-	
	Construction Inspection and Quality Control Monitoring																		

Estimate 1 of 12

CHANGE PROPOSAL 2 2-01-2017 Exhibit A (4 of 14) GWA Yigo Tank 2 CM

Phase Letter and Task Number	Task Description	Principal Engineer (Paul/Jeff)	PM/Resident Engineer (Bryan/Aaron)	Asst. PM (Aaron)	Prestress Structural Specialty (Eric Magee)	Civil Engineer/CQA (Briankeith/Andre)	Structural/Special Inspector (Briankeith/Andre)	SR Electrical Engineer (EMCE)	Electrical Engineer (EMCE)	CM Safety Officer (Mark)	Civil Inspector/Structural (Briankeith/Andre)	Civil Inspector (Peter/Paul)	Electrical Inspector (EMCE)	P6 Scheduler (Larry Matson)	Submitta/IRFI Manager (Briankeith/Andre)	Estimating Support (Emile Roux of RLB)	Project Manager Ass't (Bobbie)	Admin (Bobbie)	Amount
B10.1	Onsite Inspector (assumes 1500 hr, 1/2 time for RE & Asst. RE)		17	50				3	4	26	360	522	20					27	107,782
B10.2	Special Inspections						118												12,980
B10.3	Testing																		
B10.3.1	Contractor Testing (part of Task B10.1)								2				2						500
B10.3.2	CM/CQA Testing (also see expenses)	1				-						-	_						
B10.3.3	GWA Testing (part of Task B10.1)	1																	
B10.3.4	Acceptance (part of Task B10.1)								2				8						1,250
	Construction QA Survey Services (also see expenses)								_			20							1.812
	Project Closeout	+										20							1,012
B12.1		_	4	12					2				2						3,240
B12.1		+	4	8							12	12	8						5,574
	Training and Warranty Periods	+	- 4	0							12	12	0						5,574
			4								20								3.772
B13.1	Training		4	4							20								
B13.2	Warranties		1	1						بـــــــا	L.,	4 400					-		365
		Sum PM/	RE Hours	600					Su	ım Inspecto	or Hours:	1,400							
	CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	44	141	460	16	12	167	19	57	26	529	871	72	58	250	50	-	79	
	CONSTRUCTION PHASE SERVICES SUBTOTAL	10,780	28,803	73,520	2,640	1,320	18,370	3,040	7,125	2,470	61,152	78,913	9,000	8,700	22,500	5,500	-	4,740	338,573
	CONSTRUCTION PHASE EXPENSES SUBTOTAL																		43,090
	CONSTRUCTION PHASE SERVICES & EXPENSES TOTAL	10,780	28,803	73,520	2,640	1,320	18,370	3,040	7,125	2,470	61,152	78,913	9,000	8,700	22,500	5,500	-	4,740	381,663
С	POST CONSTRUCTION SERVICES																		
C1	Final Report	-	-	-								-					-	-	•
C2	Record Drawings	+																	
- 02	I Coord Didwings	1		-								-							
	POST CONSTRUCTION PHASE SERVICES HOUR SUBTOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	POST CONSTRUCTION PHASE SERVICES SUBTOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	POST CONSTRUCTION PHASE EXPENSES SUBTOTAL																		
	SUBTOTAL POST CONSTRUCTION SERVICES	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ALL	SUBTOTAL HOURS	44	141	460	16	12	167	19	57	26	529	871	72	58	250	50	-	79	
ALL	SUBTOTAL																		381,663
ALL	GRT AT 4.167%																		15,904
ALL	GRAND TOTAL																		397,566
		-1								1					1				55.,500

Estimate 2 of 12

# Exhibit A (5 of 14)

GHD - PROJECT EST	IMATING S	SHEET- GH	D EXPENS	SES	
Project Name: GWA Construction of Yigo Reservoir GHD Project Number: 8411481 Prepared by: Aaron Sutton	- CM Services	s Change Prop	osal 2	Attachment: of: Checked by: Date:	Bryan Ryley 1/31/2017
EXPENSE ITEM	QUANTITY	UNIT COST	AMOUNT	MARKUP	TOTAL
PRECONSTRUCTION PHASE TASKS					
Report Reproduction, misc.	0	750	0	0	0
SUBTOTAL		750	0	0	0
CONSTRUCTION PHASE TASKS		730	U	0	U
Mileage (0.52/mile)	18750	0.52	9,750	1,463	11,213
Report Reproduction, misc	1	375	375	56	431
Live Video feed, website access & maintenance (6 months)	6	173	1,035	155	1,190
CQA Compaction Testing	1	1,965	1,965	295	2,259
CQA Concrete Testing	1	10,065	10,065	1,510	11,575
CQA Survey Verification	1	14,280	14,280	2,142	16,422
SUBTOTAL		26,858	37,470	5,620	43,090
POST CONSTRUCTION SERVICES					
SUBTOTAL			0	0	
TOTAL		27,608	37,470	5,620	43,090

# Exhibit A (6 of 14)

GHD - PROJECT ESTIMATING SHEE	CT - GHD QA SERVICE	S SUMMARY	
Project Name: GWA Construction of Yigo Reservoir - CM Ser	rvices Change Proposal 2	Attachment:	
GHD Project Number: 8411481		of:	
Prepared by: Aaron Sutton		Checked By:	
		Date:	1/31/2017
QA SURVEY ESTIMATE			
<u>Under Tank Piping:</u>	<u>Quantity</u>		
Inlet Piping & Top of Flange	\$800		
Outlet Piping & Top of Flange	\$800		
Over-Flow Piping & Top of Flange	\$800		
Drain Line Piping & Top of Flange	\$800		
Wash Down Piping	\$800		
Ring Drain, high points and outlets	\$1,200		
Over Excavation:			
Bottom of Over Excavation	\$800		
Top of Type G - Fine Aggregate	\$1,200		
Top of Type H - Drian Rock	\$1,200		
Top of Type II Blian Rook	Ψ1,200		
Tank Foundation:			
Top of Formwork	\$800		
Pump House Foundation:			
Top of Formwork	\$0		
·			
Generator Bldg Foundation:			
Top of Formwork	\$0		
Overflow Manhole:			
Below Base	\$0		
Top of Manhole	\$0		
Bottom of Overfow Pipe	<b>\$</b> 0		
	, -		
Detention Basin:			
Bottom of Pond	\$0		
Vaults:			
Top Outlet Vault #1 Footing Formwork	\$0		
Top Outlet Vault #1 Roof Slab Formwork	\$0		
Top Outlet Vault #2 Footing Formwork	\$0		
Top Outlet Vault #2 Roof Slab Formwork	\$0		
Top Drain Vault #1 Footing Formwork	<b>\$</b> 0		
Top Drain Vault #1 Roof Slab Formwork	\$0 \$0		
Top Inlet Vault #1 Footing Formwork	\$0 \$0		
Top Inlet Vault #1 Roof Slab Formwork	\$0 \$0		
Top Inlet Vault #2 Poof Slab Formwork	\$0 \$0		
Top Inlet Vault #2 Roof Slab Formwork	\$0 \$0		
Top Inlet Meter Vault Footing Formwork	\$0 \$0		
Top Inlet Meter Vault Roof Slab Formwork	\$0 ***		
Top Inlet/Outlet Meter Vault Footing Formwork	<b>\$</b> 0		
Top Inlet/Outlet Meter Vault Roof Slab Formwork	\$0		
Top Electrical Handholds	\$800		
Top Communication Handholds	\$800		

# Exhibit A (7 of 14)

Paveme	nt:
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Ribbon Gutter Formwork \$800 Pavement Formwork \$800

## Bench Marks:

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

Contingency 5% \$680

TOTAL ESTIMATED BUDGET \$14,280

Rate

 Half Day
 \$800

 Full Day
 \$1,200

 Hourly
 \$150

## **CQA TESTING ESTIMATE**

## **Material Labratory Testing:**

Overflow Manhole Below Base

Outlet Vault #1

First Lift

Middle

Last

**Below Foundation** 

Procotor & Seive Analysis:	Unit Cost	Quantity	<u>Cost</u>
Type - G Crushed Aggregate	\$295.00	0	\$0.00
Type - H Drain Rock	\$295.00	0	\$0.00
Type - E Pea Gravel	\$295.00	0	\$0.00
Type - I Backfill Material	\$295.00	0	\$0.00
Compaction Testing:			
Over-Excavation:			
Bottom of Over-Excavation	\$74.00	1	\$74.00
Type G - Crushed Aggregate	\$74.00	5	\$370.00
Top of Type H - Drian Rock	\$340.00	1	\$340.00
Type-E Certificate of Observation	\$340.00	1	\$340.00
Pump House:			
Foundation	\$74.00	0	\$0.00
Generator Bldg:			
Foundation	\$74.00	0	\$0.00

\$55.00

\$55.00

\$55.00

\$55.00

\$55.00

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0

0

\$0.00

\$0.00

\$0.00

\$0.00

\$0.00

# Exhibit A (8 of 14)

	TOTA	AL ESTIMATED BU	IDGET:	\$1,964.60
		Contingency	10%	\$178.60
ravement	φ/4.UU	۷		φ148.00
Pavement	\$74.00 \$74.00	1 2		\$74.00 \$148.00
Pavement: Ribbon Gutter	¢74.00	4		¢74 00
Dovement				
Last	\$55.00	1		\$55.00
Middle	\$55.00	1		\$55.00
First Lift	\$55.00	1		\$55.00
Below Foundation	\$55.00	1		\$55.00
Communications Handholes (estimated)				
Last	\$55.00	1		\$55.00
Middle	\$55.00	1		\$55.00
First Lift	\$55.00	1		\$55.00
Below Foundation	\$55.00	1		\$55.00
Electrical Handholes (estimated)	_			
Last	\$55.00	0		\$0.00
Middle	\$55.00	0		\$0.00
First Lift	\$55.00	0		\$0.00
Below Foundation	\$55.00	0		\$0.00
Inlet/Outlet Meter Vault	<b>#</b> FF 00	^		<b>#</b> 0.00
In Indian Control Markon Van U				
Last	\$55.00	0		\$0.00
Middle	\$55.00	0		\$0.00
First Lift	\$55.00	0		\$0.00
Below Foundation	\$55.00	0		\$0.00
Inlet Meter Vault				
Last	\$55.00	U		\$0.00
		0		
Middle	\$55.00 \$55.00	0		\$0.00
First Lift	\$55.00 \$55.00	0		\$0.00
Below Foundation	\$55.00	0		\$0.00
Inlet Vault #2				
Last	\$55.00	0		\$0.00
Middle	\$55.00	0		\$0.00
First Lift	\$55.00	0		\$0.00
Below Foundation	\$55.00 \$55.00	0		\$0.00
Inlet Vault #1	<b>¢</b> EE 00	0		<b>ድ</b> ስ ስስ
	Ψ00.00	J		ψ0.00
Last	\$55.00	0		\$0.00
Middle	\$55.00	0		\$0.00
First Lift	\$55.00	0		\$0.00
Below Foundation	\$55.00	0		\$0.00
Drain Vault #1				
Last	\$55.00	0		\$0.00
Middle	\$55.00	0		\$0.00
First Lift	\$55.00	0		\$0.00
	\$55.00			\$0.00

# Exhibit A (9 of 14)

Rate 055			
1st Test \$55 2nd Test \$19			
\$74			
***			
Concrete Testing:			
Concrete resting.			
Outlet Vault #1:	Unit Cost	<b>Quantity</b>	<u>Cost</u>
Footing	\$305.00	0	\$0.00
Walls	\$305.00	0	\$0.00
Roof Slab	\$305.00	0	\$0.00
Outlet Vault #2:			
Footing	\$305.00	0	\$0.00
Walls	\$305.00	0	\$0.00
Roof Slab	\$305.00	0	\$0.00
<u>Drain Vault #1:</u>			
Footing	\$305.00	0	\$0.00
Walls	\$305.00	0	\$0.00
11.07			
Inlet Vault #1:	¢205.00	0	<b>\$0.00</b>
Footing	\$305.00	0	\$0.00
Walls Roof Slab	\$305.00 \$305.00	0 0	\$0.00 \$0.00
Rooi Siab	φ305.00	U	φυ.υυ
Inlet Vault #2:			
Footing	\$305.00	0	\$0.00
Walls	\$305.00	0	\$0.00
Roof Slab	\$305.00	0	\$0.00
Inlet Meter Vault:			
Footing	\$305.00	0	\$0.00
Walls	\$305.00	0	\$0.00
Roof Slab	\$305.00	0	\$0.00
Inlet/Outlet Meter Vault:			
Footing	\$305.00	0	\$0.00
Walls	\$305.00	0	\$0.00
Roof Slab	\$305.00	Ö	\$0.00
_ ,			
Encasement:	<b>#205.00</b>	4	<b>#205.00</b>
Inlet Piping	\$305.00	1	\$305.00
Outlet Piping	\$305.00	1	\$305.00 \$305.00
Over-Flow Piping	\$305.00 \$305.00	1	\$305.00
Drain Line Piping	\$305.00 \$305.00	1	\$305.00
Wash Down Piping	\$305.00	1	\$305.00 \$305.00
Electrical & Communications	\$305.00	1	\$305.00
<u>Handholds:</u>			
Electrical	\$305.00	1	\$305.00
Communications	\$305.00	1	\$305.00

# Exhibit A (10 of 14)

Pavement:				
Ribbon Gutter	\$305.00	1		\$305.00
Pavement	\$305.00	2		\$610.00
Pump House:				
Footing	\$305.00	0		\$0.00
Walls	\$305.00	0		\$0.00
Roof Slab	\$305.00	0		
Rooi Siab	\$305.00	U		\$0.00
Generator Building:				
Footing	\$305.00	0		\$0.00
Walls	\$305.00	0		\$0.00
Roof Slab	\$305.00	0		\$0.00
Water Tank:				
Foundation	\$305.00	1		\$305.00
Core Walls (7 ea.)	\$305.00	7		\$2,135.00
Columns (4 ea.)	\$305.00	4		\$1,220.00
Column Footings (4 ea.)	\$305.00 \$305.00			
• , ,	*	4		\$1,220.00
Roof Slab	\$305.00	1		\$305.00
Shotcrete	\$305.00	<u>2</u>		\$610.00
		Contingen	cy 10%	\$915.00
DESCRIPTION OF TESTS:	тот	TAL ESTIMATE	D BUDGET:	\$10,065.00
DESCRIPTION OF TESTS:  Compressive Strength of Cylindrical Cond			D BUDGET:	-
Compressive Strength of Cylindrical Cond	crete Specimens (4 a	at \$17.00 ea.):	O BUDGET:	\$68.00
Compressive Strength of Cylindrical Conc Curing and Disposal of Cylindrical Concre	crete Specimens (4 a	at \$17.00 ea.): ut test, each:		\$68.00 \$12.00
Compressive Strength of Cylindrical Conc Curing and Disposal of Cylindrical Concre Air Content of Freshly Mixed Concrete by	crete Specimens (4 a ete Specimens witho the Pressure/Volum	at \$17.00 ea.): ut test, each:		\$68.00 \$12.00 \$50.00
Compressive Strength of Cylindrical Conc Curing and Disposal of Cylindrical Concre Air Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete,	crete Specimens (4 a ete Specimens witho the Pressure/Volum each:	at \$17.00 ea.): ut test, each: etric Method, pe		\$68.00 \$12.00 \$50.00 \$50.00
Compressive Strength of Cylindrical Conc Curing and Disposal of Cylindrical Concre Air Content of Freshly Mixed Concrete by	crete Specimens (4 a ete Specimens witho the Pressure/Volum each:	at \$17.00 ea.): ut test, each: etric Method, pe	r test:	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00
Compressive Strength of Cylindrical Conc Curing and Disposal of Cylindrical Concre Air Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete,	crete Specimens (4 a ete Specimens witho the Pressure/Volum each:	at \$17.00 ea.): ut test, each: etric Method, pe		\$68.00 \$12.00 \$50.00 \$50.00 \$125.00
Compressive Strength of Cylindrical Conc Curing and Disposal of Cylindrical Concre Air Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete,	crete Specimens (4 a ete Specimens witho the Pressure/Volum each:	at \$17.00 ea.): ut test, each: etric Method, pe	r test:	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00
Compressive Strength of Cylindrical Conc Curing and Disposal of Cylindrical Concre Air Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimen	crete Specimens (4 a ete Specimens witho the Pressure/Volum each:	at \$17.00 ea.): ut test, each: etric Method, pe	r test:	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00
Compressive Strength of Cylindrical Conc Curing and Disposal of Cylindrical Concre Air Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimen QA SPECIAL INSPECTIONS  Special Inspections:	crete Specimens (4 a ete Specimens witho the Pressure/Volum each: ns in the field (2.5 Ho	at \$17.00 ea.): ut test, each: etric Method, pe ours of Labor):	r test: SUBTOTAL	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 .: <b>\$305.00</b>
Compressive Strength of Cylindrical Conc Curing and Disposal of Cylindrical Concre Air Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimer  QA SPECIAL INSPECTIONS  Special Inspections:  Outlet Vault #1:	crete Specimens (4 a ete Specimens witho the Pressure/Volum each: ns in the field (2.5 Ho	at \$17.00 ea.): ut test, each: etric Method, pe ours of Labor):  Quantity	r test: SUBTOTAL  Amount	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 : \$305.00
Compressive Strength of Cylindrical Conce Curing and Disposal of Cylindrical Concretair Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimer   QA SPECIAL INSPECTIONS  Special Inspections:  Outlet Vault #1: Footing	crete Specimens (4 a sete Specimens without the Pressure/Volumeach: as in the field (2.5 House)  Unit hours	et \$17.00 ea.):  ut test, each: etric Method, pe  ours of Labor):   Quantity 0	r test:  SUBTOTAL  Amount 110	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 : \$305.00
Compressive Strength of Cylindrical Conce Curing and Disposal of Cylindrical Concre Air Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimer  QA SPECIAL INSPECTIONS  Special Inspections:  Outlet Vault #1: Footing Walls	crete Specimens (4 a ete Specimens witho the Pressure/Volum each: ns in the field (2.5 Ho	at \$17.00 ea.): ut test, each: etric Method, pe ours of Labor):  Quantity	r test:  SUBTOTAL  Amount 110 110	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 : \$305.00
Compressive Strength of Cylindrical Conce Curing and Disposal of Cylindrical Concretair Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimer   QA SPECIAL INSPECTIONS  Special Inspections:  Outlet Vault #1: Footing	crete Specimens (4 a sete Specimens without the Pressure/Volumeach: as in the field (2.5 House)  Unit hours	et \$17.00 ea.):  ut test, each: etric Method, pe  ours of Labor):   Quantity 0	r test:  SUBTOTAL  Amount 110	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 : \$305.00
Compressive Strength of Cylindrical Concocuring and Disposal of Cylindrical Concretair Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimer  QA SPECIAL INSPECTIONS  Special Inspections:  Outlet Vault #1: Footing Walls Roof Slab	crete Specimens (4 a sete Specimens withouthe Pressure/Volumeach: as in the field (2.5 House)  Unit hours hours	et \$17.00 ea.):  ut test, each: etric Method, pe  purs of Labor):	r test:  SUBTOTAL  Amount 110 110	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 : <b>\$305.00</b> : <u>Total</u> \$0 \$0
Compressive Strength of Cylindrical Conce Curing and Disposal of Cylindrical Concret Air Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimer   QA SPECIAL INSPECTIONS  Special Inspections:  Outlet Vault #1: Footing Walls Roof Slab  Outlet Vault #2:	crete Specimens (4 a sete Specimens without the Pressure/Volume each: as in the field (2.5 House hours hours hours hours	et \$17.00 ea.): ut test, each: etric Method, pe  purs of Labor):   Quantity 0 0 0	SUBTOTAL  Amount 110 110 110	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 \$305.00
Compressive Strength of Cylindrical Conce Curing and Disposal of Cylindrical Concret Air Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimer   QA SPECIAL INSPECTIONS  Special Inspections:  Outlet Vault #1: Footing Walls Roof Slab  Outlet Vault #2: Footing	crete Specimens (4 a sete Specimens without the Pressure/Volume each: as in the field (2.5 House hours hours hours hours	at \$17.00 ea.): ut test, each: etric Method, pe  purs of Labor):  Quantity 0 0 0	Amount 110 110	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 \$305.00 Total \$0 \$0 \$0
Compressive Strength of Cylindrical Concocuring and Disposal of Cylindrical Concretair Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimer  QA SPECIAL INSPECTIONS  Special Inspections:  Outlet Vault #1: Footing Walls Roof Slab  Outlet Vault #2:	crete Specimens (4 a sete Specimens without the Pressure/Volume each: as in the field (2.5 House hours hours hours hours	et \$17.00 ea.): ut test, each: etric Method, pe  purs of Labor):   Quantity 0 0 0	SUBTOTAL  Amount 110 110 110	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 \$305.00 Total \$0 \$0 \$0
Compressive Strength of Cylindrical Conce Curing and Disposal of Cylindrical Concret Air Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimer  QA SPECIAL INSPECTIONS  Special Inspections:  Outlet Vault #1: Footing Walls Roof Slab  Outlet Vault #2: Footing Walls Roof Slab	crete Specimens (4 a sete Specimens without the Pressure/Volume each: as in the field (2.5 Hours hours hours hours hours hours	Quantity 0 0 0 0 0	Amount 110 110 110 110 110	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 \$305.00 Total \$0 \$0 \$0 \$0
Compressive Strength of Cylindrical Concocuring and Disposal of Cylindrical Concretair Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimer  QA SPECIAL INSPECTIONS  Special Inspections:  Outlet Vault #1: Footing Walls Roof Slab  Outlet Vault #2: Footing Walls Roof Slab  Drain Vault #1:	crete Specimens (4 a sete Specimens withouthe Pressure/Volumeach: as in the field (2.5 House hours hours hours hours hours hours hours hours	At \$17.00 ea.):  ut test, each: etric Method, pe  purs of Labor):   Quantity 0 0 0 0 0	Amount 110 110 110 110 110 110	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 \$305.00 Total \$0 \$0 \$0 \$0
Compressive Strength of Cylindrical Concocuring and Disposal of Cylindrical Concretair Content of Freshly Mixed Concrete by Unit Weight and Yield of Fresh Concrete, Slump Test & Making Concrete Specimer  QA SPECIAL INSPECTIONS  Special Inspections:  Outlet Vault #1: Footing Walls Roof Slab  Outlet Vault #2: Footing Walls Roof Slab Roof Slab	crete Specimens (4 a sete Specimens without the Pressure/Volume each: as in the field (2.5 Hours hours hours hours hours hours	Quantity 0 0 0 0 0	Amount 110 110 110 110 110	\$68.00 \$12.00 \$50.00 \$50.00 \$125.00 \$305.00 Total \$0 \$0 \$0 \$0

# Exhibit A (11 of 14)

Inlet Vault #1:			440	**
Footing	hours	0	110	\$0
Walls	hours	0	110	\$0
Roof Slab	hours	0	110	\$0
Inlet Vault #2:				
Footing	hours	0	110	\$0
Walls	hours	0	110	\$0
Roof Slab	hours	0	110	\$0
Inlet Meter Vault:				
Footing	hours	0	110	\$0
Walls	hours	0	110	\$0
Roof Slab	hours	0	110	\$0
Inlet/Outlet Meter Vault:				
Footing	hours	0	110	\$0
Walls	hours	0	110	\$0
Roof Slab	hours	0	110	\$0 \$0
11001 Slab	110015	U	110	φυ
Encasement:		_		
Inlet Piping	hours	2	110	\$210
Outlet Piping	hours	2	110	\$210
Over-Flow Piping	hours	2	110	\$210
Drain Line Piping	hours	2	110	\$210
Wash Down Piping	hours	2	110	\$210
Electrical & Communications Ducts	hours	2	110	\$210
Handholds:				
Electrical	hours	1	110	\$210
Communications	hours	1	110	\$210
Pavement:				
Ribbon Gutter	hours	2	110	\$210
Pavement	hours	4	110	\$420
Overflow Manhole:				
Pre-Cast Sections	hours	0	110	\$210
Pump House:				
	houre	0	110	\$210
Footing	hours			
Walls	hours	0	110	\$210 \$210
Roof Slab	hours	0	110	\$210
Generator Bldg:		_		
Footing	hours	0	110	\$210
Walls	hours	0	110	\$210
Roof Slab	hours	0	110	\$210
Water Tank:				
Foundation	hours	8	110	\$840
Core Walls (7 at 2 hours each)	hours	14	110	\$1,470
Columns (4 at 2 hours each)	hours	8	110	\$840
Column Footings (4 at 2 hours each.)	hours	8	110	\$840
Roof Slab (3 at 4 hours each)	hours	12	110	\$1,260

# Exhibit A (12 of 14)

Shotcrete ( 3 days at 8 hours) Vertical Post-tensioning	hours hours	24 8	110 110	\$2,520 \$840
Circumferential Pre-stressing	hours	16	110	\$1,680
		118	•	\$14,070

# Exhibit A (13 of 14)

GHD - PROJECT EST	IMATING S	SHEET- GH	D EXPENS	SES	
Project Name: GWA Construction of Yigo Reservoir	Attachment:				
GHD Project Number: 8411481	of:				
Prepared by: Aaron Sutton		Bryan Ryley			
				Date:	1/31/2017
	T	I		T	
EXPENSE ITEM	QUANTITY	UNIT COST	AMOUNT	MARKUP	TOTAL
PRECONSTRUCTION PHASE TASKS					
SUBTOTAL	-				
CONSTRUCTION PHASE TASKS					
Photovotaic Solar Panel (EA.)	0	700	0	0	0
Marine Batteries (EA.)	0	125	0	0	0
Tristar MPPT Controller (EA.)	0	850	0	0	0
Camera Housing, Mounting Hardware (LS)	0	600	0	0	0
Internet Service - Static IP (Monthly)	12	150	1,800	270	2,070
Wiring, Battery Encloser, Misc. (LS)	0	400	0	0	0
NVR Recorder Hardware/Software (LS)	0	3,000	0	0	0
SUBTOTAL	270	2,070			
POST CONSTRUCTION SERVICES					
SUBTOTAL	_				
TOTAL			1,800	270	2,070

# Exhibit A (14 of 14)

## **NOTES**

- 1 Survey cost assumes \$1,000 per crew day and 10 crew days total over the length of the project
- 2 GEO CQA costs assumes 10% check on Contractor's testing
- 3 Original contract was for 1 year (360 days)
- 4 Reduced contract with approval of Yigo 2 contract is 330 (substantial completion) + 196 (Substantial completion) + 75 days (Final) 360 (original contract) = 241 days extra
- 5 Negotiated to provide 180 days (6 months)
- 6 Extra costs considered:

Will need extra inspector because of complication of additional tank extra time beyond 360 days at Astumbo for final

# Exhibit B (1 of 4)

# GUAM CONSOLIDATED COMMISSION ON UTILITIES RESOLUTION NO. 02-FY2015

# RELATIVE TO APPROVAL OF THE YIGO AND ASTUMBO RESERVOIR CONSTRUCTION MANAGEMENT CONTRACT

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

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

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

WHEREAS, structural inspections of the Yigo #1, Yigo Elevated, and Astumbo #1 reservoirs has been completed and the reservoirs were found to be in poor condition; and

WHEREAS, the design of Yigo and Astumbo reservoirs are on its pre-final stage and nearly completed; and

WHEREAS, GWA has advertised the Request For Proposals (RFP-05-ENG-2014) soliciting statement of qualifications from experienced and qualified engineering firms to provide construction management services for the Yigo and Astumbo Replacement Reservoir project; and

WHEREAS, RFP packages were picked up by thirty (30) interested parties, from which GWA received proposal submittals from eleven (11) firms before the RFP submittal deadline; and

# Exhibit B (2 of 4)

WHEREAS, the GWA A-E Selection committee reviewed and evaluated the eleven (11) proposals (see EXHIBIT A) and generated a short list of the top three (3) firms with a recommendation to award a contract to the firm GHD and any successor at interest thereto (see EXHIBIT B – Evaluation Summary and GM Determination); and

WHEREAS, GHD and GWA negotiated the price for the services to be provided in the total amount of One Million Three Hundred Eighty Seven Thousand Nine Hundred Eighty Two Dollars (\$1,387,982.00) (see EXHIBIT C); and

WHEREAS, GWA management seeks approval of the fee proposal amount of One Million Three Hundred Eighty Seven Thousand Nine Hundred Eighty Two Dollars (\$1,387,982.00), along with a ten percent (10%) contingency of One Hundred Thirty Eight Thousand Seven Hundred Ninety Eight Dollars and Twenty Cents (\$138,798.20) to bring the total authorized funding amount to a maximum of One Million Five Hundred Twenty Six Thousand Seven Hundred Eighty Dollars and Twenty Cents (\$1,526,780.20); and

WHEREAS, funding for this project will be from the 2013 Bond Funds under the line item "PW 12-05 Tank Major Repair Yigo #1, Mangilao #2, Astumbo #1"; and

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

- 1. The recitals set forth above hereby constitute the findings of the CCU.
- The CCU finds that the terms of the fee proposal submitted by GHD are fair and reasonable.
- The CCU finds that the terms of the conditions set by GWA relative to commencement of subsequent work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
- The CCU hereby authorizes the management to accept the fee proposal from GHD which is also incorporated into this Resolution in its entirety (Exhibit C).

# 

# Exhibit B (3 of 4)

- 5. The CCU hereby further authorizes the management of GWA to enter into a contract with GHD, in the amount of One Million Three Hundred Eighty Seven Thousand Nine Hundred Eighty Two Dollars (\$1,387,982.00).
- 6. The CCU hereby further approves the total funding amount for this project of One Million Three Hundred Eighty Seven Thousand Nine Hundred Eighty Two Dollars (\$1,387,982.00), along with a ten percent (10%) contingency of One Hundred Thirty Eight Thousand Seven Hundred Ninety Eight Dollars and Twenty Cents (\$138,798.20) to bring the total authorized funding amount to One Million Five Hundred Twenty Six Thousand Seven Hundred Eighty Dollars and Twenty Cents (\$1,526,780.20).

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

DULY AND REGULARLY ADOPTED, this 28th day of October 2014.

Certified by:

SIMON A. SANCHEZ, II

Chairperson

Attested by:

**JOSEPH T. DUENAS** 

Secretary

## SECRETARY'S CERTIFICATE

I, Joseph T. Duenas, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and

# Exhibit B (4 of 4)

legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 4

NAYS:

ABSTENTIONS: Q

ABSENT:





Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913 Tel: (671) 300-6846

## **Issues for Decision**

## Resolution No. 44-FY2017

Relative to Contract Approval for the Route 2 Agat War in the Pacific National Park Sewer Line Rehabilitation and Replacement Project

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

The objective of this project is to replace approximately 16 manholes and approximately 2,200 linear feet of sewer pipelines along Route 2, in the village of Agat. These sewer infrastructure elements have been identified by GWA, through an SSES investigation, to be subjected to excessive infiltration and inflow (I&I) and surcharging. Successful completion of this project will result in reduced I&I within the wastewater collection system and decreased storm water volume that enters into the collection system tributary to the Agat-Santa Rita WWTP GWA and USEPA agree that efforts to rehabilitate, repair or replace the sewer line are necessary.

## Where is the project located?

This project is located along Route 2, in the village of Agat. Construction activities will be limited to the government easements of the sewer infrastructure elements.

## How much will it cost?

The construction services contract was proposed by ProPacific Builder Corporation at a total amount of Four Million Five Hundred Fifty Four Thousand Four Hundred Fifty One Dollars (\$4,554,451.00). This contract amount, which is primarily based on unit pricing, includes the furnishing of all labor, tools, equipment and materials, and agency coordination needed to complete the sewer infrastructure replacement in the aforementioned locations.

GWA management is also seeking a ten percent (10%) contingency of the total contract amount of Four Hundred Fifty Five Thousand Four Hundred Forty Five Dollars and Ten Cents (\$455,445.10), which brings the total authorized funding amount to a maximum of Five Million Nine Thousand Eight Hundred Ninety Six Dollars and Ten Cents (\$5,009,896.10).

## When will it be completed?

The construction contract length of this project is 365 calendar days after an NTP is issued to the contractor. Estimated completion of construction is in Fall 2018.

## What is the funding source?

The funding for this project will be from USEPA SRF Grant Funds and, if necessary, GWA Bond Funds applicable to the project.

## CONSOLIDATED COMMISSION ON UTILITIES

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

## **RESOLUTION NO. 44-FY2017**

## RELATIVE TO CONTRACT APPROVAL FOR THE ROUTE 2 AGAT WAR IN THE PACIFIC NATIONAL PARK SEWERLINE REHABILITATION AND REPLACEMENT PROJECT S15-001-EPA

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

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

WHEREAS, GWA has received a grant from USEPA under the State Revolving Fund program to improve the sewer collection system, which included approximately 2,100 linear feet of gravity sewer line along Route 2 fronting the "War in the Pacific" National Historical Park, also known as "Ga'an Point" in Agat; and

WHEREAS, the stretch of gravity sewer line indicated underwent a Sanitary Sewer Evaluation Survey (SSES) which discovered that the line is subject to high levels of infiltration and inflow (I&I) and surcharging; and

WHEREAS, GWA and USEPA agree that efforts to rehabilitate, repair or replace the sewer line are necessary and the first order to do so is through scope of services that includes general civil engineering, geotechnical engineering, and archeological investigation for wastewater collection system evaluation, analysis and design; and

WHEREAS, in May of 2015 GWA Management began the procurement process to find a consulting engineering team to design the sewer rehabilitation and replacement, and via Resolution No. 42-FY2015, approved by the CCU in August of 2015, GWA Management was

 authorized to enter into a contract with SSFM International, Inc. (SSFM) to design the sewer rehabilitation and replacement; and

WHEREAS, in November of 2015 GWA Management entered into a contract with SSFM to design the sewer rehabilitation and replacement, and in April of 2017 the final design was completed by SSFM; and

WHEREAS, GWA has advertised the Request for Proposals (RFP 05-ENG-2017) for the Construction Management Services for Route 2 War in the Pacific National Park Sewerline Rehabilitation and Replacement project, and received and reviewed proposals from eight proposers; and

WHEREAS, GWA is currently negotiating the fee for Construction Management Services with the selected proposer, and the contract amount is not anticipated to exceed Seven Hundred Fifty Thousand Dollars (\$750,000.00), and is therefore within the authority of the GWA General Manager; and

WHEREAS, GWA has advertised the Invitation to Bid (IFB-07-ENG-2017) for the Route 2 War in the Pacific National Park Sewerline Rehabilitation and Replacement soliciting bid proposals from experienced and responsive bidders to repair and/or replace segments of gravity sewer lines and manholes subjected to I&I in the village of Agat; and

WHEREAS, this project consists of furnishing all labor, tools, equipment and materials, including coordination with GWA Wastewater Operations, GWA Engineering, the Construction Manager, the project Design Engineer, and GWA's Program Management Office, that are necessary to reduce and prevent I&I from entering the wastewater collection system; and

**WHEREAS,** IFB packages were obtained by multiple interested parties, from which GWA received bid proposals from three (3) parties (SEE EXHIBIT A – Abstract of Bids) before the bid proposal deadline, and one (1) party withdrew its bid within 24 hours of the bid opening; and

**WHEREAS,** GWA's initial review of the bid package for the apparent lowest bidder revealed some calculation errors which was further clarified by the bidder (SEE EXHIBIT B - Confirmation of Bid Price); and

WHEREAS, the project Design Engineer, in conjunction with GWA, analyzed the bid proposal received (SEE EXHIBIT C – Evaluation) on June 16, 2017 and determined that ProPacific Builder Corporation, who submitted the lowest bid as responsive and responsible and met all the bid requirements set forth by GWA; and

**WHEREAS,** GWA Management finds ProPacific Builder Corporation's bid proposal acceptable and now seeks CCU approval of ProPacific Builder Corporation's bid proposal in the amount of Four Million Five Hundred Fifty Four Thousand Four Hundred Fifty One Dollars (\$4,554,451.00) attached hereto (SEE EXHIBIT B and D); and,

WHEREAS, GWA Management further seeks CCU approval of a ten percent (10%) contingency to the bid proposal or Four Hundred Fifty Five Thousand Four Hundred Forty Five Dollars and Ten Cents (\$455,445.10) to bring the total authorized funding amount to a maximum of Five Million Nine Thousand Eight Hundred Ninety Six Dollars and Ten Cents (\$5,009,896.10); and

**WHEREAS,** funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds applicable to the project; and

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

- 1. The recitals set forth above hereby constitute the findings of the CCU.
- The CCU finds that the terms and conditions set by GWA relative to commencement of work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
- The CCU hereby authorizes the management of GWA to accept the bid proposal from "ProPacific Builder Corporation" attached hereto as EXHIBIT D, and which is incorporated into this Resolution.

1	4. The CCU hereby further authorizes the management of GWA to enter into a
2	contract with "ProPacific Builder Corporation" in the amount of Four Million
3	Five Hundred Fifty Four Thousand Four Hundred Fifty One Dollars
4	(\$4,554,451.00).
5	5. The CCU hereby further approves the funding total of Four Million Five Hundred
6	Fifty Four Thousand Four Hundred Fifty One Dollars (\$4,554,451.00), plus a ter
7	percent (10%) contingency of Four Hundred Fifty Five Thousand Four Hundred
8	Forty Five Dollars and Ten Cents (\$455,445.10) for a total amount of Five
9	Million Nine Thousand Eight Hundred Ninety Six Dollars and Ten Cents
10	(\$5,009,896.10).
11	6. The funding for this project will be from the USEPA State Revolving Fund and, in
12	necessary, GWA Bond funds applicable to the project.
13	<b>RESOLVED</b> , that the Chairman certified and the Board Secretary attests to the adoption
14	of this Resolution.
15	of this resolution.
16	<b>DULY AND REGULARLY ADOPTED</b> , this 25 <sup>th</sup> day of July 2017.
17 18	Certified by: Attested by:
19	
20	
21	JOSEPH T. DUENAS Chairperson  J. GEORGE BAMBA Secretary
22	Champerson
23	I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:
24	
25	The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and
26	legally held at a place properly noticed and advertised at which meeting a quorum was
27	present and the members who were present voted as follows:
28	AYES:
29	NAYS:
30	
31	A DOTENITION IC
	ABSTENTIONS:
32	ABSTENTIONS:  ABSENT:
32	

(Nar O) Bids	ey.			W8 .8	7. GRI	6. AEC	5. SUN	4. JSW	3. CHI	2. PAC	1. PRC		roject
Bids Opened and Read by:  Sturvia P. Bensan  (Name and Signature)	GWA Estimate			BME & SONS INC.	GREENGUAM CORP.	AEGION/INSITUFORM	SUMITOMO MITSUI CONST. CO. LTD	JNI WSF	CHI CONSTRUCTION INC.	PACIFIC RIM CONSTRUCTORS, INC.	PROPACIFIC BUILDER CORP.	Bidders Name	Project Number: S15-005-EPA; IFB-07-ENG-2017
NIGUE B. QUAN MIGHL B. QUAN (Name and Signature)				ha hid submitted	no bid submitted	no hid submitted	no bid submitted	no hid submitted	5	15% or According bid	Endurance Assurance Corporation	Section A-5 Bid Bond	017
GWA Processon Victor of Name and Sub									<	<	<	Bidder Qualification Form	1
Victor of Herce Name and Swajure)									<	<	<	Non-Collusion Affidavit	
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PHENT WISHTANG									<	<	<	Special Instructions to Bidders	
MARBUE									<	<	< <	Addendum 1 2	
0414 \$5,5~	3,10								#375	45,4	14.10		
Const Const	00.086, NO								\$3,750,000.00	\$5,488,888.00	\$ 4,623,951.00	BID AMOUNT	

# GUAM WATERWORKS AUTHORITY ABSTRACT OF BIDS Exhibit A (1 of 1) ORIGINAL



P.O. Box 7446 TAMUNING, GUAM 96913 Tel: 671-477-3109 | Fax: 671-477-7424

E-mail: jgyc@guam.net

June 14, 2017

PROPACIFIC BUILDER CORP

Thomas F. Cruz, PE
Chief Engineer
Guam Waterworks Authority
Gloria B. Nelson Public Service BLDG.
688 Route 15 Mangilao, GU 96913

Subject:

**Bid Price Proposal** 

IFB-07-ENG-2017 Route 2 War in the Pacific National Park Sewerline

Rehabilitation and Replacement GWA Project No. S15-005-EPA

Dear Mr. Cruz,

ProPacific Builder Corporation has reviewed our bid proposal for the above project and confirms that our total amount of bid price is \$4,554,451.00.

Thank you and we look forward to working with you.

Yours Sincerely,

jean veon v PResident

# Exhibit (2 of 5)

## **GUAM WATERWORKS AUTHORITY**

## ROUTE 2 AGAT WAR IN THE PACIFIC NATIONAL PARK SEWER LINE REHABILITATION AND REPLACEMENT GWA Project No. S15-005-EPA

## **UNIT PRICE BID FORM**

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
10	General Requirements				
10.1	Mobilization, Demobilization, Bonds and Permits (not to exceed 5% of the total of all bid items except bid items under 10 General Requirements)	LS	-		\$422,268.00
10.2	Project Record Documents (a minimum of 1% of the total of all bid items except bid items under Section 10. General Requirements)	LS	-		\$41,808.00
10.3	Maintenance of Traffic	LS	-		\$50,000.00
10.4	Archaeological Monitoring	LS	-		\$50,000.00
10.5	Project Sign	EA	4	\$1250	\$5,000.00
11	Site Work				
11.1	Support Concrete Utility Poles During Construction	EA	6	\$500	\$3,000.00
11.2	Erosion and Sediment Control	LŞ	-		\$5,000,00
11.3	Dewatering	LS	-		\$5,000.00
11.4	Unsuitable Materials Disposal	CY	350	\$150	\$52,500.00
11.5	Import Fill	CY	350	\$30	\$10,500.00
12	Road Work				
12.1	Remove Existing Asphalt Pavement	SY	2700	\$10	\$27,000,00
12.2	Temporary Roadway Paving (2" Thick)	SY	400	\$25	\$10,000.00
12.3	Asphalt Pavement (3" thick)	SY	1900	\$75	\$142,500.00
	Aggregate Base (8" thick)	SY	1900	\$16.50	\$31,350,00
	Aggregate SubBase (12" thick)	SY	500	\$24	\$12,000.00
	Flowable Trench Backfill	CY	6000	\$145	\$870,000.00
	Asphalt Driveway Restoration	SY	800	\$75	\$60,000,00
	Driveway Aggregate Base (8" thick)	SY	800	\$16.50	\$13,200,00
	Boulevard Topsoil Restoration	SY	2600	\$9	\$23,400.00
	Hydroseeding	SY	2600	\$5	\$13,000.00
12.11	Roadway Line Painting (4" White)	LF	1060	\$20	\$21,200.00

Section 00410 Bid Form Addendum No. 2 Page 5

# Exhibit (3 of 5)

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
13	Temporary Bypass Pumping				
13.1	Bypass Pumping for Sanitary Sewer Mains (4" to 12" Dia.)	LS	-		\$75,000.00
13.2	Bypass Pumping for Sanitary Sewer Mains (13" to 21" Dia.)	LS	•		\$75,000.00
14	Abandon or Remove Pipe/Structures				
14.1	Existing Concrete Manholes	EA	-		<u> </u>
14.2	Remove Existing Asbestos Cement	EA LF	6 45	\$1500	\$9,000.00
14.3	Remove Existing Storm Pipe	LF LF	35	\$500	\$22,500.00
14.4		LF		\$75	\$2,625.00
	Remove Existing Box Culvert		20	\$75 \$1500	\$1,500.00 \$1,500.00
14.5	Remove Existing Concrete Headwall	EA	1	\$1500	\$1,500.00
15	Pressure Pipes				
15.1	Remove and Reinstall Water Services with fittings (<1.5" diameter)	LF	200	\$120	\$24,000.00
16	Sanitary Sewer Pipe				
16.1	8" PVC, DR 26	LF	20	\$600	\$12,000.00
16.2	10" PVC, DR 26	LF	20	\$750	
	27" PVC, PS 115	LF	2115	\$900	\$15,000.00 \$1,903,500.00
16.4	30" PVC, PS 115	LF	4	\$900	\$3,600.00
16.5	Sewer Main Connection to Existing Manhole	EA	2	\$5000	\$10,000.00
16.6	30" Diameter PVC Cap	EA	1	\$1500	\$1,500.00
17	Carlana Carra Black II.				
17.1	Sanitary Sewer Manholes	EA	4		
	Sewer Manholes (48" dia.)	EA	1	\$16000	\$16,000.00
	Sewer Manholes (60", Type A)	EA	11	<b>\$18000</b>	\$198,000.00
17.3	Construct New Manhole over existing sewer	EA	4	\$18000	\$72,000.00
18	Sewer Laterals and Cleanouts				
	Replace 4" Sewer Laterals	LF	320	¢4€∩	\$144,000,00
	Install Sewer Cleanout (Grassed area)	EA	12	\$450	\$144,000.00
18.3	Install Sewer Cleanout (Asphalt or	EA	2	\$3000	\$36,000.00
	Concrete Pavement area)		-	\$3500	\$7,000.00
10	Storm Dusiness Sustan				
	Storm Drainage System	15	25		
	Storm Drainage Culvert (24" Dia, Concrete CL III)	LF	35	\$600	\$21,000.00

Section 00410 Bid Form Addendum No. 2 Page 6

# Exhibit B (4 of 5)

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
19.2	Concrete Box Culvert (3'x6' Reinf Concrete)	LF	20	\$1500	\$30,000.00
19.3	Concrete Headwall (24" Dia. Pipe)	EA	1	\$5000	\$5,000.00
		All Bid Prices	\$4,554,451.00		

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

## ARTICLE 6 - TIME OF COMPLETION

- 6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

## **ARTICLE 7 - ATTACHMENTS TO THIS BID**

- 7.01 The following documents are attached to and made a condition of this Bid:
  - A. Required Bid security in the form of <u>15% Bid Bond</u>.
  - B. List of Proposed Major Suppliers;
  - C. Required Bidder Qualification Statement with Supporting Data; and

## **ARTICLE 8 - DEFINED TERMS**

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

## Exhibit B (5 of 5)

## APPENDIX I

## **CERTIFICATION OF BIDDER REGARDING NONSEGREGATED FACILITIES**

(Applicable to Contracts and related sub-contracts \$10,000 which are not exempt from the Equal Opportunity Clause.)

The Contractor certifies that he does not maintain or provide for his employees any segregated facilities in any of his establishment, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Contractor certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control, where segregated facilities are maintained. The Contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this Contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. The Contractor agrees that (except where he has obtained identical certifications from proposed sub-contractors for specific time periods) he will obtain identical certifications exceeding \$10,000 which are not exempt from the provision of the Equal Opportunity Clause, and that he will retain such certifications in his files.

NAME AND TITLE OF SIGNER:

Jean Yeon Yu, President

(Please Type)

Ob/14/17

(Signature)

(Date)

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

## Exhibit C (1 of 5)



## TRANSMITTAL LETTER

June 16, 2017

Guam Waterworks Authority Engineering Division, Room 202 Gloria B. Nelson Public Service Building 688 Route 15 Mangilao, Guam 96913

Subject: Route 2 War in the Pacific National Park Sewerline Rehabilitation and Replacement

Bid Re-Evaluation - Project No.: S15-005-EPA

Attention: Mr. Miguel C. Bordallo, P.E.

SSFM is pleased to submit our recommendations to GWA based on our re-evaluation of bids received for the Route 2 Sewerline Rehabilitation and Replacement Project. Included in the attached package is four (4) supporting documents as revised per our review of the bid submittals and written comments received from GWA's legal counsel.

In summary, we re-evaluated bid contents of each submittal to reconfirm that bid requirements have been met and verify that all have been tabulated appropriately, with emphasis on the updated bid documents from Propacific Builder Corporation. After thorough review and assessment of the above, the key findings pertained to two of the bid submissions:

- CHI Construction submitted to GWA a request for withdrawal of its bid in accordance with *Article 16.03* of the *Instruction to Bidders* that was deemed acceptable by GWA. CHI Construction's bid submission was therefore not considered for selection.
- Based on feedback from GWA General Counsel, and pursuant to 2 GAR Chapter 3 § 3109 (m)(4)(B), ProPacific Builder Corp resubmitted their Bid Proposal on 6/14/2017 correcting bid prices and the bid total, along with a confirmation of the total bid price letter in response GWA. The Certification of Bidder Regarding Nonsegregated Facilities document was also executed properly (signed) on 6/14/2017 per GWA's 6/13/2017 letter of request.

Based on the updated bid package received, ProPacific Builder Corp's bid conforms to the bid requirements for this project and our amended recommendation is for the contract to be awarded to ProPacific Builder Corp. as the lowest, most responsive bidder.

Please do not hesitate to let us know should you have any questions.

With warmest regards,

SSFM/INTERNATIONAL, INC.

Carlos H. Salas

Pacific Region Manager

Attachment - Bid Evaluation

215 Rojas Street I Suite 213 I Harmon, Guam 96913 I Tel 671.646.7736 I www.ssfm.com Planning I Project & Construction Management I Structural, Civil & Traffic Engineering

BID ABSTRACT Route 2 War in the Pacific National Park Sewerline Rehabilitation and Replacement Project No. S15-005-EPA

Exhibit C (2 of 5)

Bid Date: 6/1/2017

Prepared By: SSFM International

BIDDER PACIFIC RIM CONSTRUCTORS, INC.	BID BOND ✓	QUALIFICATION STATEMENT		NDUM EDGEMENT 2	PROPOSAL AND BID SCHEDULE	BID AMOUNT \$ 5,488,888.00	NON COLLUSION AFFIDAVIT	EEO CERT.	SEGREGATED FACILITIES CERT.	OFFENDER	WAGE AND BENEFIT DETERMINATION		SPECIAL INSTRUCTIONS TO BIDDERS		STATEMENTS	NOTES/COMMENTS Bid submittal conforms to bid requirements
PROPACIFIC BUILDER CORP	·	<b>*</b>	<b>✓</b>	~	<b>~</b>	\$ 4,554,451.00	<b>V</b>	·	*	<b>~</b>	·	·	<b>~</b>	<b>V</b>		In response to GWA's 6/13/2017 letter request, ProPacific Builder Corp resubmitted their Bid Proposal on 6/14/2017 correcting bid prices and the bid total, along with a confirmation of bid price letter.  The Certification of Bidder Regarding Nonsegregated Facilities document was also executed (signed) 6/14/2017 as requested on GWA's 6/13/2017 letter request
CHI CONSTRUCTION INC.	<b>*</b>	✓ Missing OSHA logs	<b>~</b>	✓	<b>*</b>	\$ 3,750,000.00		√ Not fully completed	<b>*</b>	<b>✓</b>	✓	<b>*</b>	<b>√</b>	<b>√</b>	✓	CHI Construction withdrew it's bid on 6/2/17 due to incorrect amounts entered on a few bid items.  OSHA 500 logs were not attached to support Qualifications Statement.

### Exhibit C (3 of 5)

Guam Waterworks Authority BID PRICE TABULATION Route 2 War in the Pacific National Park Sewerline Rehabilitation and Replacement Project No. S15-005-EPA

Bid Date: 6/1/2017 BY: SSFM International

Item		Estimated	Unit of	GOVER	RNMENT	PACIF	IC RIM	PROPACIFI	C BUILDERS	CHI CONST	RUCTION	NOTES/COMMENTS
No.	Description	Quantity	Measure	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	
10	General Requirements											
10.1	Mobilization, Demobilization, Bonds and Permits (not to exceed 5% of the total of all bid items except bid items under 10 General Requirements)		LS		\$ 110,000.00		\$ 281,000.00		\$ 422,268.00		\$ 175,408.00	All bidders exceeded 5% of total bid items (except General Req items) for Mobilization, Demobilization, Bonds and Permits pay item
10.2	Project Record Documents (a minimum of 1% of the total of all bid items except bid items under Section 10. General Requirements)		LS		\$ 42,000.00		\$ 56,000.00		\$ 41,808.00		\$ 35,392.00	
10.3	Maintenance of Traffic		LS		\$85,000.00		\$ 221,000.00		\$ 50,000.00		\$ 85,000.00	
10.4	Archaeological Monitoring		LS		\$45,000.00		\$ 115,000.00		\$ 50,000.00		\$ 12,000.00	
10.5	Project Identification Signs	4	EA	\$5,000.00	\$20,000.00	\$ 1,930.00	\$ 7,720.00	\$ 1,250.00	\$ 5,000.00	\$ 1,200.00	\$ 4,800.00	
11	Site Work											
11.1	Support Concrete Poles during construction	6	EA	\$9,500.00	\$ 57,000.00	\$ 6,450.00	\$ 38,700.00	\$ 500.00	\$ 3,000.00	\$ 4,500.00	\$ 27,000.00	
11.2	Erosion and Sediment Control		LS		\$ 15,000.00		\$ 28,000.00		\$ 5,000.00		\$ 25,000.00	
11.3	Dewatering		LS		\$ 215,000.00		\$ 165,000.00		\$ 5,000.00		\$ 35,000.00	
11.4	Unsuitable Materials Disposal	350	CY	\$30.00	\$ 10,500.00	\$ 30.00	\$ 10,500.00	\$ 150.00	\$ 52,500.00	\$ 80.00	\$ 28,000.00	
11.5	Import Fill	350	CY	\$40.00	\$ 14,000.00	\$ 105.00	\$ 36,750.00	\$ 30.00	\$ 10,500.00	\$ 80.00	\$ 28,000.00	
12	Road Work											
12.1	Remove Existing Asphalt Pavement	2700	SY	\$10.00	\$ 27,000.00	\$ 12.00	\$ 32,400.00	\$ 10.00	\$ 27,000.00	\$ 25.00	\$ 67,500.00	
12.2	Temporary Roadway Paving (2" Thick)	400	SY	\$100.00	\$ 40,000.00	\$ 84.00	\$ 33,600.00	\$ 25.00	\$ 10,000.00	\$ 100.00	\$ 40,000.00	
12.3	Asphalt Pavement (3" thick)	1900	SY	\$50.00	\$ 95,000.00	\$ 85.50	\$ 162,450.00	\$ 75.00	\$ 142,500,00	\$ 120.00	\$ 228.000.00	
12.4	Aggregate Base (8" thick)	1900	SY	\$25.00	\$ 47,500.00	\$ 60.00	\$ 114,000,00	\$ 16.50	\$ 31,350.00	\$ 60.00	\$ 114,000,00	
12.5	Subbase (12" thick)	500	SY	\$40.00	\$ 20,000.00	\$ 69.00	\$ 34,500.00	\$ 24.00	\$ 12,000.00	\$ 50.00	\$ 25,000.00	
12.6	Flowable Trench Backfill	6000	SY	\$160.00	\$ 960,000.00	\$ 157.00	\$ 942,000.00	\$ 145.00	\$ 870,000.00	\$ 160.00	\$ 960,000.00	
12.7	Asphalt Driveway Restoration	800	SY	\$35.00	\$ 28,000.00	\$ 86.00	\$ 68,800.00	\$ 75.00	\$ 60,000.00	\$ 70.00	\$ 56,000.00	ProPacific Builder Corp resubmitted their Bid Proposal 6/14/2017 correcting bid prices and the bid total, along with a confirmation of bid price letter in response to GWA
12.8	Driveway Aggregate Base (8" thick)	800	SY	\$17.00	\$ 13,600.00	\$ 58.50	\$ 46,800.00	\$ 16.50	\$ 13,200.00	\$ 60.00	\$ 48,000.00	
12.8	Boulevard Topsoil Restoration	2600	SY	\$17.00	\$ 44,200.00	\$ 13.00	\$ 33,800.00	\$ 9.00	\$ 23,400.00	\$ 30.00	\$ 78,000.00	
12.9	Hydroseeding	2600	SY	\$5.00	\$ 13,000.00	\$ 10.00	\$ 26,000.00	\$ 5.00	\$ 13,000.00	\$ 10.00	\$ 26,000.00	
12.1	Roadway Line Painting (4" White)	1060	LF	\$12.00	\$ 12,720.00	\$ 12.50	\$ 13,250.00	\$ 20.00	\$ 21,200.00	\$ 10.00	\$ 10,600.00	
13	Temporary Bypass Pumping											
13.1	Bypass Pumping for Sanitary Sewer Mains (4" to 12")		LS		\$ 50,000.00		\$ 122,000.00		\$ 75,000.00		\$ 180,000.00	
13.2	Bypass Pumping for Sanitary Sewer Mains (15" to 21")		LS		\$ 125,000.00		\$ 177,000.00		\$ 75,000.00		\$ 220,000.00	
14	Abandon or Remove Pipe/Structures											
14.1	Existing Concrete Manholes	6	EA	\$1,800.00	\$ 10,800.00	\$ 3,800.00	\$ 22,800.00	\$ 1,500.00	\$ 9,000.00	\$ 8,500.00	\$ 51,000.00	
14.3	Remove Existing Asbestos Cement Pipe	45	LF	\$500.00		\$ 1,160.00						ProPacific Builder Corp resubmitted their Bid Proposal 6/14/2017 correcting bid prices and the bid total, along with a confirmation of bid price letter in response to GWA
14.4	Remove Existing Storm Pipe	35	LF	\$100.00	\$ 3,500.00	\$ 130.00	\$ 4,550.00	\$ 75.00	\$ 2,625.00	\$ 700.00	\$ 24,500.00	
14.5	Remove Existing Box Culvert	20	LF	\$200.00	\$ 4,000.00	\$ 390.00	\$ 7,800.00	\$ 75.00	\$ 1,500.00	\$ 1,000.00	\$ 20,000.00	
14.6	Remove Existing Concrete Headwall	1	EA	\$1,500.00	\$ 1,500.00	\$ 4,300.00	\$ 4,300.00	\$ 1,500.00	\$ 1,500.00	\$ 5,000.00	\$ 5,000.00	
15	Pressure Pipes											

Guam Waterworks Authority BID PRICE TABULATION Route 2 War in the Pacific National Park Sewerline Rehabilitation and Replacement Project No. S15-005-EPA

Exhibit C (4 of 5)

Bid Date: 6/1/2017 BY: SSFM International

Item		Estimated	Unit of	GOVER	RNMENT	PACIF	IC RIM	PROPACIFIC	C BUILDERS	CHI CONST	TRUCTION	NOTES/COMMENTS
No.	Description	Quantity	Measure	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	
15.1	Water Services with fittings (<1.5" diameter)	200	LF	\$125.00	\$ 25,000.00	\$ 190.00	\$ 38,000.00	\$ 120.00	\$ 24,000.00	\$ 100.00	\$ 20,000.00	
16	Sanitary Sewer Pipe											
16.1	8" PVC, DR 35	20	LF	\$400.00	\$ 8,000.00	\$ 970.00	\$ 19,400.00	\$ 600.00	\$ 12,000.00	\$ 20.00	\$ 400.00	
16.2	10" PVC, DR 35	20	LF	\$450.00	\$ 9,000.00	\$ 930.00	\$ 18,600.00	\$ 750.00	\$ 15,000.00	\$ 25.00	\$ 500.00	
16.3	27" PVC, DR 35	2115	LF	\$570.00	\$ 1,205,550.00	\$ 723.00	\$ 1,529,145.00	\$ 900.00	\$ 1,903,500.00	\$ 100.00	\$ 211,500.00	
16.4	30" PVC, DR 35	4	LF	\$650.00	\$ 2,600.00	\$ 855.00	\$ 3,420.00	\$ 900.00	\$ 3,600.00	\$ 1,200.00	\$ 4,800.00	
16.5	Sewer Main Connection to Existing Manhole	2	LF	\$5,500.00	\$ 11,000.00	\$ 1,630.00	\$ 3,260.00	\$ 5,000.00	\$ 10,000.00	\$ 6,500.00	\$ 13,000.00	
16.6	30" Diameter PVC CAP	1	EA	\$3,500.00	\$ 3,500.00	\$ 1,600.00	\$ 1,600.00	\$ 1,500.00	\$ 1,500.00	\$ 2,000.00	\$ 2,000.00	
				, . ,								
17	Sanitary Sewer Manholes											
17.1	Sewer Manholes (48" dia.)	1	EA	\$6,500.00	\$ 6,500.00	\$ 33,700.00	\$ 33,700.00	\$ 16,000.00	\$ 16,000.00	\$ 50,000.00	\$ 50,000.00	
17.2	Sewer Manholes (60" dia.)	11	EA	\$7,500.00	\$ 82,500.00			\$ 18,000.00		\$ 55,000.00	\$ 605,000.00	
17.3	Construct New Manhole over existing sewer	4	EA	\$10,000.00	\$ 40,000.00	\$ 44,425.00	\$ 177,700.00	\$ 18,000.00	\$ 72,000.00	\$ 8,500.00	\$ 34,000.00	
18	Sewer Laterals and Cleanouts											
18.1	Replace 4" Sewer Laterals	320	LF	\$280.00				\$ 450.00				
	Install Sewer Cleanout (Grassed area)	12	EA	\$1,200.00				\$ 3,000.00				
18.3	Install Sewer Cleanout (Asphalt or Concrete Pavement area)	2	EA	\$1,700.00	\$ 3,400.00	\$ 4,215.00	\$ 8,430.00	\$ 3,500.00	\$ 7,000.00	\$ 8,200.00	\$ 16,400.00	
19	Storm Drainage System											
19.1	Storm Drainage System Storm Drainage Culvert (24" Dia, Concrete CL III)	35	IF	\$410.00	\$ 14,350.00	\$ 535.00	\$ 18.725.00	\$ 600.00	\$ 21,000,00	\$ 900.00	\$ 31,500.00	
19.2	Concrete Box Culvert (3'x6' Reinf Concrete)	20	IF	\$600.00	\$ 12,000.00			\$ 1,500.00		\$ 2.000.00		
19.3	Concrete Headwall (24" Dia. Pipe)	1	EA	\$6.500.00								
	` ' '			, , , , , , , , ,		,	,	,	,	,		
TOTALS					\$3,665,720.00		\$5,488,888.00		\$4,554,451.00		\$3,750,000.00	ProPacific Builder Corp resubmitted their Bid Proposal 6/14/2017 correcting bid prices and the bid total, along with a confirmation of bid price letter in response to GWA
TOTA	CONTRACTOR CONCERNICATION COST				An con ma							
IOTAL	ESTIMATED CONSTRUCTION COST				\$3,665,720.00				l			

### Exhibit C (5 of 5)

#### **CONCLUSIONS & RECOMMENDATIONS**

#### The following technical considerations and recommendations apply to the review of these bids:

#### LOW BIDDER:

CHI Construction is the apparent low bidder, with a bid about 2% above the Engineer's Estimate.

CHI Construction though submitted a request to withdraw their bid on 6/2/17 due to incorrect amounts entered on a few bid items.

Bidder submitted a duly signed written notice to Owner requesting to withdrew their bid on 6/2/2017, within 24 hours after the bid opening. Bidder has demonstrated, to the satisfaction of GWA, there were substantial mistakes in their bid preparation, and therefore the request for bid withdrawal was found acceptable, and in accordance with Article 16.03 of the Instruction to Bidders.

#### SECOND LOW BIDDER:

Evaluation of Propacific Builder Corporation's original bid submission identified calculation discrepancies with the Total of All Bid Prices inputted and with bid prices on pay items 12.7 and 14.3. In addition, the Certification of Bidder Regarding Nonsegregated Facilities document was unsigned.

Based on feedback from GWA General Counsel, and pursuant to 2 GAR Chapter 3 § 3109 (m)(4)(B), these issues were determined to be minor informalities to which the bidder may be requested to correct. Accordingly, GWA sent a letter request on 6/13/2017 to Propacific Builders requesting correction to the minor informalities, along with a confirmation bid price letter.

In response to GWA's 6/13/2017 letter request, ProPacific Builder Corp resubmitted their Bid Proposal 6/14/2017 correcting bid prices and the bid total, along with a confirmation of bid price letter in response GWA. The Certification of Bidder Regarding Nonsegregated Facilities document was also executed (signed) 6/14/2017 as requested on GWA's 6/13/2017 letter request.

Propacific Builder Corporation submitted the second lowest bid, with a bid about 24% above the Engineer's Estimate. Propacific Builder's updated bid submission is in conformance with the bid requirements

#### HIGH BIDDER:

Pacific Rim's bid submission is the high bidder with a bid about 50% above the Engineer's estimate. Bid submission is in conformance with the bid requirements.

#### OVERALL RECOMMENDATION AND CONCLUSION:

Due to GWA's acceptance of CHI Construction's request to withdraw their bid, the apparent low bidder will not be selected.

Minor informalities discovered on Propacific Builder initial submission were corrected in accordance with Title 2 GAR Chapter 3. The updated bid submission conforms to the bid requirements, with a bid amount resulting in Propacific Builders Corp being the lowest hidder.

Therefore, recommendation is for the contract to be awarded to Propacific Builders Corp as the lowest, most responsive Bid.

Reviewed by (printed name and title):	Concur (printed name and title):
Tim Deleon Guerrero	
Civil Design Engineer	
Signed/Dated:	Signed/Dated:

### Exhibit D (1 of 13)



# BID INVITATION NO. IFB-07-ENG-2017 GWA Project No.: S15-005-EPA

Route 2 War in the Pacific National Park Sewerline Rehabilitation and Replacement

### **BID PROPOSAL**

Submitted by:



### PROPACIFIC BUILDER CORPORATION

(formerly Guam Yooshin Corporation)
750 Route 8 Suite 202 Hanam Plaza,
Barrigada, Guam 96913
T. 671.477.3109 | F. 671.477.7424 | jgyc@guam.net

### Exhibit D (2 of 13) PROPACIFIC BUILDER CORPORATION (formerly Guam Yooshin Corp.)

P.O. Box 7446 TAMUNING, GUAM 96913 Tel: 671-477-3109 | Fax: 671-477-7424

E-mail: jgyc@guam.net

#### **Table of Content**

I. Bid Form

Attachment No. 1: List of Major Suppliers

II. **Bid Bond** 

III. **Qualifications Statement** 

Attachment No. 1: Balance Sheets Within the Last 3 Years

Attachment No. 2: Evidence of Individual Authority

Attachment No. 3: Resume of Key Personnel

Attachment No. 4: Safety Program

Attachment No. 5: OSHA A300 Within the Last 5 Years

Attachment No: 6: Safety Citations and Violations from OSHA and Government of Guam

**Procurement Requirements** IV.

> Attachment No. 1: Contractor's License Attachment No. 2: Copies of Addendums

### Exhibit D (3 of 13)



P.O. Box 7446 TAMUNING, GUAM 96913 Tel: 671-477-3109 | Fax: 671-477-7424 E-mail: jgyc@guam.net

### **BID FORM**

### Exhibit D (4 of 13)

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### Exhibit D (5 of 13)

#### BID FORM

#### ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

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

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

#### ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

#### ARTICLE 3 - BIDDER'S REPRESENTATIONS

- 3.01 In submitting this Bid, Bidder represents that:
  - A. Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum Date
05/18/2017
05/26/2017

- B. Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the <u>observable</u> local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.
- C. Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

Section 00410 Bid Form Addendum No. 2

### Exhibit D (6 of 13)

- D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.
- E. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.
- F. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

#### **ARTICLE 4 - BIDDER'S CERTIFICATIONS**

#### 4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
  - "fraudulent practice" means an intentional misrepresentation of facts made (a) to
    influence the bidding process to the detriment of Buyer, (b) to establish bid prices at
    artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open
    competition;
  - "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
  - "coercive practice" means harming or threatening to harm, directly or indirectly, persons
    or their property to influence their participation in the bidding process.

Section 00410 Bid Form Addendum No. 2

### Exhibit D (7 of 13)

#### ARTICLE 5 - BASIS OF BID

5.01 Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the following price(s):

Section 00410 Bid Form Addendum No. 2

### Exhibit D (8 of 13)

#### **GUAM WATERWORKS AUTHORITY**

#### ROUTE 2 AGAT WAR IN THE PACIFIC NATIONAL PARK SEWER LINE REHABILITATION AND REPLACEMENT GWA Project No. S15-005-EPA

#### UNIT PRICE BID FORM

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
10	General Requirements				
10.1	Mobilization, Demobilization, Bonds and Permits (not to exceed 5% of the total of all bid items except bid items under 10 General Requirements)	LS	-		\$422,268.00
10.2	Project Record Documents (a minimum of 1% of the total of all bid items except bid items under Section 10. General Requirements)	LS			\$41,808.00
10.3	Maintenance of Traffic	LS	-		\$50,000.00
10.4	Archaeological Monitoring	LS	×		\$50,000.00
10.5	Project Sign	EA	4	\$1250	\$5,000.00
11	Site Work				
11.1	Support Concrete Utility Poles During Construction	EA	6	\$500	\$3,000.00
11.2	Erosion and Sediment Control	LS	20		\$5,000.00
11.3	Dewatering	LS	1-0		\$5,000.00
11.4	Unsuitable Materials Disposal	CY	350	\$150	\$52,500.00
11.5	Import Fill	CY	350	\$30	\$10,500.00
12	Road Work				
12.1	Remove Existing Asphalt Pavement	SY	2700	\$10	\$27,000.00
12.2	Temporary Roadway Paving (2" Thick)	SY	400	\$25	\$10,000.00
12.3	Asphalt Pavement (3" thick)	SY	1900	\$75	\$142,500.00
12.4	Aggregate Base (8" thick)	SY	1900	\$16.50	\$31,350.00
12.5	Aggregate SubBase (12" thick)	SY	500	\$24	\$12.,000.00
12.6	Flowable Trench Backfill	CY	6000	\$145	\$870,000.00
12.7	Asphalt Driveway Restoration	SY	800	\$75	\$142,500.00
12.8	Driveway Aggregate Base (8" thick)	SY	800	\$16.50	\$13,200.00
12.9	Boulevard Topsoil Restoration	SY	2600	\$9	\$23,400.00
12.10	Hydroseeding	SY	2600	\$9 \$5	\$13,000.00
12.11	Roadway Line Painting (4" White)	LF	1060	\$20	\$21,200.00

Section 00410 Bid Form Addendum No. 2

### Exhibit D (9 of 13)

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
13	Temporary Bypass Pumping				
13.1	Bypass Pumping for Sanitary Sewer Mains (4" to 12" Dia.)	LS			\$75,000.00
13.2	Bypass Pumping for Sanitary Sewer Mains (13" to 21" Dia.)	LS	~		\$75,000.00
14	Abandon or Remove Pipe/Structures				
14.1	Existing Concrete Manholes	EA	6	\$1500	\$9,000.00
14.2	Remove Existing Asbestos Cement	LF	45	\$500	\$21,000.00
14.3	Remove Existing Storm Pipe	LF	35	\$75	\$2,625.00
14.4	Remove Existing Box Culvert	LF	20	\$75	\$1,500.00
14.5	Remove Existing Concrete Headwall	EA	1	\$1500	\$1,500.00
15	Pressure Pipes				
15.1	Remove and Reinstall Water Services with fittings (<1.5" diameter)	LF	200	\$120	\$24,000.00
16	Sanitary Sewer Pipe				
16.1	8" PVC, DR 26	LF	20	\$600	\$12,000.00
16.2	10" PVC, DR 26	LF	20	\$750	\$15,000.00
16.3	27" PVC, PS 115	LF	2115	\$900	\$1,903,500.00
16.4	30" PVC, PS 115	LF	4	\$900	\$3,600.00
16.5	Sewer Main Connection to Existing Manhole	EA	2	\$5000	\$10,000.00
16.6	30" Diameter PVC Cap	EA	1	\$1500	\$1,500.00
17	Sanitary Sewer Manholes				
17.1	Sewer Manholes (48" dia.)	EA	1	\$16000	\$16,000.00
17.2	Sewer Manholes (60", Type A)	EA	11	\$18000	
17.3	Construct New Manhole over existing sewer	EA	4	\$18000	\$72,000.00
10	Course Laterale and Classicate				
18	Sewer Laterals and Cleanouts Replace 4" Sewer Laterals	LF	220		
18.1	·		320	\$450	\$144,000.00
18.2	Install Sewer Cleanout (Grassed area)	EA	12	\$3000	\$36,000.00
18.3	Install Sewer Cleanout (Asphalt or Concrete Pavement area)	EA	2	\$3500	\$7,000.00
19	Storm Drainage System				
19.1	Storm Drainage System Storm Drainage Culvert (24" Dia, Concrete CL III)	LF	35	\$600	\$21,000.00

Section 00410 Bid Form Addendum No. 2

### Exhibit D (10 of 13)

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
19.2	Concrete Box Culvert (3'x6' Reinf Concrete)	LF	20	\$1500	\$30,000.00
19.3	Concrete Headwall (24" Dia. Pipe)	EA	1	\$5000	\$5,000.00
			Total of	All Bid Prices	\$4,623,951.00

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

#### ARTICLE 6 - TIME OF COMPLETION

- 6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

#### **ARTICLE 7 - ATTACHMENTS TO THIS BID**

- 7.01 The following documents are attached to and made a condition of this Bid:
  - A. Required Bid security in the form of 15% Bid Bond
  - B. List of Proposed Major Suppliers;
  - Required Bidder Qualification Statement with Supporting Data; and

#### **ARTICLE 8 - DEFINED TERMS**

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

Section 00410 Bid Form Addendum No. 2

### Exhibit D (11 of 13)

#### **ARTICLE 9 - BID SUBMITTAL**

01	This Bid submitted by:	
	If Bidder is:	
	An Individual	
	Name (typed or printed):	
	Ву:	
	(Individual's signature)	
	Doing business as:	
	Business address:	
	Phone:Facsimile:	
	E-mail address:	
	<u>A Partnership</u>	
	Partnership Name:	(SEAL)
	Ву:	
	(Signature of general partner - attach evidence of authority to sign)	
	Name (typed or printed):	
	Business address:	
	Dhana	
	Phone:Facsimile:	
	E-mail address:	
	A Corporation	
	Corporation Name: ProPacific Builder Corporation	
	State of Incorporation: Guam	
	Type (General Business), Professional, Service, other): General Construction	_
	By:	
	(Signature - attach evidence of authority to sign)	
	Name (typed or printed): Jean Yeon Yu	
	Title: President	
	(CORPORATE SEAL)	
	(Signature of Corporate Secretary)	

Section 00410 Bid Form Addendum No. 2

### Exhibit D (12 of 13)

Phone: 671-477-3109	Facsimile:	671-477-7424
E-mail address: jgyc@guam.net		
A Limited Liability Company (LLC)		
LLC Name:		
State in which organized:		
By:(Signature - attach evidence of autho	rity to sian)	
, ,	,	
Name (typed or printed):		
Title:		
Business address:		-
Phone:	Facsimile:	
E-mail address:		
A Joint Venture		
First Joint Venturer Name:		(SEAL)
Ву:		
(Signature - attach evidence of autho	rity to sign)	
Name (typed or printed):		
Title:		
Business address:		
Phone:	Facsimile:	
E-mail address:		
Second Joint Venturer Name:		(SEAL)
Ву:		
	rity to sign)	
(Signature - attach evidence of autho		
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(Signature - attach evidence of autho  Name (typed or printed):  Title:  Business address:		
(Signature - attach evidence of autho Name (typed or printed): Title:		

Section 00410 Bid Form Addendum No. 2

### Exhibit D (13 of 13)

Phone and Facsimile Number, and Address for receipt of official communications to Joint Venture:
(Each joint venturer must sign. The manner of signing for each individual, partnership, corporation, and limited liability company that is a party to the joint venture should be in the manner indicated above.)

Section 00410 Bid Form Addendum No. 2



Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913 Tel: (671) 300-6846

#### Issues for Decision

#### Resolution No. 45-FY2017

Relative to Approval of Owner Site Representative (Construction Management) Services Contract for the Design and Construction of the Umatac-Merizo Wastewater Treatment Plant Upgrade

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

The objective of this project is to provide construction management services during the construction activities for the upgrades of the Umatac-Merizo WWTP. Given the WWTP upgrades are via a Design-Build contract, the Owner Site Representative/construction manager services are necessary, and will focus on monitoring the progress of the design work, observing construction progress on the site by the Design-Builder, monitoring construction for conformance with the Design-Builder's plans and specifications, reviewing the construction schedule relative to actual construction progress, reviewing Design-Builder pay applications in comparison with construction work performed, receiving and logging Design-Builder submittals, and keeping GWA advised and informed as to project progress and cost, just to name a few activities.

The approval of the Owner Site Representative (Construction Management) Services Contract and ultimately execution of the contract will tie into the completion schedule for this Court Order project. There is an immediate need for the CM given the WWTP upgrades are currently under design.

#### Where is the project located?

This project is located at the existing Umatac-Merizo WWTP in Umatac village.

#### How much will it cost?

The construction management services proposal by SSFM International One Million Two Hundred Seventy Eight Thousand Fifty Dollars (\$1,278,050.00).

GWA management is also seeking a 10% contingency of One Hundred Twenty Seven Thousand Eight Hundred Five Dollars (\$127,805.00), for a total funding amount of One Million Four Hundred Five Thousand Eight Hundred Fifty Five Dollars (\$1,405,855.00).

#### When will it be completed?

The Owner Site Representative (Construction Management) Services will be until December 2018.

#### What is the funding source?

The funding for this project will be from the GWA Bond Funds under the line items CIP WW 12-07 "Umatac Merizo STP Replacement", System Development Charge Funds, as applicable, and Internally Funded CIP.

#### CONSOLIDATED COMMISSION ON UTILITIES

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

#### **RESOLUTION NO. 45-FY2017**

## RELATIVE TO APPROVAL OF OWNER'S SITE REPRESENTATIVE (CONSTRUCTION MANAGEMENT) SERVICES CONTRACT FOR THE DESIGN AND CONSTRUCTION OF THE UMATAC-MERIZO WASTEWATER TREATMENT PLANT UPGRADE PROJECT S17-002-BND

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

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

WHEREAS, GWA has a number of critical Court Order ("CO") projects including a complete evaluation of the Umatac-Merizo Wastewater Treatment Plant (WWTP) to determine what improvements are necessary at the plant to achieve compliance with the WWTP's National Pollutant Discharge Elimination System (NPDES) permit through the United States Environmental Protection Agency (USEPA), as stated in Paragraph 15 of the 2011 Court Order, as well as the completion of construction activities identified in the approved plan resulting from the evaluation noted above, as stated in Paragraph 16 of the 2011 Court Order; and

WHEREAS, the System Evaluation Report required under Paragraph 15 of the 2011 Court Order, completed in December of 2013 by GWA's Program Management Office (PMO), resulted in a recommendation to GWA and USEPA that, with suitable WWTP upgrades and coordination with regulatory agencies, continued discharge to the Toguan River could be a viable and cost-effective option; and

//

WHEREAS, in June of 2016, GWA's PMO completed a Umatac-Merizo Wastewater Treatment Plant Upgrade Project Basis of Design Report, which provided a preliminary design intended to meet the June 30, 2016 interim deadline to execute a design contract, as described in Paragraph 16 of the 2011 Court Order; and

WHEREAS, GWA Management, in an effort to comply with the intent of the 2011 Court Order interim deadline to execute a construction contract by June 30, 2017, determined that the most expedient procurement process would be to proceed with a design-build project; and

WHEREAS, in June of 2017, GWA entered into a contract with "Core Tech – Hawaiian Dredging, LLC" to perform the Design and Construction of the Umatac-Merizo Wastewater Treatment Plant Upgrade; and

WHEREAS, GWA also required construction management type engineering services to oversee the design build construction activities and as such advertised the Request for Proposals (RFP 07-ENG-2017) soliciting statement of qualifications from experienced and qualified engineering firms to provide Owner's Site Representative (Construction Management) Services for the Design and Construction of the Umatac-Merizo Wastewater Treatment Plant Upgrade project, and received and reviewed proposals from five proposers; and

**WHEREAS,** RFP packages were downloaded by multiply engineering firms, from which GWA received proposal submittal from five (5) firms before the RFP submittal deadline; and

WHEREAS, the GWA A-E Selection Committee reviewed and evaluated the five (5) proposals and generated the ranking of the most qualified firm (see EXHIBIT A-Evaluation Score) which indicated "SSFM International" as being the highest-ranked firm; and

WHEREAS, the A-E Selection Committee submitted, through GWA's engineering division, for the General Manager's (GM) Determination of selection, the ranking of the firms evaluated from which GWA can begin scope and fee negotiation with the selected firm or any successor at interest thereto (see EXHIBIT B- GM Determination); and

31

32

WHEREAS, GWA's PMO negotiated the scope and fee with SSFM, and recommend for acceptance the final scope and fee submitted by SSFM in the amount of One Million Two Hundred Seventy Eight Thousand Fifty Dollars (\$1,278,050.00) (SEE EXHIBIT C – SCOPE AND FEE PROPOSAL). The GWA Chief Engineer has reviewed the negotiated scope and fee proposal and concurs with the findings of the PMO that it is reasonable and responsible; and

WHEREAS, GWA Management seeks approval of the fee proposal amount of One Million Two Hundred Seventy Eight Thousand Fifty Dollars (\$1,278,050.00), plus a ten percent (10%) contingency of One Hundred Twenty Seven Thousand Eight Hundred Five Dollars (\$127,805.00), for a total amount of One Million Four Hundred Five Thousand Eight Hundred Fifty Five Dollars (\$1,405,855.00); and

WHEREAS, funding for this project will be from the GWA Bond Funds under the line items CIP WW 12-07 "Umatac Merizo STP Replacement", System Development Charge Funds and Internally Funded CIP; and

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

- 1. The recitals set forth above hereby constitute the findings of the CCU.
- 2. The CCU finds that the terms of the scope and fee proposal submitted by SSFM are fair and reasonable.
- 3. The CCU finds that the terms and conditions set by GWA relative to commencement of work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
- 4. The CCU hereby authorizes the management of GWA to enter into a contract with SSFM in the amount of One Million Two Hundred Seventy Eight Thousand Fifty Dollars (\$1,278,050.00) (EXHIBIT C).
- 5. The CCU hereby further approves the total funding amount for this project of One Million Two Hundred Seventy Eight Thousand Fifty Dollars (\$1,278,050.00), plus a ten percent (10%) contingency of One Hundred Twenty Seven Thousand Eight Hundred Five Dollars (\$127,805.00), for a total amount of One Million Four Hundred Five Thousand Eight Hundred Fifty Five Dollars (\$1,405,855.00).

1	6. The CCU further approves the funding for this project will be from the GWA					
2	Bond Funds under the line items CIP WW 12-07 "Umatac-Merizo ST					
3	Replacement", System Development Charge Funds and Internally Funded CIP					
4						
5	<b>RESOLVED</b> , that the Chairman certified and the Board Secretary attests to the adoption					
6	of this Resolution.					
7	<b>DULY AND REGULARLY ADOPTED</b> , this 25 <sup>th</sup> day of July 2017.					
9	Certified by: Attested by:					
11						
13 14	JOSEPH T. DUENAS Chairperson  J. GEORGE BAMBA Secretary					
15 16 17 18	I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:  The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was					
20	present and the members who were present voted as follows:  AYES:					
22						
23	NAYS:					
24	ABSTENTIONS:					
26	ABSENT:					
27						
28						
29						
30						
31						
32						
	4					

### Exhibit A (1 of 1)



#### **GUAM WATERWORKS AUTHORITY**

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

June 1, 2017

To:

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

From:

Gloria P. Bensan

Chairperson, Consultant Selection Board

Subject:

RFP-07-ENG-2017

Owner's Site Representative (Construction Management) Services for the Design and Construction of the Umatac-Merizo Wastewater Treatment Plant

Upgrade

GWA Project No. S17-002-BND

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

EVALUATION COMMITTEE MEMBERS					
Name	Title				
John Davis, P.E.	CIP Wastewater Engineer Supervisor				
Rylma Carino	Junior Engineer				
David Fletcher	Operations and Maintenance Manager				
Irina Constantinescu, P.E.	Brown and Caldwell, PMO				

	Consultant		Evaluati	on Score		Total	Rank
1.	AmOrient Engineering	90	90	87	73	340	2
2.	E.M. Chen & Associates, Inc.	70	88	69	49	276	5
3.	TG Engineers, PC	90	92	96	61	339	3
4.	EMPSCO Engineering Consultants	80	92	80	86	338	4
5.	SSFM International	85	90	97	85	357	1

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

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



#### **GUAM WATERWORKS AUTHORITY**

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

#### **MEMORANDUM**

To:	Miguel C. Bordallo, P.E., General Manager
From:	Thomas F. Cruz, P.E., Chief Engineer
Subject:	RFP-07-ENG-2017
	Owner's Site Representative (Construction Management) Services for the Design and Construction of the Umatac-Merizo Wastewater Treatment Plant Upgrade GWA Project No. S17-002-BND
Date:	June 1, 2017
	n Committee has completed all necessary actions for selecting the most qualified to the referenced solicitation. All proposals were reviewed and scored according to

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

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

- 1. SSFM International
- 2. AmOrient Engineering
- 3. TG Engineers, PC

Concurred:

VINCENT E. GUERRERO Supply Management Administrator	<u>2</u> 17 Date
GENERAL MANAGE	ER'S DETERMINATION
Consultant Firm Selected:	
SEFM INT.	
Remarks:	W W
MIGUEL C. BORDALLO, P.E. General Manager	6 - 7 - 17 Date

414 W Soledad Avenue, Suite 602 Hagatna, GU 96910

### Exhibit C (1 of 25)

T: 671.300.4220

July 12, 2017



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

148556

Subject: Letter of Recommendation for Owner's Site Representative (Construction Management) Services for the Umatac-Merizo Wastewater Treatment Plant Upgrade; GWA Project Number S17-002-BND

Dear Mr. Cruz:

Brown and Caldwell (BC) has reviewed and negotiated with SSFM International, Inc. (SSFM) the construction management services scope and fee for the Umatac-Merizo Wastewater Treatment Plant Upgrade project. BC recommends executing a contract with SSFM to provide construction management services for the aforementioned project. Their fee and scope proposal associated with construction management services was reasonable and responsible. Table 1, below, indicates the cost change made between SSFM's initial and final fee proposal as result of negotiations. During negotiations, SSFM agreed to reduce their fee in some areas but were also directed by BC to add scope in others, leading to a higher final fee than proposed initial fee. BC also directed SSFM to prepare a time & material (T&M) proposal, rather than a lump sum proposal. Attachment 1 provides the revised detailed summary of SSFM's scope and fee proposal.

**Table 1: Fee Proposal Summary** 

	Original Proposed Fee	Final Negotiated Fee		
	\$1,231,707.00	\$1,278,050.00		
Percent of Project Cost <sup>1</sup>	7%	7%		

<sup>&</sup>lt;sup>1</sup>Percent of Project Cost Based upon select design-build bid of \$18,645,450.00.

414 W Soledad Avenue, Suite 602 Hagatna, GU 96910

T: 671.300.4220

### Exhibit C (2 of 25)

If you have any questions, please call me at (671) 300-4223.

Respectfully Submitted,

**Brown and Caldwell** 

Bill Chang, P.E.

**Supervising Engineer** 

cc: Erickson Marble, Brown and Caldwell Gloria Bensan, Guam Waterworks Authority

#### Attachments:

1. Final Negotiated CM Scope and Fee



### Exhibit C (3 of 25)

July 5, 2017 2017\_085.000

CLIENT: Guam Waterworks Authority

Gloria B. Nelson Public Service Building

688 Route 15 Mangilao, GU 96913

Attention: Mr. Thomas F. Cruz, P.E., Chief Engineer

PROJECT: Owner's Site Representative (Construction Management) Services for the Design and

Construction of the Umatac-Merizo Wastewater Treatment Plant Upgrade; GWA Project No. S17-

002-BND

REFERENCE: GWA RFP 07-ENG-2017

#### PROPOSAL FOR PROFESSIONAL SERVICES

We are pleased to submit the following proposal between **Guam Waterworks Authority** (hereinafter referred to as CLIENT) and **SSFM INTERNATIONAL, INC.** (hereinafter referred to as SSFM) to provide OWNERS SITE REPRESENTATIVE services for this project as described herein.

#### **ATTACHMENTS**

This PROPOSAL together with the following attachments constitute the entire agreement between the parties herein:

- 1. EXHIBIT "A": Scope of Services
  - a. Description of Services
  - b. Basic Scope of Work
  - c. Work Not Included in This Agreement
  - d. Information Required From Client
  - e. Assumptions Made
- 2. EXHIBIT "B": Schedule of Billing Rates

#### **GENERAL DESCRIPTION OF THE PROJECT**

The project is described as the design and construction of the Umatac-Merizo Wastewater Treatment Plant (WWTP) Upgrade project. GWA plans to improve the WWTP, including rehabilitation or installation of pump stations, headworks, aerated lagoon, storage tank, overland flow system, and UV disinfection system. The goal of the Owner's Site Representative (OSR) is to observe, advice, and assist GWA with the Design-Build project.

#### SERVICES TO BE PROVIDED

Description of Owner's Site Representative Services as described in Owner's Site Representative (CM) for Umatac-Merizo WWTP Upgrade (See Exhibit A – Scope of Services)

#### OWNERS SITE REPRESENTATIVE (OSR) CHARGES

For the basic scope of work shown hereinbefore, compensation for our services shall be calculated on a Time and Materials basis using the billing rates of assigned personnel in effect at the time of these services are performed plus 4.166% Guam Tax, not to exceed \$1,278,050.00. See Exhibit B – Schedule of Billing Rates and estimates for Not-To-Exceed amount.



Exhibit C (4 of 25) Guam Waterworks Authority Owner's Site Representative (Construction Construction of the Umatac-Merizo Wastewater **Treatment Plant Upgrade** Page 2

July 5, 2017

2017\_085.000

**ADDITIONAL SERVICES**: Services beyond the scope indicated above shall be on a Time and Material basis using billing rates in effect at the time these services are performed, plus 4.166% Guam Tax. However, before any additional services are provided, SSFM must receive the CLIENT's consent to those services.

#### **Weather Delays or Contractor's Contract Extensions**

- 1. SSFM's fees for the services covered by this Agreement are based on an estimated construction contract time period and without allowances for construction contract extensions caused by weather delay days or other reasons.
- 2. For construction contract time extensions, Client agrees to compensate SSFM for services provided during this period on a Time and Material basis using the billing rates of SSFM's assigned personnel plus 4.166% Guam Tax.

#### **Overtime Pay**

SSFM's estimate of fee's for the services covered by this Proposal are based on regular 5 days a week and 8 hours per day excluding weekends and holidays. Overtime work, if necessary, shall be charged to GWA and/or Contractor as approved by GWA.

PAYMENTS ON ACCOUNTS AND LATE PAYMENTS: Invoices for our services shall be submitted, at our option, either upon completion of any phase of service or on a monthly basis. Invoices shall be payable when rendered and shall be considered "past due" if not paid within 30 days after the invoice date. A service charge will be charged at the rate of 1.5% (18% annual rate) per month or the maximum allowable by law on the then outstanding balance of "past due" accounts. In the event that any portion of an account remains unpaid 90 days after billing, SSFM may, without waiving any claim or right against the CLIENT, and without liability whatsoever to the CLIENT, suspend the performance of the service.

#### **REIMBURSABLES (MATERIALS):**

- 1. Reimbursable expense means the expense incurred directly or indirectly in connection with the project such as, but not limited to, off-island transportation, lodging, meals, long distance telephone calls and facsimile transmissions, overnight deliveries, internet, computer and equipment lease or rental costs, and the cost of reproductions beyond those normally required for coordination and information purposes.
- 2. Reimbursable expenses shall be billed at a multiple of 1.15 times the cost incurred plus Guam Tax.

SCHEDULE OF SERVICES: Excluding CLIENT and OWNER review periods, significant scope changes and/or redesigns by CLIENT, or other delays beyond the control of SSFM, the time schedule for the proposed scope of services should proceed according to the following time estimates:

Phase **Estimated Time** 

Pre-Construction Design Phase Construction Phase Post-Construction Phase

3 months after notice to proceed (NTP) 17 months after Pre-Construction Phase 2 months after Construction Phase



### Exhibit C (5 of 25)

Guam Waterworks Authority
Owner's Site Representative (Construction
Management) Services for the Design and
Construction of the Umatac-Merizo Wastewater
Treatment Plant Upgrade
Page 3

July 5, 2017

2017\_085.000

Thank you very much for this opportunity to provide professional services for this PROJECT.

SSFM INTERNATIONAL, INC.

Rizaldy B. Cortez, P.E., PMP, LEED AP Guam General Manager / RME

Email: rcortez@ssim.com

Reviewed and Approved By:

Michael P. Matsumoto, P.E., FACEC

President/CEO

Email: mmatsumoto@ssfm.com

Enclosures: Exhibit "A" – Scope of Services (RFP dated 6/20/17 pages 14-23)

Exhibit "B" – Schedule of Billing Rates



### Exhibit C (6 of 25)

Guam Waterworks Authority
Owner's Site Representative (Construction
Management) Services for the Design and Construction
of the Umatac-Merizo Wastewater Treatment Plant
Upgrade
2017\_085.000

Page A-1

July 5, 2017

### EXHIBIT "A" SCOPE OF SERVICES

#### **DESCRIPTION OF SERVICES**

 Our construction management services as outlined under "Basic Scope of Work" will be limited to the following physical limits:

The Umatac-Merizo Wastewater Treatment Plant site

#### BASIC SCOPE OF WORK

1. Owners Site Representative (CM Services) - Refer to attached Exhibit A-2 (RFP Scope Definition pages 14-23)

#### WORK NOT INCLUDED IN THIS AGREEMENT

Other than the services described in paragraphs hereinbefore, the following work are not included in this Agreement, however, SSFM can provide these services either through in-house staff or by subconsultants as additional services:

- 1. Design Engineering Work NOT INCLUDED
- 2. Design Review Work NOT INCLUDED
- 3. Submittal approval and RFI Responses NOT INCLUDED
- 4. Value Engineering Work NOT INCLUDED

#### ASSUMPTIONS MADE

- 1. OSR (CM) Field Office to be provided by the Owner.
- 2. Work will be completed within the estimated time shown on the SCHEDULE OF SERVICES in the cover letter.

--o0o--

### Exhibit C (7 of 25)

**EXHIBIT A-2** 

#### III. SCOPE OF WORK

Owner's Site Representative (Construction Management) Services for the Design and Construction of the Umatac-Merizo Wastewater Treatment Plant Upgrade GWA Project No. S17-002-BND

The work performed under this scope shall consist of Owner's Site Representative (Construction Management) Services for the Design and Construction of the Umatac-Merizo Wastewater Treatment Plant Upgrade project. For the purpose of clarity and alignment with the Design-Build contract for this project, this Scope of Work will hereafter use the term "Owner's Site Representative" to describe the desired professional services included under this Scope of Work. Hereafter, the terms "CM," "Construction Manager," and "Construction Management" will not be used.

GWA plans to improve the Umatac-Merizo Wastewater Treatment Plant (WWTP), including rehabilitation or installation of pump stations, headworks, aerated lagoon, storage tank, overland flow system, and UV disinfection system. The goal of the Owner's Site Representative (OSR) is to observe, advise, and assist GWA with the Design-Build project. The OSR will coordinate the construction process with the Design-Builder's designated representative at the project site. The OSR is not the Design-Builder's subcontractor, consultant, agent, or employee.

The OSR, an independent consultant and owner's representative for GWA, will have these primary functions:

- Observe construction progress on the site by the Design-Builder
- Monitor construction for conformance with the Design-Builder's plans and specifications
- Review the construction schedule relative to actual construction progress
- Review Design-Builder pay applications in comparison with construction work performed
- Receive and log Design-Builder submittals
- Keep GWA advised and informed as to project progress and cost
- Provide supporting information during the change process
- Disclose any information relevant to GWA's interest
- Make proactive recommendations to GWA for action to maintain progress and achieve the project schedule and budget
- Act in the best interest of GWA

#### The OSR shall not:

- Authorize any deviation from the contract documents or substitution of materials or equipment (including "or-equal" items)
- Exceed limitations of GWA's authority as set forth in the contract documents
- Undertake any of the responsibilities of the Design-Builder, construction subcontractors, project design professionals, or suppliers
- Advise on, issue directions relative to, or assume control over any aspect of the means, methods, technique, sequences, or procedures of the Work

### Exhibit C (8 of 25)

- Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the Design-Builder's activities or operations
- Accept submittals from anyone other than the Design-Builder
- Have any authority with respect to GWA's occupancy of the construction, in whole or in part

GWA has retained a Program Manager, Brown and Caldwell, to assist with the administration of the GWA's capital improvement program. The selected consultant will work under the direction of the GWA General Manager, the GWA Chief Engineer, and Brown and Caldwell (Program Manager). Brown and Caldwell is the designated GWA project manager for this design-build project.

The OSR's dealings in matters pertaining to the construction in general shall be with the Design-Builder's designated representatives at the Site. The OSR's dealings with the Design-Builder's construction subcontractors and suppliers, including project design professionals, shall only be through or with the knowledge and approval of the Design-Builder.

#### **OWNER'S SITE REPRESENTATIVE SERVICES**

The OSR shall provide and maintain an appropriately sized on-site inspection staff throughout the duration of the construction period for the project. OSR responsibilities include construction monitoring and inspection, review of Design-Builder applications for payment, construction schedule assessment, construction document review, and OSR professional practice, which includes the specific activities described below. The OSR shall be responsible for the safety of their personnel at the site of the project and shall provide a written Health and Safety Plan for all OSR activities at the project site.

A general scope of services is provided. However, proposing consultants are encouraged to offer their own opinions and suggestions regarding the scope of services for the work included herein. The scope of the OSR's services, as currently envisioned by the GWA, would include, but not be limited to, the following areas of work:

#### A. GENERAL OSR TASKS

The OSR will provide services relating to the daily field observation, inspection, coordination, communication, and monitoring for the construction and rehabilitation work. Specific construction work components of this project include the following:

- Demolition of existing equipment and structures
- UV disinfection system and effluent flow meter installation
- Headworks construction, including influent flow meter and screens
- Aerated lagoon improvements
- Storage tank installation
- Process electrical, instrumentation and control
- Grading and drainage, including the overland flow system upgrade
- Archaeological monitoring, as needed

### Exhibit C (9 of 25)

General construction assistance services consist of:

- 1. Project Liaison: The OSR shall serve as GWA's liaison:
  - a. With the Design-Builder regarding the construction Work.
  - b. With the Design-Builder when the Design-Builder's operations affect GWA's onsite operations.
  - c. With respect to the Design-Builder's requests for additional details or information from GWA, or for clarifications and interpretations of the contract documents.
  - With respect to proposed modifications of the contract documents, Change Orders, and similar matters.
- 2. <u>Project Correspondence:</u> The OSR shall review Design-Builder's correspondence, reports, and inspection documentation as required to communicate project activities and issues with GWA. The OSR shall develop a format for daily and weekly reports for the approval of GWA. At a minimum, the following reports and documents shall be provided:
  - a. <u>Daily Construction Log:</u> The onsite inspector shall maintain a Daily Construction Log, which shall be available to GWA for review at any time. This item is further discussed below, under "Duties of the Resident Inspector."
  - b. Weekly Status Report: The OSR shall prepare and submit a weekly construction progress report to the GWA Chief Engineer or designated project manager. The status report shall summarize the daily construction activities, weekly progress meetings with the Design-Builder, and include an updated construction schedule.
  - c. <u>Progress Photo Log:</u> The OSR shall prepare and retain a construction progress photo log in an organized album with phases of the project clearly labeled. The photo log shall capture all phases of the project preconstruction, during construction, and post-construction.
- 3. <u>Design-Builder Applications for Payment:</u> The OSR shall review each construction-related Application for Payment received from the Design-Builder, according to the following procedure:
  - a. Note compliance with the established procedure for Application for Payment submission, and for compliance with Bid and Contract requirements.
  - b. Meet with the Design-Builder to review each Application for Payment.
  - c. Forward the Application for Payment with recommendations to GWA, noting particularly the relationship of the payment requested to:
    - i. The Schedule of Values accepted by the Owner;
    - ii. Relevant cost of the work provisions:
    - iii. Construction completed;
    - iv. Materials and equipment delivered to the site, but not incorporated in the construction Work.

The OSR shall submit their review and recommendations within 5 working days of receipt from the Design-Builder.

4. <u>Certificates and Operation & Maintenance Manuals:</u> During the course of construction, the OSR shall review materials and equipment certificates, operation &

### Exhibit C (10 of 25)

maintenance (O&M) manuals, and other documentation required by the contract documents to be assembled and furnished by the Design-Builder. The OSR shall note whether the documentation is applicable to the items actually installed, and deliver such documentation to GWA for its review and acceptance prior to payment for that part of the Work.

- 5. <u>Project Meetings:</u> The OSR shall attend meetings with the Design-Builder, construction subcontractors, GWA, and other stakeholders, such as Pre-Construction Conferences, progress meetings, job conferences, and other project-related meetings. The Design-Builder shall prepare an agenda and provide meeting minutes for each meeting.
- 6. <u>Pre-Construction Conference:</u> The OSR shall attend one or more Pre-Construction Conferences to discuss key contract elements, Design-Builder's construction schedule, coordination requirements, progress payment estimates, change orders, as-recorded drawings, submittals coordination, etc. The Design-Builder shall prepare an agenda and provide meeting minutes.
- 7. <u>Progress Meetings</u>: The OSR shall attend weekly progress meetings, arranged by the Design-Builder, to discuss progress of work, contract requirements, and other issues related to the administration and prosecution of the work. Prior to the weekly meeting, the OSR shall review the Design-Builder's record drawings to ensure that they are current and capture any deviations from the original plan set. The OSR shall also have a current copy of the original plan set. The Design-Builder shall prepare meeting minutes for all progress meetings with the OSR, subcontractors, the Program Manager, and GWA.
- 8. <u>Other Meetings:</u> Arrange meetings between the Design-Builder and GWA, and other stakeholders as necessary.
- 9. <u>Project Coordination:</u> The OSR shall coordinate and communicate with GWA, the Program Manager, and the Design-Builder. The OSR shall notify GWA of any deficiencies with the work of the Design-Builder.
- 10. <u>PM/CM Software Coordination:</u> The OSR shall procure the Project Management / Construction Management software selected by the Design-Builder. The OSR will coordinate with the Program Manager, GWA, and the Design-Builder to help ensure that all parties have the needed PM/CM software to effectively transmit and review project documents.
- 11. <u>Requests for Information:</u> Track all Requests for Information (RFIs) and maintain an RFI log. Coordinate receipt of answers from all sources. Assist GWA with the development of a response to RFIs regarding any aspect of the contract documents.
- 12. <u>General Compliance Monitoring:</u> The OSR shall evaluate Design-Builder compliance with all local and federal labor laws applicable to the project. Any violations shall be immediately reported to GWA. Compliance monitoring shall include but not be limited to the following:

### Exhibit C (11 of 25)

- a. Regulations and laws: Monitor compliance with Territorial and/or Federal laws, regulations and rules.
- b. Labor Laws: Monitor Contractor and subcontractor procedures to verify legal status of employees on site.
- c. Licensure: Confirm that the Contractor and its subcontractor and their workers have all required licenses and ensure that said licenses are valid throughout the term of the Contract.
- d. Permits: Monitor and track Design-Builder's compliance in obtaining required permits and approvals.
- e. Review Design-Builder's insurance documents submitted to GWA for compliance with Contract requirements. Track insurance documents, ensure insurance is valid throughout the term of Contract and maintain insurance certificate log.
- 13. <u>Claims and Disputes:</u> The OSR shall promptly notify GWA regarding any issues that arise during construction of the project that could result in claims and/or disputes. The OSR shall provide the following services to assist GWA with the resolution of claims and disputes:
  - a. Records: Maintain copies of all verbal and written communications, submittals, testimony, photos, and meetings regarding a potential dispute and promptly submit all originals to the GWA Chief Engineer and, if requested, the Attorney for GWA.
  - b. Claims: Review claims submitted by the Design-Builder and provide written recommendations to GWA regarding the solution of the dispute.
- 14. <u>Stop Work Orders:</u> The OSR, upon notice of serious or urgent Contract non-compliance issues relating to a portion of, or the entire project, shall issue specific stop work orders to the Design-Builder as follows:
  - a. If the work or actions of the Design-Builder or subcontractor are an imminent threat to the public or personnel on the project, the stop work order may be issued orally at that time, with written confirmation to follow.
  - b. With prior notification and approval of the GWA Chief Engineer or Project Manager in all other cases.
  - c. Recommendations to issue Stop Work Orders shall be submitted to GWA upon the discovery by the OSR of such need.
- 15. <u>Schedule Monitoring:</u> The OSR shall review the Design-Builder's construction schedule. The OSR shall bring schedule variances to the attention of the Design-Builder and GWA. The OSR may recommend corrective action to GWA throughout the project in the event that construction progress falls behind schedule. An updated project schedule should be submitted with each of the Design-Builder's pay applications. If

### Exhibit C (12 of 25)

necessary, a recovery schedule should also be submitted illustrating how the Design-Builder plans to bring a late project back within schedule.

- 16. <u>Quality Control:</u> The OSR shall monitor ongoing and completed construction work for compliance with the plans and specifications. The OSR shall advise GWA if, based on their observation, the work is not in compliance with the plans and specifications. Additionally, the OSR shall:
  - a. Promptly advise the Program Manager or the GWA Chief Engineer if the Design-Builder fails to correct or remove the defective work.
  - b. Assist with the preparation of punch lists and final inspection checklists, and verify that work is completed before final acceptance by GWA.

#### B. INTERPRETATIONS AND CLARIFICATIONS

1. <u>Interpretation:</u> The OSR shall provide GWA with interpretation of contract drawings, specifications, and recommendations as necessary. Provide requested interpretations of the plan and specifications in a timely manner to GWA for review and concurrence prior to submitting to the Design-Builder. The interpretations may be formally communicated as RFIs.

#### C. SUBMITTALS

- The OSR shall receive samples furnished at the Site by the Design-Builder, and notify GWA of availability of samples for examination.
- The OSR shall record date of receipt of submittals and samples approved by the Design-Builder.
- 3. The OSR shall advise GWA and the Design-Builder of the commencement of any portion of the construction work requiring a submittal or sample, for which the OSR believes that the submittal has not been accepted by GWA.
- 4. The OSR shall maintain a Submittal Log and shall keep track of submittals, status, and disposition.

#### D. INSPECTIONS AND TESTS

- 1. Resident Inspection, Construction Inspection, and Quality Control Monitoring: The OSR shall provide full-time observation and inspection services of construction. OSR work shall be performed in a way as to not impede the Design-Builder's progress nor allow for an unreasonable amount of work to be performed without inspection. In the event that any of the inspectors are not satisfactory to GWA, the OSR shall replace the person with one that is acceptable to GWA.
  - a. Resident Inspector: The OSR shall provide at least one full-time competent on-site inspector to observe all phases of the construction. The Resident Inspector shall have demonstrable experience satisfactory to GWA relative to the type of work being performed.

### Exhibit C (13 of 25)

- b. Special Inspections: In addition to general compliance inspections, the OSR shall provide full-time inspection services by a person with demonstrable experience and certification satisfactory to GWA related to concrete placement, concrete anchoring, pre-stressing operations, grading, excavation, backfilling, and all other operations that require special inspections.
- 2. Duties of the Resident Inspector will include, but are not limited to:
  - a. Prior to construction, review the plans and specifications and bring to GWA's attention any issues before they arise in the field.
  - b. Prepare a Daily Construction Log (daily report, diary, or log book) which will include the following data:
    - i. Design-Builder's hours at the site
    - ii. Construction subcontractors present at the site
    - iii. Record of construction personnel and equipment
    - iv. Weather conditions
    - v. Photographs of construction
    - vi. Site visitors
    - vii. Daily progress referenced by station locations or coordinate locations
    - viii. Review of testing results
    - ix. Review of the construction schedule versus construction progress
    - x. Any site accidents
    - xi. Force majeure or delay events
    - xii. Emergencies
    - xiii. Damage to property by fire or other causes
    - xiv. Discoveries of any constituents of concern or hazardous environmental conditions
    - xv. Deliveries of equipment and materials
    - xvi. Problems or complaints
  - c. Maintain daily contact with the Design-Builder's designated representative.
  - d. Record contact information of all construction subcontractors and major suppliers of materials and equipment (e.g., names, addresses, telephone numbers, fax numbers, email addresses, website locations)
  - e. Construction integrity review for compliance with the construction documents:
    - i. Check materials against approved submittals
    - ii. Proper support of and bedding for Pipe
    - iii. Proper foundation subgrades
    - iv. Pipe depth and location referenced by stationing or coordinates
    - v. Backfill and compaction
    - vi. Concrete samples
    - vii. Verification of appropriate testing
    - viii. Check for defective materials
    - ix. Verification of installation techniques
    - x. Construction of pipe restraints and thrust blocking as required by the construction documents
    - xi. Pressure testing

### Exhibit C (14 of 25)

- xii. Check site clean-up; condition or removal of temporary erosion control structures (silt fencing, etc.) and repairs to roads, drive-ways, yards, drainage culverts, water piping, etc.
- f. Record data for Record drawings:
  - i. Record and sketch, including station information as applicable, the location of all underground utilities
  - ii. GPS surveyed locations of the underground utilities, and locations of valves and fittings. Notes to include the size of the fitting or valve and its orientation
  - iii. Record and sketch all changes or variations to the construction plans
  - iv. Photograph and sketch details of fittings, connections and valves
  - v. Note any changes to the plans. Track all change orders and record on the construction plans
  - vi. Mark as-built data on a master set of plans for final drafting
- g. Pay Request Review:
  - i. Make field measurements to verify all pay items
  - ii. Check and verify Contractor's pay requests
  - iii. Coordinate with Contractor to determine earned value for lump sum bid items
- 3. Observation of Testing, System Start-Ups, and Training: The OSR shall:
  - a. Observe tests, equipment and systems start-ups, and operation & maintenance training.
  - b. Review Design-Builder's recordkeeping regarding tests, equipment, and system start-ups, and operation & maintenance training.
  - c. Coordinate and monitor testing required to be performed by GWA.
  - d. Maintain a log of all testing performed.

### E. CHANGE MANAGEMENT

- 1. <u>Change Order Review:</u> Track all Change Orders (originals to be provided to GWA) and maintain a Change Order Log. Based on Design-Builder Proposed Change Orders, provide evaluations, independent cost estimates, and recommendations to GWA.
- 2. <u>Change Order Documents</u>: The OSR shall maintain copies of all approved change orders (originals to be provided to GWA) and ensure that subsequent pay requests accurately represent these change orders.

### F. CONSTRUCTION SURVEY SERVICES

- 1. <u>Construction Survey Services</u>: The OSR shall review Design-Builders survey and field measurements as necessary to verify that the work is installed in accordance with the plans and specifications. Changes to the horizontal and vertical alignments and elevations work shall be made only with the approval of the GWA Chief Engineer.
  - a. Pipeline Alignments and Location of Structures: Spot check Design-Builder's construction staking to verify the pipeline alignments and structure locations

### Exhibit C (15 of 25)

are as called for on the plan and specifications and in order to ensure that the work is located within lawful and approved property, Rights-of-Way and easements.

b. Elevations: Spot check the Design-Builder's elevations for foundations, pads, pipeline inverts, backfill thickness, manholes, and other structures for which vertical elevation is a critical design element.

### G. DISPUTES BETWEEN OSR, GWA, AND DESIGN-BUILDER

1. The OSR shall make recommendations to GWA on all claims related to the technical requirements of the Contract Documents. The OSR is not responsible for resolving disputes between GWA and the Design-Builder.

### H. PROJECT RECORDS AND DESIGN-BUILDERCOMPLETION DOCUMENTS

- 1. <u>Project Records:</u> The OSR shall maintain a fully searchable electronic project record and a clearly labeled / tabbed set of 3-ring binders and electronic copies. The project records shall include all project correspondences, photos, daily logs, weekly reports, and other items required to document the construction process.
- 2. <u>Punch List Development:</u> Throughout the construction of the project, the OSR shall prepare and maintain a list of defects and deficiencies in the work, which will be communicated with GWA and the Design-Builder. The deficiency list shall be discussed at each project meeting. The unresolved deficiency list shall be provided to all members of the pre-final and final inspection team. The list shall be revised after inspections to reflect additional items identified during the inspection. The OSR is to monitor punch list completion, but is not responsible for the Design-Builder's correction of deficiencies.
- 3. Inspections: The OSR shall participate in GWA's site visits and inspections.
  - a. <u>Preliminary Inspections:</u> Preliminary inspections shall be arranged as necessary for specific work elements that require the certification and approval of other agencies. The OSR will advise GWA if a preliminary inspection appears necessary.
  - b. <u>Pre-Final Inspection</u>: A pre-final inspection shall be conducted after the Design-Builder notifies GWA in writing that the Design-Builder believes the work is substantially complete. The OSR shall assist in the preparation of a punch list of items to be completed or corrected, and in preparation of the Certificate of Substantial Completion.
  - c. <u>Final Inspection</u>: The final inspection shall be conducted after correction of punch list items. The OSR shall observe whether items on the final punch list have been completed or corrected, and make recommendations to GWA concerning acceptance and issuance of the notice of acceptability of the Work. The OSR shall assist GWA with preparing the notice of acceptability of the Work.

### Exhibit C (16 of 25)

- 4. <u>Final Report:</u> The OSR shall prepare a final report after written final acceptance of the work by GWA. The final report shall include a narrative documentation of all significant construction events and issues, and shall become a historical record for the project. The project record described above shall become a part of and be submitted along with the final report. The final report and other post-construction activities specified herein shall be completed within thirty (30) calendar days of Final Completion, as accepted by GWA in writing.
- 5. <u>Record Documents:</u> The OSR shall communicate with the Design-Builder regarding development of official record documents. Record drawings shall be generated by the Design-Builder. Record drawings shall be marked "RECORD DRAWINGS," and be dated and sealed by Design-Builders professional engineer licensed on Guam.

### I. COMMISSIONING AND STARTUP

1. The OSR is to coordinate with the Design-Builder, Program Manager, and GWA to assist with successful startup and testing. In particular, the OSR will ensure that GWA Operations is involved with the process. Coordination between the OSR, Design-Builder, Program Manager, GWA Operations, and other stakeholders as required, should take place prior to initiation of startup and testing. Startup and testing is to be performed in accordance with the technical specifications.

#### J. TRAINING

1. The OSR shall coordinate with the Design-Builder, GWA, and the Program Manager to schedule startup training required by the construction contract.

### K. WARRANTIES

1. The Design-Builder shall maintain a copy of warranties and compile associated Manufacturer and Design-Builder warranty documents. Warranty information shall be included in the final report. All original warranty documents shall be provided to the OSR and GWA.

#### L. SPARE PARTS

1. The OSR shall maintain a list of all spare parts to be delivered to GWA if applicable under the contract, and confirm that the spare parts have been formally transferred from the Design-Builder to GWA prior to project closure. Transfer documentation shall be included in the Final Report.

This Request for Proposal was approved by Miguel Bordallo, P.E. GWA General Manager and Thomas F. Cruz, P.E., Chief Engineer.

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Exhibit C (17 of 25)

#### GWA Umatac-Merizo Wastewater Treatment Plant Upgrade (Bid Proposal) START DATE: 05-Jun-17 CONSTRUCTION SCHEDULE PROJECT COMPLETION DATE: 31-Dec-18 GWA Umatac-Merizo Wastewater Treatment Plant Upgrade (B 575 05 Jun-17 31 Dec 18 MILESTONES & PERFORMANCE PERIOD 5/5 05-Jun-17 S1-Day-18 ▼ 31-Dec-18 ▼ 31-Dec-18 Notice to Proceed 575 05-Jun-17 A-000-100 **♦** Contract Comple ▼ 30-Dec-18 Design Start Date ♦ Design Start Date 08-Dec-17 ◆ Design Completion Date Start of Construction 30-Dec-18 PRE-CONSTRUCTION PHASE DESIGN & PERMIT REQUIREMENTS ▼ 08-Dec-17 Phase 1, Design Development & Submitta → 03-Aug-17 **▼** 03-Aug-17 Basic of Desing & Equipment Selection Preparal Submit Design Submittal GoVt Review & Approval Basic of Desing & Equipment Selection Prépare/ Submit Design Submittal 05-Jun-17 15-Jun-17 20-Jul-17 BD-000-100 Govt Review & Approval 03-Aug-17 Phase 2, Design Development & Submittal 159 05-Jun-17 New Effluent Pump Station & Forcemain ▼ 10-Nov-17 18 05-Jun-17 18 05-Jun-17 120 23-Jun-17 21 21-Oct-17 141 23-Jun-17 22-Jun-17 20-Oct-17 Topo Survey Prepare/ Submit Design Submittal Govt Review & Approvel / Permit Process Prepare/ Submit Design Submittal Govt Review & Apptoval / Permit Process BO-000-215 BO-000-220 10-Nov-17 Overland System Grading Plan Piping BD-000-340 Prepare/ Submit Design Submittal 10-Nov-17 Prepare/ Submit Design Submittal Gov't Review & Approval / Permit Process 10-Noy-17 120 21 23-Jun-17 21-Oct-17 BD-000-350 GoVt Review & Approval / Permit Process 10-Nov-17 Prepare/ Submit Design Submittel Gov't Review & Approval / Permit Process BD-000-360 23-Jun-17 21-Oct-17 23-Jun-17 20-Oct-17 Prepare/ Submit Design Submittal Gov't Review & Apptoval / Permit Process BD-000-370 Lagoon Baffle and Outlet 10-Noy-17 Prepare/ Submit Design Submittal Gov/t Review & Approval / Permit Process velopment & Submittal 120 23-Jun-17 21 21-Oct-17 Prepare/ Submit Design Submittal Gov't Review & Approval / Permit Process 08-Dec-17 BD-000-390 Prepare/ Submit Final Design Submittal Package Govt Review & Approval / Permit Process 136 28-Jun-17 10-Nov-17 28 11-Nov-17 08-Dec-17 Prepare/ Submit Final Design Submittal Package Gov't Review & Approval / Permit Process PROCUREMENT & DELIVERY 30-Apr-18 BE-000-110 Procure and Delivery of Equipment & Material 273 01-Aug-17 30-Apr-18 Procure and Delivery of Equipment & Material ₹ 30-Dec-18 MOBILIZATION & CONSTRUCTION WORKS ₹ 30-Dec-18 Mobilization Site Clearing Headwork Construction Lagoon Effluent Pump Stat 01-Sep-17 21-Sep-17 22-Sep-17 05-Nov-17 01-Nov-17 30-Mar-18 26-Nov-17 25-Mar-18 27-Dec-17 25-May-18 MO-014-0170 Site Clearing Esgoon Effluent Pump Station MO-014-0200 nerator Building & Installation 2 Z-Dec-17 25-May-18 1 13-Aug-18 1 13-Aug-Generator Building & Installation Underground Piping Installatio Overland Flow Treatment Area 1 Overland Flow Treatment Area 2 Floculative Lagoon Repairs / Modifications Underground Electrical Installation Recirculating Pumps MO-014-0220 MO-014-0230 MO-014-0240 Floquiative Lagoon Repairs / Modifications MO-014-0250 Underground Electrical Insta Recirculating Pumps MO-014-0270 Mis. Pumps and Structures MO-014-0290 Above Ground Piping Installation Electrics/Constrols Installations MO-014-0300 ☐ Electrical/Constrols Installations MO-014-0310 Mechanical & Electrical Testing SSIONING AND HANDOVER Startup/Comm ning/Substantial Completion ₹ 30-Dec-18 Startup and Commissioning Substantial Completion Date Startup and Cor F-028-5230 Date Revision Checked Approved Remaining Level of Effort Remaining Work Summary 20-Jan-17 Preliminary Schedule JW Actual Level of Effort Critical Remaining Work Page 1 of 1 CTI-HDCC LLC Actual Work Milestone



## Exhibit C (18 of 25) Guam Waterworks Authority

Owner's Site Representative (Construction
Management) Services for the Design and Construction
of the Umatac-Merizo Wastewater Treatment Plant
Upgrade
2017\_085.000

Page B-1

July 5, 2017

## EXHIBIT "B" SCHEDULE OF CURRENT BILLING RATES

The hourly billing rates shown below include Guam Gross Receipt Tax.

PERSONNEL CATEGORY	HOURLY BILLING RATE
Principal	\$215.00
Project Manager	\$215.00
Resident Engineer	\$178.00
Clerk	\$59.00

See attached "Exhibit B-2" for estimated Not-To-Exceed amount.

### **EXHIBIT B-2**

# ONWER'S SITE REPRSENTATIVE (CM) SERVICES FOR DESIGN AND CONSTRUCTION OF UMATAC-MERIZO WWTP UPGRADE PROJECT NO.: \$17-002-BND Exhibit C (19 of 25)

### **T&M BILLING RATE SUMMARY**

CATEGORIES	RATE	UNIT	NTE QTY	NTE AMOUNT
Principal	\$215.00	Hour	381	\$81,915.00
Project Manager	\$215.00	Hour	1,066	\$229,190.00
Resident Engineer/Inspector	\$178.00	Hour	3,519	\$626,382.00
Secretaty/Clerk	\$59.00	Hour	3,519	\$207,621.00
Subtotal				\$1,145,108.00
Γ				I
Special Inspections				
Soils Engineer, PE	\$216.00	Hour	54	\$11,664.00
Soils Inspector	\$120.00	Hour	108	\$12,960.00
Concrete Special Inspector, PE	\$215.00	Hour	156	\$33,540.00
Concrete Inspector	\$99.00	Hour	288	\$28,512.00
Subtotal				\$86,676.00
QA Testing				
Soils Test: ASTM C-136, D-2419 & D-1557	\$401.00	Set	3	\$1,203.00
Compaction Test: ASTM D-1556 or D-2922	\$158.00	Set	30	\$4,740.00
Concrete Test: ASTM C-39 & C-138	\$175.00	Set	6	\$1,050.00
Asphalt Test: ASTM D-1559, D-2041, D-2172, D-2726	\$653.00	Set	3	\$1,959.00
Asphalt Test: ASTM D-2950	\$99.00	Each	6	\$594.00
Testing Technician	\$54.00	Hour	192	\$10,368.00
Subtotal				\$19,914.00
OA CUTTO				
QA Survey	64.070.00	Half Da	20	¢24.560.00
2-Man Crew	\$1,078.00	Half Day	20	\$21,560.00
3-Man Crew	\$1,198.00	Half Day	4	\$4,792.00
Subtotal				\$26,352.00
Total Not-To-Exceed (NTE) Amount				\$1,278,050.00

# GWA July 19, 2017 Work Session - ISSUES FOR DECISION $Exhibit \ C \ (20 \ of \ 25)$

### ONWER'S SITE REPRSENTATIVE (CM) SERVICES FOR DESIGN AND CONSTRUCTION OF UMATAC-MERIZO WWTP UPGRADE PROJECT NO.: S17-002-BND

Task Number	Task Description	Principal	Project Manager	Resident Engineer	Project Inspector	Secretary/Clerk	CADD Operator	Subconsultants	Amount
	HOURLY LABOR RATES	\$215.00	\$215.00	\$178.00		\$59.00			
Α	DESIGN DOCUMENTS REVIEW								
1	Document Review								
2	Pre-bid Conference								
3	Bid Review and Comments								
4	Attend Pre-con meeting								
	SUBTOTAL								
В	CONSTRUCTION PHASE								
1	Project Controls								
1.1	Project correspondence								
1.2	Submittal review								
1.3	Payment requests								
1.4	Attend weekly progress meetings								
1.5	Request for information								
1.6	Claims and disputes								
1.7	Project records								
2	Construction Inspection								
2.1	Onsite inspection								
2.2	Acceptance of work								
2.3	Stop work orders								
2.4	Change orders								
2.5	Design changes								
2.6	<del>DCVR</del>								
3	Project Closeout								
3.1	Schedule monitoring								
3.2	Punchlist development								
3.3	Inspections								
3.4	Training and warranty								
	SUBTOTAL								
С	POST CONSTRUCTION								
1	Final report								
2	Project records								
3	Record drawings								
	SUBTOTAL								
	All af the above tools	201	4.000	2.542		2.542			1145 400
1	All of the above tasks	381	1,066	3,519		3,519			1,145,108
1	CLIDTOTAL								1 1 4 5 1 0 0
	SUBTOTAL								1,145,108
D	Special Inspection Estimated Fee								86,676
E	QA Testing Estimated Fee								19,914
F	Survey Estimated Fee								26,352
F-	SUBTOTAL								132,942
	JUBIUIAL								134,342
	TOTAL NOT-TO-EXCEED AMOUNT								1,278,050
	TOTAL NOT-TO-LACELD ANIOUNT								1,270,030

### Exclusions:

- 1. Design review
- 2. Submittal approval and RFI responses.
- 3. OSR (CM) field office (to be provided by Owner).

### GWA July 19, 2017 Work Session - ISSUES FOR DECISION

## ONWER'S SITE REPRSENTATIVE (CM) SERVICES FOR DESIGN AND CONSTRUCTION OF UMATAC-MERIZO WWTP UPGRADE PROJECT NO.: S17-002-BND $\begin{array}{c} \text{Exhibit C} \\ \text{PROJECT NO.: S17-002-BND} \end{array}$

#### RATE DEVELOPMENT

CATEGORIES	Direct Rate	188% OH	10% Profit	4.167% GRT	ROUNDED
Principal	\$65.00	\$187.20	\$205.92	\$214.50	\$215.00
Project Manager	\$65.00	\$187.20	\$205.92	\$214.50	\$215.00
Resident Engineer/Inspector	\$54.00	\$155.52	\$171.07	\$178.20	\$178.00
Project Inspector					
Secretaty/Clerk	\$18.00	\$51.84	\$57.02	\$59.40	\$59.00

### ONWER'S SITE REPRSENTATIVE (CM) SERVICES Exhibit C (22 of 25) FOR DESIGN AND CONSTRUCTION OF UMATAC-MERIZO WWTP UPGRADE PROJECT NO.: S17-002-BND

#### DURATIONS

Mo	nth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
Initial Design Phase																								
Submittal Phase																								
Construction Phase																								
Close-out Phase																								J
																								Total
Principal		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.2
Project Manager	(	0.15	0.15	0.15	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	6.2
Resident Engineer/Inspector		0.3	0.5	0.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20.3
Project Inspector																								0.0
Clerk		0.3	0.5	0.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20.3

### Exhibit C (23 of 25)

## ONWER'S SITE REPRSENTATIVE (CM) SERVICES FOR DESIGN AND CONSTRUCTION OF UMATAC-MERIZO WWTP UPGRADE PROJECT NO.: \$17-002-BND

Task Number	Task Description	PSE&T Soils Engineer	PSE&T Soils Inspector	SSFM Concrete, PE	SSFM Concrete Inspector		Amount
	HOURLY LABOR RATES	\$ 216.00	\$ 120.00	\$215.00	\$99.00		
D	SPECIAL INSPECTIONS						
1	Soils						
1.1	Shallow foundations	6	12				2,736
1.2	Excavations	6	12				2,736
1.3	Classification & testing of fill matls	6	12				2,736
1.4	Backfilling & compaction	30	60				13,680
1.5	Observe subgrade	6	12				2,736
	SUBTOTAL	54	108				24,624
2	Concrete						
2.1	Inspection of reinforcements			48	96		19,824
2.2	Inspection of welding						
2.3	Inspection of bolts						
2.4	Inspection of anchors						
2.5	Verification use of design mix			12			2,580
2.6	Testing & sampling of fresh concrete						
2.7	Placement of concrete			48	96		19,824
2.8	Inspection of curing			48	96		19,824
	Expenses						
	SUBTOTAL			156	288		62,052
	TOTAL SPECIAL INSPECTIONS						86,676

PSE&T Soils Engineer & Inspector rate above includes SSFM 15% OH mark-up and 4.16% GRT.

### Exhibit C (24 of 25)

## ONWER'S SITE REPRSENTATIVE (CM) SERVICES FOR DESIGN AND CONSTRUCTION OF UMATAC-MERIZO WWTP UPGRADE PROJECT NO.: \$17-002-BND

Task Number	Task Description	ASTM C-136, D-2419 & D-1557	ASTM D-1556 or D- 2922	ASTM C-39 & C-138	ASTM D-1559, D- 2041, D-2172, D-2726	ASTM D-2950	Technician	Amount
	UNIT RATES	\$401.00	\$158.00	\$175.00	\$653.00	\$99.00	\$54.00	
E	QA TESTING *							
1	Soils							
1.1	Fill Materials	3						1,203
1.2	Backfill Compaction Tests		30					4,740
1.3	Testing Technician Onsite Time						132	7,128
2	Concrete							
2.1	Concrete Compressive Strength			6				1,050
2.2	Testing Technician Onsite Time						24	1,296
3	Asphalt Paving							
3.1	AC Mix Tests				3			1,959
3.2	AC Field Compaction Tests					6		594
3.3	Testing Technician Onsite Time						36	1,944
	Expenses							
	SUBTOTAL	3	30	6	3	6	192	19,914

### Exhibit C (25 of 25)

## ONWER'S SITE REPRSENTATIVE (CM) SERVICES FOR DESIGN AND CONSTRUCTION OF UMATAC-MERIZO WWTP UPGRADE PROJECT NO.: \$17-002-BND

Task Number	Task Description	2-Man Crew	3-Man Crew					Amount
	UNIT RATES	\$1,078	\$1,198					
F	CONSTRUCTION SURVEY SERVICES *							
			•	•	•	•	•	
1	2-Man Crew for regular checking	20						21,560
2	3-Man Crew		4					4,792
	Expenses			·	·			
	SUBTOTAL	20	4					26,352



Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913 Tel: (671) 300-6846

### **Issues for Decision**

### Resolution No. 46-FY2017

Relative to Change Order Approval to the Island-wide Well Site Rehabilitation (D-03, D-17, D-18, D-22, and M-09)

### What are the objectives of the proposed changes and are they necessary and urgent?

The objective of Change Order No. 6, is to add a well maintenance rig (well pump hoist) to the Island-wide Well Site Rehabilitation project. The rig has been identified as critical equipment for GWA to regularly perform well maintenance and timely repairs. Additional funding is needed for Change Order No. 6 and additional electrical work. The additional electrical work was determined to be necessary after award of the contract to complete the power supply requirements for the project. Due to the urgency of completing the power supply to the well sites, additional funding is requested before a formal change order is requested.

### Where is the project located?

This project is located at Groundwater Wells D-03, D-17, D-18, D-22, and M-09 within the villages of Dededo and Mangilao. Construction activities will be limited to the property boundaries of the well sites.

### How much will it cost?

The original contract value for this project is Four Million Six Hundred Eighty Nine Thousand Eight Hundred Eighty Eight Dollars (\$4,689,888.00), plus a ten percent (10%) contingency of Four Hundred Sixty Eight Thousand Nine Hundred Eighty Eight Dollars and Eighty Cents (\$468,988.80).

The proposed Change Order No. 6 will require funding in the amount of Eight Hundred Seventeen Thousand One Hundred Forty Seven Dollars (\$817,147.00) to proceed with the purchase of the well maintenance rig and supporting equipment.

The additional electrical work necessary to complete the well power supply is estimated to be Two Hundred Thousand Dollars (\$200,000.00). This brings the total authorized funding amount to a maximum of Six Million One Hundred Seventy Six Thousand Twenty Three Dollars and Eighty Cents (\$6,176,023.80).

#### When will it be completed?

The shipment of the rig and supporting equipment will arrive four months after the approval of this Change Order. The electrical work is expected to be completed in October 2017.

#### What is the funding source?

The funding for this project will be from USEPA Grant and, if necessary, GWA Bond Funds applicable to the project.



### **RESOLUTION NO. 46-FY2017**

## RELATIVE TO CHANGE ORDER APPROVAL TO THE ISLAND-WIDE WELL SITE REHABILITATION (D-03, D-17, D-18, D-22, M-09) PROJECT W15-004-EPA

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

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

WHEREAS, GWA has received a grant from the United States Environmental Protection Agency ("USEPA") under the State Revolving Fund ("SRF") program to repair and rehabilitate the water and wastewater system infrastructure; and

**WHEREAS,** GWA has a number of important USEPA SRF projects including the rehabilitation, repair, or replacement of groundwater wells D-03, D-17, D-18, D-22, and M-09, which have been inoperable for a significant amount of time; and

WHEREAS, the inoperability of the above noted wells has inhibited the full optimization of the island's system water pressure and contributed to the supply deficiencies; and

**WHEREAS,** Resolution No. 41-FY2016 approved by the CCU authorized GWA management to enter into a contract with Pacific Rim Constructors, Inc. (PRC) to perform the construction services for the Island-wide Well Site Rehabilitation (D-03, D-17, D-18, D-22, and M-09) project; and

WHEREAS, during the construction activities to address potential operational issues, GWA and its Program Management Office (PMO) evaluated the well maintenance needs and identified a well maintenance rig (well pump hoist) as critical equipment for GWA to perform well maintenance and timely repairs; and

**WHEREAS,** GWA has discussed the proposal of purchasing a well maintenance rig with the USEPA (the funding agency for this project) and received the USEPA's support to use the 2012 SRF grant, which expires on September 30<sup>th</sup>, 2017, if the purchase is made through a change order under the current Island-wide Well Site Rehabilitation project; and

WHEREAS, GWA's PMO has provided technical guidance to GWA, prepared a technical scope of work for PRC, and facilitated the discussions between GWA and PRC regarding the equipment details, costs, warranties, and local equipment maintenance services; and

WHEREAS, GWA received a final proposal from PRC on July 14<sup>th</sup>, 2017 in the amount of Eight Hundred Seventeen Thousand One Hundred Forty Seven Dollars (\$817,147.00) (SEE EXHIBIT A), reviewed PRC's proposal with the PMO, and determined PRC's proposal as fair and reasonable; and

**WHEREAS**, GWA found that, in addition to the need for the well maintenance rig, urgent electrical design changes have become necessary to bring power supply to four wells (D-03, D-17, D-18, and D-22), due to changes that have occurred at these well sites since the original design of the wells; and

WHEREAS, the electrical systems that would connect the four abovementioned wells to the island-wide electrical system have either deteriorated to the point of needing replacement, or been removed from the well sites for use at other operational well sites; and

**WHEREAS**, GWA engineering estimated that an additional Two Hundred Thousand Dollars (\$200,000.00) is necessary to complete the urgent electrical changes and to bring power supply to these four wells; and

 WHEREAS, CCU previously authorized the original funding for this project, including a ten percent (10%) contingency, in the amount of Five Million One Hundred Fifty Eight Thousand Eight Hundred Seventy Six Dollars and Eighty Cents (\$5,158,876.80); and

WHEREAS, GWA has executed five (5) change orders to date in the amount of Four Hundred Fifty Nine Thousand Seven Hundred Fifty Nine Dollars and Fifty-Two Cents (\$459,759.52), which equates to a total approved contract value of Five Million One Hundred Forty Nine Thousand Six Hundred Forty Seven Dollars and Fifty-Two Cents (\$5,149,647.52); and

WHEREAS, GWA Management seeks CCU approval of the proposed Change Order No. 6 to proceed with the purchase of the well maintenance rig and supporting equipment in the amount of Eight Hundred Seventeen Thousand One Hundred Forty Seven Dollars (\$817,147.00), as well as the cost for the construction of the additional electrical power supply components in the amount of Two Hundred Thousand Dollars (\$200,000.00), for a total additional cost in the amount of One Million Seventeen Thousand One Hundred Forty Seven Dollars (\$1,017,147.00) which would bring the total authorized funding to Six Million One Hundred Seventy Six Thousand Twenty Three Dollars and Eighty Cents (\$6,176,023.80); and

**WHEREAS**, funding for the change order work will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds associate with production wells rehabilitation as applicable; and

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

- 1. The recitals set forth above hereby constitute the findings of the CCU.
- The CCU finds that the terms of the fee proposal submitted by Pacific Rim Constructors, Inc. are fair and reasonable.
- 3. The CCU hereby authorizes the management of GWA to approve the Change Order No. 6 in the amount of Eight Hundred Seventeen Thousand One Hundred Forty Seven Dollars (\$817,147.00) (EXHIBIT A).

1	4. The CCU hereby further approves the increase funding authorized for this project
2	of One Million Seventeen Thousand One Hundred Forty Seven Dollar
3	(\$1,017,147.00) which accounts for the well rig and electrical improvements, t
4	bring the total authorized funding amount to a maximum of Six Million On
5	Hundred Seventy Six Thousand Twenty Three Dollars and Eighty Cen-
6	(\$6,176,023.80).
7	<b>RESOLVED</b> , that the Chairman certified and the Board Secretary attests to the adoption
8	of this Resolution.
10	
11	<b>DULY AND REGULARLY ADOPTED</b> , this 25 <sup>th</sup> day of July 2017.
12	
13	Certified by: Attested by:
14	
15	IOSERILT DUENAS L CEODOS DAMBA
16	JOSEPH T. DUENAS Chairperson  J. GEORGE BAMBA Secretary
17	I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as
18 19	evidenced by my signature above do hereby certify as follows:
20	The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular
21	meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was
22	present and the members who were present voted as follows:
23	AYES:
24	NAYS:
25	
26	ABSTENTIONS:
27	ABSENT:
28	
30	
31	
32	
	4

414 W Soledad Avenue, Suite 602 Hagatna, GU 96910

T: 671.300.4220

### Exhibit A (1 of 4)



July 14, 2017

Mr. Thomas Cruz
Chief Engineer
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 16
Mangilao, Guam 96913

148557

Subject: Letter of Recommendation for Water Production Well Maintenance Rig for the IslandWide Well Site Rehabilitation (D-03, D-17, D-18, D-22, and M-09); GWA Project No. W15-004-EPA

Dear Mr. Cruz:

Brown and Caldwell (BC)—upon reviewing the cost proposal from Pacific Rim Constructors, Inc. (PRC) for the purchase of a Water Production Well Maintenance Rig, Chassis, and Supporting Equipment for the IslandWide Well Site Rehabilitation (D-03, D-17, D-18, D-22, and M-09) project—finds the cost proposal (Attachment 1) for \$817,147.00 to be fair and reasonable, and recommends it for approval.

If you have any questions, please call me at (671) 300-4228.

Respectfully Submitted,

**Brown and Caldwell** 

George Watson Project Manager

GW:bc

cc: Bill Chang, P.E., Brown and Caldwell Gloria Bensan, Guam Waterworks Authority

Attachments:

1. Pacific Rim Constructors, Inc. Cost Proposa

### **Attachment 1**

Exhibit A (2 of 4)



July 13, 2017

Brown and Caldwell Attn: George Watson 414 W. Soledad Avenue, Suite 602 Hagatna, Guam 96910

Re: Request for Proposal - Water Production Well Maintenance Rig

GWA Islandwide Well Site Rehabilitation

GWA Project No. W15-004-EPA

Hafa Adai Mr. Watson,

We are pleased to offer this proposal to provide the above referenced rig and associated equipment. As requested, we based our proposal upon the documents contained in your letter dated July 12, 2017, but products and manufacturers may be somewhat different in our proposal. We would like to ask for the attached information be reviewed closely and to let us know if you have any questions. The total cost of each item is as indicated on the attached cost breakdown and includes the purchasing and shipping for each item.

From a schedule standpoint, the equipment will be ready to ship in approximately 16 weeks, but this is dependent on a number of things that are outside our control.

From a payment standpoint, we will need a minimum of 40% paid upon issuance of the change order and the remainder paid prior to shipping.

While this change order will in effect increase the duration of our contract with GWA, it is our assumption that this change will not negatively affect the closeout of the project, payment of retainage or impact the date of substantial completion.

On behalf of Pacific Rim, I wish to express my gratitude for considering us.

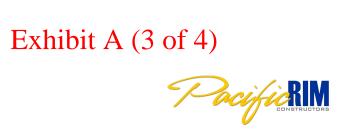
Keith J. Stewart,

Respectfully,

President

### Pacific Rim Constructors, Inc. **GWA Well Maintenance Equipment**

Change Order Pricing



Item	Description		Price
	2018 Freightliner M2 106 with 12T		
Well Maintenance Rig	Pump Hoist Body 6", 8" -Cleaning Brush J200 w/ applicable	See Morrico Specs	\$312,028.00
Nylon Brush	tool 10", 12", 16' - Cleaning Brush J400 w/	Cotey Chemical Corporation	\$822.00
Nylon Brush	applicable tool	Cotey Chemical Corporation	\$2,412.00
Frayed Steel Cable Casing Scratcher	6", 8", 10", 12" and 16" casing scratcher	Zim Industries - Fresno	\$16,790.00
Standard Bailer	4",6" and8" x 8' long	Zim Industries - Fresno	\$9,706.00
Suction Bailer	4".6" and8" x 8' long	Zim Industries - Fresno	\$15,911.00
Dart Bailer	4",6" and8" x 8' long	Zim Industries - Fresno	\$11,033.00
Bailer Dump Tub	18" x 36"	Zim Industries - Fresno	\$1,093.00
Rig-Mounted Welder	Bobcat 250	See attached specs	\$18,447.00
Casing Elevators, Clevises and Slings	3 6", 4 6" and 6 5/8", Heavy Duty		\$5,413.00
Pipe Wrenches	Two 36" Heavy-Duty Straight	Rigid	\$269.00
Pipe Wrenches	Two 48" Heavy-Duty Straight	Rigid	\$530.00
Slip Plates	3 1/2" 4 1/2" -and 6"	Shop Fabricated - Hunke	\$528.00
Water Level Sounder	1,000' of Cable, Solid State	onep rabilitation rainte	\$1,448.00
Surge Block	4", 5"and 6"		\$772.00
Mixing Tank	150 gallon HDLPE Mixing Tank	Protectoplas MT0150	\$10,303.00
Megger	Insulation Multimeter	Trotectopius Wiro130	\$1,355.00
Chain Tongs	Two Model 3235, Double-End Reversable	Rigid	\$806.00
Compressor	Diesel-Powered (see attached)	See Morrico Specs	\$268,370.00
T & C Steel AIrlift Pipe	4-inch-diameter 609'	oce memos opecs	\$17,244.00
T & C Steel Alrlift Pipe	1-inch-diameter 609'		\$4,311.00
Airlift Discharge Head	4' x 1'	Shop Fabricated - Hunke	\$560.00
Ford Diesel Pickup Chassis	F350 XLT 4 x4 as per attached spec (Quote		\$86,432.00
	9' Hunke Manufactured heavy-duty flatbed the Ford Truck with tool boxes, rear bumpe grade blue paint and custom assemblies to	deck with headache rack will be installed on r / hitch, DOT light package, commercial neet GWA requirements are the local Guam Ford rep or the Mainland ood on Guam. We have heard conflicting	
Equipment Trailer with Trailer hitch	22'Long. Tandem Axles (see attached) 8.5' x 22' industrial grade trailer with "super	er deluxe bobcat ramps. Channel x 82"" wide 1 22' deck length, with 12DKU jack, 14,000 LED light package, 7 prong electrical	\$18,029.00
Pipe Lifting Pins	3", 4" and 6" Three - 1/2" Grade 120 with Grab Hooks at	Shop Fabricated - Hunke	\$4,939.00
Tie Down Chain	Each End x 15'		\$2,464.00
Rachet Type Load Binders	3 Grade 120 for 1/2" Chain		\$1,704.00
Oxygen - Acetylene Torch Kit w/ Tanks	I Portable Kit	Miller SMI TL-550	\$798.00
Cable Depthometer	7/16" to 5/8" Range		\$2,630.00

\$817,147.00 **Total Proposal Amount** 

### Exhibit A (4 of 4)

## Pacific Rim Constructors, Inc. Well Maintenance Rig

**Change Order Pricing** 

### **Hunke with Freightline Chasis**

Vendor Proposal Amount:	\$228,360.00
Shipping & Handling	Included
Options Added	\$13,955.00
On Island Training	\$7,000.00
Warranty	\$5,000.00
Subtotal	\$254,315.00
PRC Insur & Bonds	\$13,500.00
PRC Coordination	\$4,500.00
Subtotal	\$272,315.00
PRC OH&P	\$27,232.00
PRC GRT	\$12,481.00
	\$312,028.00



"Better Water, Better Lives."

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

Tel: (671) 300-6846

### **Issues for Decision**

### Resolution No. 47-FY2017

Relative to Approval of Contract for Design Services for the Upgrade of the Norther District Wastewater Treatment Plant to Secondary Treatment

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

The objective of project is to design the necessary upgrades to the NDWWTP to secondary treatment as part of the wastewater improvements in support of the relocation of U.S. Marines and their dependents to Guam and which is funded through a General Assistance Grant from the U.S. Department of Defense, Office of Economic Adjustment.

The scope of work in general involves engineering design, permitting, and engineering services during construction. The urgency of approving the project intent and fee range is GWA's internal milestone deadline to issue the Notice to Proceed to the design firm by the end of July 2017 to meet timelines established in the Office of Economic Adjustment grant requirements and coordinated with the Guam Water and Wastewater Intergovernmental Support Team.

### Where is the project located?

The project is located at the existing Northern District WWTP as well as the adjacent property northwest of the existing plant that is going through final acquisition proceedings.

### How much will it cost?

•	nt seeks the support on end of the design rar	f the CCU to approve the int	ent of the design project and Dollars and
•	ts (\$X,XXX,XXX.xx).	ige cost of	Dollars and
GWA managemer	nt further seeks approv	val for a contingency of appr	• • • • • • • • • • • • • • • • • • • •
or	Dollars and	Cents (\$YYY,YYY.yy).	This contingency and high-
end design fee rar	nge will amount to a to	otal authorized fund of	Dollars
(\$Z,ZZZ,ZZZ.zz).			

### When will it be completed?

The design firm will be required to provide services to the overall project which has a completion deadline of December 31, 2021.

### What is the funding source?

The source of funding for the engineering services will be from the OEA General Assistance Grant OCO N676-16-02.



### CONSOLIDATED COMMISSION ON UTILITIES

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

#### **RESOLUTION NO. 47–FY2017**

RELATIVE TO APPROVAL OF CONTRACT FOR DESIGN SERVICES FOR THE UPGRADE OF THE NORTHERN DISTRICT WASTEWATER TREATMENT PLANT TO SECONDARY TREATMENT, GWA PROJECT NO. S17-003-OEA (OEA GRANT OCO N676-16-02)

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

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

WHEREAS, the U.S. Department of Defense, Office of Economic Adjustment awarded to GWA a General Assistance Grant for community investment August 26, 2016 with subsequent additional grants forthcoming; and

**WHEREAS**, the General Assistance Grant is to be used for water and wastewater improvements in support of the relocation of U.S. Marines and their dependents to Guam; and

WHEREAS, the report "Final Guam Water and Wastewater Assessment Report in Support of the Economic Adjustment Committee Implementation Plan," (NAVFAC, Department of the Navy, February 2015) has recommended the design and construction of NDWWTP treatment upgrades to comply with current National Pollutant Discharge Elimination System permit and mitigate impacts to wastewater utilities, nearshore waters, and marine biological resources; and

1	WHEREAS, GWA has advertised the Request-For-Proposals RFP-08-ENG-2017 dated
2	April 21, 2017, soliciting statement of qualifications from experienced and qualified engineering
3	firms to provide design engineering services for the UPGRADE OF THE NORTHERN
4	DISTRICT WASTEWATER TREATMENT PLANT TO SECONDARY TREATMENT; and
5	
6	WHEREAS, RFP packages were downloaded by thirty-five (35) interested parties and of
7	those, five (5) firms picked up the appropriate documents on compact disk (CD), from which
8	GWA received proposal submittals from four (4) Design Engineering firms of the thirty-five (35)
9	interested parties before the RFP submittal deadline; and
10	
11	WHEREAS, the GWA A-E Selection Committee reviewed and evaluated all four (4)
12	proposals (SEE EXHIBIT A-Evaluation Score) and generated a short list of the top three (3)
13	firms, and conducted interviews with the top three (3) Design Engineering firms; and
14	WHEREAS - leaves 44 the interior de SWA A E Selection Committee and let al
15	WHEREAS, subsequent to the interviews the GWA A-E Selection Committee updated
16	the ranking list of the most qualified firm (SEE EXHIBIT B – Evaluation Score) which indicated the design team led by DUENAS CAMACHO & ASSOCIATES ("DCA") as being the highest
17	ranked firm; and
18	Taliked IIIII, and
19	WHEREAS, the GWA A-E Selection Committee submitted, through GWA's
20	engineering division for the General Manager's (GM) Determination of selection, the ranking of
21	the firms evaluated from which GWA can begin scope and fee negotiations with the selected
22	firm or any successor at interest thereto (SEE EXHIBIT C- GM Determination); and
23	
24	WHEREAS, GWA's Project Management/Construction Management (PM/CM) team
26	has negotiated the Scope of Work (SEE EXHIBIT D - Scope of Work) which includes
27	engineering design, permitting, and engineering services during construction, and which is being
28	used as a base for the fee negotiations for the design services which GWA engineering estimates
29	to be within the estimated range of Dollars (\$X,XXX,XXX.00) to
30	Dollars and Zero Cents (\$Y,YYY,YYY.00); and
31	
32	

WHEREAS. The on-going procurement for design services is necessary and is also 1 predicated on an internal GWA milestone deadline to issue the Notice to Proceed to the design 2 firm by the end of July 2017 to meet timelines established in the Office of Economic Adjustment 3 grant requirements and coordinated with the Guam Water and Wastewater Intergovernmental Support Team (GWWIST), and to do so GWA management seeks the support of the CCU to approve the intent of the design project and the estimated high end of the design range cost of Dollars and Zero Cents (\$X,XXX,XXX.00); and 7 8 WHEREAS, GWA management will provide an update via the GM's Report the results 9 of the procurement process relative to this resolution which will include the name of the design 10 firm selected and the negotiated design fee's; and 11 12 WHEREAS, the source of funding for the engineering services will be from the OEA 13 General Assistance Grant OCO N676-16-02; 14 15 NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities 16 does hereby approve the following: 17 18 1. The recitals set forth above hereby constitute the findings of the CCU. 19 2. The CCU finds that the terms of the Scope of Work as described in EXHIBIT 20 C are acceptable. 21 3. The CCU hereby approves the intent of the design project and authorizes the 22 management of GWA to enter into a contract for design services with the 23 most qualified design engineering firm in the amount of not to exceed 24 Dollars and Zero Cents (\$X,XXX,XXX.00) and 25 subject only to final negotiations on remaining terms and conditions not 26 already agreed upon which are acceptable to GWA. 27 4. The CCU hereby further approves a contingency of approximately five 28 percent (5%) or Dollars and Zero Cents (\$YYY,YYY.00) for a 29 total authorized funding not to exceed Dollars 30 (\$Z,ZZZ,ZZZ.00). 31 32 3

1	5. The source of funding for the engineering services will be from the OEA
2	General Assistance Grant OCO N676-16-02.
3	
4	RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption
5	of this Resolution.
6	
7	<b>DULY AND REGULARLY ADOPTED</b> , this 25th day of July 2017.
8 9 10	Certified by: Attested by:
11 12	JOSEPH T. DUENAS Chairperson  J. GEORGE BAMBA Secretary
13 14 15	I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:
16 17 18	The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:
19 20	AYES:
21	NAYS:
22	ABSTENTIONS:
23	ABSENT:
24	
25	
26 27	
28	
29	
30	
31	
32	
	4

### Exhibit A (1 of 1)



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

June 6, 2017

To:

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

From:

Gloria P. Bensan

Chairperson, Consultant Selection Board

Project:

RFP-08-ENG-2017

Design Services for the Upgrade of the Northern District Wastewater Treatment Plant

(NDWWTP)

GWA Project No. S17-003-OEA

The following information is intended to document the evaluation process undertaken for the referenced solicitation. The top three (3) firms short listed by the committee for interviews are ranked 1-3 below.

EV	EVALUATION COMMITTEE MEMBERS					
Name	Title					
John Davis, P.E.	CIP Wastewater Engineer Supervisor					
Evangeline Lujan	Senior Regulatory Analyst					
Prudencio Aguon	Grants Administrator					
David Fletcher	Operations and Maintenance Manager					

	Consultant	Evaluation Score				Total	Rank
1.	<b>EMPSCO Engineering Consultants</b>	70	52	50	62	234	4
2.	Duenas, Camacho and Associates	100	96	100	99	395	1
3.	Kennedy/Jencks Consultants	90	82	93	96	361	3
4.	AECOM	90	88	88	96	362	2

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

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





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

June 26, 2017

To:

Thomas F. Cruz, P.E. Chief Engineer

From:

Gloria P. Bensan

Chairperson, Consultant Selection Board

Subject:

RFP-08-ENG-2017

Design Services for the Upgrade of Northern District Wastewater Treatment Plant

GWA Project No. S17-003-OEA

The following information is intended to document the post evaluation scoring process undertaken for the referenced project.

	VALUATION COMMITTEE MEMBERS
Name	Title
John Davis, P.E.	Engineer Supervisor – CIP Wastewater
Mauryn McDonald, P.E.	Engineer Supervisor – Permits and Inspection
Evangeline Lujan	Senior Regulatory Analyst
Prudencio Aguon	Grants Administrator
David Fletcher	Operations and Maintenance Manager

	POST PRESENTATION	GROSS S	CORE SU	JMMAR'	Y(2 <sup>nd</sup> Eva	aluation		
Consultant		Evaluation Score					Total	Rank
1.	Duenas, Camacho & Associates	100	91	96	100	99	486	1
2.	AECOM	95	85	88	90	98	456	3
3.	Kennedy/Jenks Consultants	95	86	90	96	97	464	2



### **GUAM WATERWORKS AUTHORITY**

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

### **MEMORANDUM**

То:	Miguel C. Bordallo, General Manager
From:	Thomas F. Cruz, P.E., Chief Engineer
Subject:	RFP-08-ENG-2017 Design Services for the Upgrade of Northern District Wastewater Treatment Plant GWA Project No. S17-003-OEA
Date:	June 26, 2017
consultant fo	n Committee has completed all necessary actions for selecting the most qualifier the referenced solicitation. All proposals were reviewed and scored according to a established in the solicitation. The evaluation summary sheet is attached for you
After the firm (3) shortlisted	n presentation and interview, the committee recommends the final ranking of three difference for the project:
2. K	uenas, Camacho & Associates ennedy/Jenks Consultants ECOM
	GUERRERO Date gement Administrator
	GENERAL MANAGER'S DETERMINATION
Consultant F	irm Selected:
Dueno	rs, Camacho ; Assoc.
Remarks:	
M	6.28.17

Date

MIGUEL C. BORDALLO, P.E.

General Manager



### Exhibit D (1 of 23)

Website: <u>www.dcaguam.com</u> Email: dca@dcaguam.com

July 14, 2017

Miguel C. Bordallo, P.E. General Manager, Guam Waterworks Authority Gloria B. Nelson Public Service Building 688 Route 15 Mangilao, Guam 96913

Via:

Mr. Thomas F. Cruz, P.E., Chief Engineer

Subject:

GWA RFP-08-ENG-2017, Upgrade of the Northern District Wastewater Treatment

Plant (NDWWTP), GWA Project No. S17-0030EA (OEA Grant OCON676-16-02)

Re:

**Draft Scope of Work** 

Hafa Adai Mr. Bordallo:

Duenas, Camacho & Associates, Inc. (DCA) in association with Gresham, Smith & Partners (GS&P), CH2M, EMCe, TRMA and Geo-Engineering & Testing, Inc. is pleased to submit the enclosed Draft Scope of Work for engineering services on the subject project in .pdf and Word formats.

The Draft Scope incorporates the results of our scoping meeting held at GWA on July 12<sup>th</sup> as well as changes and additions provided by our Team and by the Program Manager to date. We look forward to incorporating any additional changes or additions GWA wishes to make to finalize the scope document.

Sincerely,

JOHN P. DUENAS, P.E.

President

**Enclosures** 

### Exhibit D (2 of 23)

July 14, 2017

# GUAM WATERWORKS AUTHORITY UPGRADE OF THE NORTHERN DISTRICT WASTEWATER TREATMENT PLANT TO SECONDARY TREATMENT GWA PROJECT S17-003-OEA (OEA GRANT OCON676-16-02)

#### **SCOPE OF WORK**

#### 1.0 BACKGROUND

The Northern District Wastewater Treatment Plant (NDWWTP) is located in Dededo on the northwestern coast of Guam, just inland of the Tranguisson beach area, and north of the Two Lovers Point landmark. The NDWWTP was built on a limestone plateau 300 feet above the Philippine Sea by the US Navy and was commissioned in 1979. The facility collects and treats wastewater from the regions of Dededo, Latte Heights, Perez Acres, Ypaopao, Marianas Terrace, the Yigo Collector System, and other unincorporated subdivisions throughout the Yigo and Dededo Municipalities. The service area includes U.S. military facilities, including Air Force and Navy facilities within the areas of Dededo, Harmon Annex, and Andersen Air Force Base. The NDWWTP currently provides chemically enhanced primary treatment (CEPT) for a population of approximately 76,000 people. The orginal design average flow rate of the primary treatment plant was 12.0 million gallons per day (MGD), representing 46 percent of the island's wastewater flow. However, a 2011 Court Order and current 2013 NPDES permit have established new effluent limits and discharge requirements. Current average daily flow to the plant is approximately 6 mgd.

Future flows are expected to increase primarily based on military buildup, however, the increase also includes tourism impacts and onsite wasewater system conversions. The relocation of the U.S. Marine Corps to Guam from Okinawa anticipates an increase in Guam's population to include an additional 5,000 Marines and 1,300 dependents. Guam's population is also expected to increase as a result of construction activity related to the military buildup and civilian jobs created by buildup activities. Table 1 shows the flow projection summary from the NDWWTP Facility plan as well as the target flows required for the design of the upgraded treatment Plant.

Year Average Flow Peak Month Peak Day Peak Hour Flow (mgd) Flow (mgd) Flow (mgd) (mgd) 2016 6.0 6.5 16.6 20.2 2025 7.8 8.6 21.9 26.6 22.7 27.5 2035 8.1 8.9 28.9 9.4 23.8 2050 8.5 2065 9.0 9.8 25.1 30.4 9.0 Future Expansion = 12 mgd **Design Flows** 

TABLE 1 - NDWWTP FLOW PROJECTIONS

The plant design flows for current and future needs will be used as the basis of design. The design flow for the upgraded plant including secondary treatment facilities will be 9 mgd, with provisions to facilitate future expansion to 12 mgd. Supervisory control and data acquisition (SCADA) systems of the existing and the newly designed facilities will be integrated for efficient and reliable centralized operation. Process systems will share flow and effluent data for more cost-effective treatment.

The new plant will be referred to as the Northern District Wastewater Treatment Plant. Effluent concentration requirements will be as described in Table 2.

### Exhibit D (3 of 23)

July 14, 2017

TABLE 2 - NDWWTP EFFLUENT LIMITS

		Maximum Allowab	le Discharge Limits					
Parameter	Concentration and Loading							
	Average Monthly	Average Weekly	Maximum Daily	Units				
Flow Rate	12	(a)	(a)	mgd				
	30	45		mg/L				
Biochemical	3002	6760	£	lbs/day				
Oxygen Demand (5-day)	The average month	he average monthly percent removal shall not be less than 85 percent. (b)						
	30	45	- 4	mg/L				
Total Suspended	3002	6760	- All	lbs/day				
Solids	The average month	%						
pH (hydrogen ion)	Wit	pH units						
Settleable solids	1	-	2	mL/L				
Oil and grease, total recoverable	10	. (	15	mg/L				
Enterococcus <sup>(c)</sup>	35 <sup>(c)</sup>	-	104	CFU/100mL				
Chlorine, total residual (TRC)	1.5		2.46	mg/L				
Temperature	(a)	APPRICA	(a)	°C				
Ammonia	(a)		(a)	mg/L				
Chronic toxicity	(a)		(a)	Pass/Fail				
Priority pollutant scan	(a)		(a)	<u>⊕</u> 1.				

- (a) No effluent limits are set at this time, but monitoring and reporting is required
- (b) Both the influent and the effluent shall be monitored for Biochemical Oxygen Demand (BOD) and Total Suspended Solids. The arithmetic mean of the concentrations of effluent samples collected in a calendar month shall not exceed 15 percent of the arithmetic mean of the influent samples collected in the same calendar month (e.g. must achieve 85% removal rates).
- (c) Average monthly *Enterococcus* effluent monitoring shall be reported as a 30-day geometric mean.

  Maximum daily *Enterococcus* effluent monitoring shall be reported as the highest instantaneous maximum (the maximum of any single sample shall not exceed 104 CFU/100mL.)

GWA has retained a Program Manager, Brown and Caldwell, to assist with the administration of the GWA's Capital Improvement Program. The Engineer will work under the direction of the Program Manager.

The design and permitting portion of the contract shall be executed as a lump sum task with contract payments made according to a payment schedule approved by GWA. Post design services shall be executed as time and materials tasks with the payments not to exceed the negotiated amounts indicated in the contract.

#### 2.0 Engineer Services

#### 2.1 Treatment Plant Components

The components and processes for the new treatment plant include, but are not necessarily limited to the following:

### Exhibit D (4 of 23)

July 14, 2017

- Upstream flow equalization and/or off-spec wastewater storage at or in close proximity of the new treatment plant site.
- 2. Interconnecting piping at the new treatment plant site with the existing Southern Link Pump station.
- 3. Preliminary treatment with mechanical screening, grit removal, flow measurement, odor control and sampling.
- 4. Primary treatment with clarifiers (chemical enhanced treatment may be considered). Primary clarifiers may be eliminated from the liquid stream treatment train after evaluation of the results of the wastewater characterization study. If the wastewater characterization study confirms that the influent wastewater is weak and less than approximately 200 mg/L TSS and BOD<sub>5</sub>, then the influent wastewater would best be treated directly with bioreactors without primary clarifiers.
- 5. Primary sludge pumping (if needed)
- 6. Secondary treatment using the approved treatment system
- 7. Secondary clarification
- 8. Secondary sludge pumping, holding and dewatering
- 9. Disinfection with UV radiation
- 10. Effluent flow measurement and sampling
- 11. Water supply piping, booster pumping (if necessary) and controls to accommodate plant water and fire flow needs.
- 12. Yard piping, including liquid, sludge and drainage piping, and electrical distribution, and controls duct banks
- 13. Instrumentation, control, SCADA and network system to include panels for the automation devices and for redundant operation of the individual process systems. Centralized SCADA system to be located at the main operation building with optional remote (backup system) at locations selected by GWA.
- 14. Site work, including but not necessarily limited to drainage control, grading, roads, landscaping and fencing
- 15. Class "B" biosolids stabilization with aerobic or anaerobic digestion, or Class "A" biosolids stabilization with autothermal thermophilic aerobic digestion (ATAD)
- 16. Sludge thickening, dewatering and truck loading
- 17. Administration building with laboratory
- 18. Standby power
- 19. Plant system controls for individual treatment components or systems including standalone PLCs and a centralized SCADA system for overall monitoring and control.
- 20. New power services design will be provided for with provisions for upgrade.
- 21. Septage receiving and handling provisions
- 22. Re-purposing and re-use of existing facilities as practicable to create improved new plant operation and efficient and optimal influent and effluent.

### 2.2 Project Management Services

The Engineer shall provide project management and design services including design criteria confirmation, preliminary engineering, final design, and engineering services during bidding and construction. The Engineer shall provide services for civil, process, structural, architectural, electrical, instrumentation and mechanical engineering for wastewater treatment plant design as defined by the following tasks.

### 2.2.1 General Project Management

a. Quality Assurance and Quality Control (QA/QC) Plan. The Engineer shall develop and implement a QA/QC Plan to check, as a minimum, planning methods, design methods, calculations, cost estimates, field investigations, measurements, drawings, specifications, bid documents and

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addenda, Operation and Maintenance Manuals and other technical issues associated with project planning and design.

- b. Project Milestones and Schedule. The Engineer shall submit for approval a Primavera P6 Professional version R8.3.12 or equivalent schedule that meets required milestones. The schedule shall be consistent with the Program and construction schedules and shall include GWA's requirements and constraints, right of entry, land acquisition and permit approvals. The Engineer shall consider approaches to reduce the schedule for the design phase to provide additional float for the construction phase and develop more efficient design processes, such as smaller review packages and meetings to facilitate reviews, or more concurrent predesign and design activities. Unless changes are approved by GWA, the Engineer shall adhere to the approved project schedule. Changes that do not affect the milestones shall be updated on the schedule through all phases of the project, including monthly meetings, dates for completion of engineering design studies, and dates for review periods. A complete schedule shall be submitted to the Program Manager within 7 calendar days of any deviation from a prior approved schedule, unless otherwise agreed upon. Project milestones shall be recommended by the Engineer and subsequently approved and established by GWA. Engineer must adhere to approved milestones. The project milestones and schedule shall be submitted prior to the kick off meeting.
- c. Risk Evaluation. The Engineer shall develop and maintain a Risk Register compatible with the Program Risk Register that identifies potential risks, issues and challenges for all aspects of the project (through design, construction, final completion and acceptance) including mitigation strategies. The register shall be updated on a regular basis, follow mitigation measures and augmented as necessary.
- d. Progress Reports. The Engineer shall submit monthly progress/status reports to support monthly billings. Status reports shall include a project status narrative, updated project schedule, actual and projected spending curves, earned value reporting, details of issues, details of deviations and changes and projection milestone risks.
- e. Facility Design Communication and Documentation Through Technical Memoranda (TMs). The Engineer shall during the design of project improvements communicate to the Program Manager and GWA facility design issues, approaches, directions, considerations and decisions etc. through Technical Memoranda (TMs). TMs are not intended to supplant or obviate the preparation and submittal of the Design Development Report and Design Calculations that are integral components of design submittal packages.
- f. Meetings and Coordination. The Engineer shall arrange and conduct regularly scheduled meetings as well as meetings requested by the Program Manager and coordinate with entities within and, as appropriate, outside the NDWWTP Team. In addition, the Engineer shall identify and facilitate milestone meetings and workshops. Prepare meeting agendas and meeting minutes.
- g. Public Meetings. The Engineer shall provide technical support in public outreach meetings if required, conducted by GWA, regarding the siting of the NDWWTP Upgrades. As part of the scope of work, the Engineer shall provide conceptual architectural renderings and site layout(s) in a format suitable for the public meetings.

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- h. Construction Cost Estimates: The Engineer shall prepare an opinion of probable construction cost for the project including engineering, administration and construction management costs as an integral part of the 30%, 60% and 90% design submittals. Include contingencies as appropriate in accordance with guidance from the Association for the Advancement of Cost Engineering (AACE) criteria. The Engineer shall immediately notify GWA when design decision(s) causes a significant cost increase to the project.
- i. Deliverables. Provide deliverables in accord with GWA guidelines and section 2.3 below.
- j. Document Management. The Engineer shall utilize GWA's assigned web-based site [Bentley's ProjectWise Construction Management (EADOC) to maintain communication related to all submittals.

#### 2.2.2 Project Management Plan

The Engineer will prepare a Project Management Plan in accordance with the GWA Program Management Manual. This plan will cover such items as:

- Project description
- Scope of Work
- Work Plan
- Project Milestones and Schedule
- Progress Reporting and Program Evaluation
- Quality Control Plan
- Communications Plan
- Documentation Plan
- File Storage and Access plan
- Scope Changes and Changes to Management Plan
- Sub-Engineers and Sub-Engineer Responsibilities
- Cost Estimates and Opinions of Probable Construction Costs
- Health and Safety Plan

The Engineer will submit a draft Program Management Plan for GWA review and prior to the Kick Off meeting. The Engineer shall update the plan as may be requested by the Program Manager.

### 2.2.3 Kick Off Meeting

A project kick off meeting shall be conducted by the Engineer within three weeks after NTP. This kick off meeting shall be arranged to include attendance by the Program Manager and appropriate GWA personnel. This meeting will take place on Guam and will cover items such as:

- Communication Logistics
- Project Management Plan
- Quality Assurance and Quality Control Plan
- Project Schedule and Milestones
- Deliverables
- Project Hardships, Risks, Issues and Concerns
- Geotechnical and Survey Needs
- SCADA Systems Integration Needs

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### Future Meeting Logistics

#### 2.3 Permitting

The Engineer shall identify all permit requirements from local authorities, the Department of Public Works and Utility Agencies, including but not limited to the following:

#### 2.3.1 Permit Review

Upon contract execution, the Engineer shall conduct a local and federal permit review for the project that shall include coordination and meetings as necessary with local and federal regulators such as:

- Guam EPA
- USEPA Region 9
- US Army Corps of Engineers (USACOE)
- Local and Federal Fish and Wildlife Agencies
- Department of Public Works, Government of Guam
- Guam State Historic Preservation Office (SHPO)

Identification of required permits shall be submitted with the Draft Design Development Report, at minimum.

### 2.3.2 Environmental Information Document (EID)

Environmental Site Assessment for the proposed treatment plant upgrades and expansion is currently underway by another agency/firm. The Engineer shall provide basic project information including a detailed description of the proposed project for use by others in the preparation of the Environmental Information Document (EID). The Engineer will submit project information needed for preparation of the EID to the Program Manager who will be the interface for coordination of project information.

### 2.3.3 Area of Potential Effect (APE)

Establishing the Area of Potential Effect will be the responsibility of the agency/firm providing the environmental services described above. The Engineer will shall provide the necessary site information necessary for the environmental agency/firm to establish the APE. The Program Manager will relate to the Engineer in a timely manner environmental impact mitigation measures that must be incorporated into the project construction documents.

### 2.3.4 Cultural Resources and Historical Designation Applicability

Cultural, archaeological and historical resources surveys and investigations will be the responsibility of others. The Program Manager will relate to the Engineer in a timely manner cultural, archaeological and/or historical resources impact mitigation measures that must be incorporated into the project construction documents.

### 2.3.5 Department of Public Works (DPW) Permits

The Engineer shall prepare and complete a draft Building Permit Application for each design package during the pre-final design phase of the work and submit to GWA for review. Upon addressing GWA's comments, include the draft application in the Pre-Final Design Submittal package. The building permit shall be completed and available to the Contractors from DPW at the time of construction bidding. The Engineer shall submit the permit application to DPW and address resulting technical questions through building permit approval. Final fees to retrieve the DPW permits are to be paid by the Construction Contractor.

#### 2.3.6 Clearing and Grading Permit

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The Engineer shall prepare a draft Clearing and Grading Permit application for the site preparation design package, including the Storm Water Pollution Prevention Plan and NPDES Notice of Intent. Permit application shall be submitted to GWA for review and comment. Upon addressing comments, the permit application shall be completed and available to the Contractors at the time of construction bidding. Final Fees to retrieve the Clearing and Grading Permits shall be paid by the Construction Contractor. The Engineer shall submit the permit application to DPW and address resulting technical questions through permit approval. Note the potential existence of unexploded ordnance, references the Final Remedial Investigation for Harmon Annex Operable Unit, Andersen Air Force Base Guam, January 2000 provided in Exhibit K identified in Section 5.0 Policy Guide and Reference Materials.

### 2.4 Pre-Design

- 2.4.1 Design Documentation: The Engineer shall complete Technical Memoranda (TMs) to precede and include in the Design Development Report (DDR). The TMs shall include, but not be limited to the following:
  - Provide a summary of Northern District System history, status, issues and needs based on available reports, analyses and interviews.
  - Provide a thorough identification and evaluation of all existing infrastructure including conveyance, liquid stream treatment, sludge stabilization, dewatering and handling appurtenances and reuse/disposal.
  - Consider modification, reuse and repurposing of existing facilities.
  - Expansion considerations in all aspects of design including but not limited to hydraulic profile, dynamic process model, site layout, electrical and SCADA expansion, and future effluent limits and flows.
  - Process Alternative Analysis
  - Site Plan and Layout

The Engineer shall document findings and recommendations in separate technical memoranda to be submitted as completed, unless otherwise agreed upon with the Program Manager. Final TMs, as completed, shall be incorporated into each submission of the Design Development Report (DDR).

### 2.4.2 Document Review

Immediately after NTP, the Engineer will make a formal data request to GWA for any and all documentation relating to the existing NDWWTP, past and current studies of the service areas and future service areas, and permit documents/requirements. Concurrently with the data request, the Engineer shall conduct a series of site visits to the existing NDWWTP and properties identified by GWA for treatment plant expansion. Initial interviews with plant operators, engineering and Program Manager will be conducted as part of this task. Current SCADA system architecture, process controllers, and network devices will be assessed during this phase to make sure that the existing and newly designed systems integrate seamlessly and securely.

#### 2.4.3 Topographic and Property Surveying and Mapping

The Engineer is performing boundary and topographic surveying and mapping of the existing treatment plant site and other properties identified by GWA as part of the treatment plant upgrades and expansion of improvements under a separate contract. The Engineer shall provide under this contract surveying and mapping of the Southern Link Pump Station area and easement corridor(s) to support the design of pump station and transmission line improvements interconnecting the pump station with treatment plant improvements.

### 2.4.4 Site Investigation.

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The Engineer shall conduct detailed engineering investigations of the existing site and facilities as well as other properties/areas identified for treatment plant upgrades, expansion and supporting facilities. To this extent, facilities identified for re-use or to be re-purposed must be cleared and/or impediments removed and/or demolished such as to allow proper investigation of the facilities to support design of improvements. The Engineer shall provide design services necessary for demolition and removal of existing digester roofing and sludge removal. The Engineer will prepare a bid and construction package for early procurement to address this impediment clearing/demolition/removal work for early procurement.

### 2.4.5 Process Alternative Analysis

The NDWWTP Facility Plan incorporated under this scope as an essential reference document, identifies several potential liquid stream treatment processes as well as a recommended treatment process. The Engineer shall perform a detailed evaluation of the leading two (2) candidate liquid stream treatment processes from the Facility Plan, in addition to at least one other potential alternative of their choice for a minimum of three (3). The Study should establish and evaluate complete process trains (liquid and sludge) that will achieve the treatment requirements.

To perform this task, available wastewater data will be provided; however, there is insufficient wastewater characterization data to adequately develop the process model and solids balance. The Engineer shall plan, perform and evaluate additional wastewater characterization as noted in below to support the dynamic process modeling effort. The Engineer will conduct progress meetings to update GWA and the Program Manager of findings during this effort. A draft TM shall be developed and submitted for review prior to a final meeting for the review of findings and presentation of recommendations to GWA. A final TM, including GWA's decision on the selection of the liquid and sludge stream treatment processes from these efforts shall be provided for review, as well as incorporated into the Design Development Report.

Several potential sludge stabilization, dewatering, and handling facilities alternatives sized for current and future estimated sludge production shall be evaluated. The Engineer shall evaluate reuse of the existing anaerobic digestion tanks, the associated anaerobic digestion pump station, primary clarifiers and other existing facilities for the implementation of the stabilization facilities. The following sludge handling alternatives will be evaluated by the Engineer:

- Stabilization (maximum of four options)
  - o Aerobic sludge storage (non-Class B stabilization) for landfill disposal
  - Aerobic digestion (Class B stabilization) for landfill disposal
  - Anaerobic Digestion (Class B stabilization) for landfill disposal (only applicable if primary clarifiers are retained for use in liquid stream treatment)
  - Autothermal Thermophilic Aerobic Digestion (Class A stabilization) for reuse on parks, golf courses and for landscaping
- Thickening (maximum of four options)
  - Mechanical Thickening
    - Gravity Belt Thickeners
    - Rotary Drum Thickeners
    - Centrifuges
  - o Decanting
- Dewatering (maximum of three options)
  - o Centrifuges
    - Use of existing units with addition of new units
    - Moving existing units to the Agat Santa Rita WWTP and purchase and installation of new centrifuges at the NDWWTP

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- Screw presses
- Thickening and dewatering building with truck loading facilities (maximize of two options)
  - o Use existing dewatering building (expansion may be required) with new thickening building
  - Provide new combined thickening and dewatering building
  - 1. Alternative technologies shall evaluate wastewater and sludge treatment, including sludge digestion. The Engineer shall provide a description of each alternative technology identifying all applicable treatment components.
  - Prepare conceptual plant configurations that evaluate hydraulics and civil engineering issues.
     Using existing survey data and known elevations for structural components, prepare a plan view of process configurations on the site. The Engineer shall provide rendering level drawings of the configuration of the selected alternative.
  - 3. The TM shall include a description of alternatives presented, an analysis of the advantages and disadvantages of each treatment option, including a narrative assessment of steps to be taken for implementation, operational complexity and reliability, environmental, construction and equipment constraints, and a breakdown of the estimated costs, including but not limited to:
    - Capital Costs
      - o Equipment and structures
      - Design and engineering
      - o Overall Construction
    - Operations and Maintenance Costs
      - Personnel (including operator grade levels required)
      - Chemicals
      - o Energy
      - Maintenance
      - Sludge hauling and reuse/disposal
      - Monitoring
      - Laboratory Needs
    - Life Cycle Costs, including comparison of the cost of replacing components now, versus the cost of replacing after the remaining life is expended.
      - o For those alternatives that consider the continued utilization of the facility's existing structures, compute a probable cost for replacement or rehabilitation of those mechanical components at or near the end of their life cycle. These components shall be determined in agreement with the Program Manager after recommendations based upon the on-site evaluation.
  - 4. Provide references for unit cost estimates and plant service life for major equipment for each process. Wherever process, provide actual bid cost current costing data.
  - 5. Wastewater characterization study as described below.
  - 6. Dynamic modeling as discussed below.
  - 7. Discuss any specialized training, chemical amendments or equipment, including all proprietary issues that will be required by any of the evaluated equipment or processes.
  - 8. Discuss potential risk of contamination or collateral non-compliance attributable to use of existing or new equipment or processes as it applies to groundwater, soils, and air quality and nuisance generation.
  - 9. Conduct a fatal flaw analysis for each process treatment technology.

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### 10. Assess permit attainment goals.

- 2.4.5.1 Wastewater Characterization Study: The Engineer shall collect and analyze plant-operating data. A comprehensive wastewater-sampling program shall be undertaken in which necessary constituents including, but not limited to COD, TKN and total phosphorus (TP) portioning, are examined for influent and effluent streams.
  - The Engineer shall review and consolidate existing wastewater characterization data, and shall obtain
    any additional data as necessary for evaluation and completion of the wastewater characterization
    study. The Engineer shall submit a plan for conducting the waste characterization study as a TM for
    review by GWA and the Program Manager. The study, including results and recommendations, shall
    subsequently be presented in a TM.
  - 2. The TM shall clearly quantify all variables, including the process, hydraulic and wastewater characteristic parameters and all external conditions that will be used in subsequent modeling tasks. Process parameters to be considered include but are not limited to: aeration, internal recycle/returns and mixing. Wastewater characteristic parameters shall include but are not limited to: soluble and total BOD<sub>5</sub>; total, soluble, flocculated filtered, unbiodegradable, and particulate biodegradable COD fractions; ammonia; total Kjeldahl nitrogen (TKN); total phosphorus; orthophosphate; chlorides; suspended solids; grit and flows. External conditions include: temperature (water and air), barometric pressures, wind and solar radiation. The Engineer shall quantify the expected range of variation for all parameters and conditions.
  - 3. The Facility Plan identifies potential liquid and sludge stream treatment processes, in addition to providing recommendations and potential site layouts for these facilities. As described in the Facility Plan, the current NPDES permit does not include effluent limits for nutrients, only monitoring of nutrients in the effluent. However, the design shall include provisions for future nutrient reduction processes and facilities. The NPDES permit will be renegotiated in early 2018. The process design to be developed for treatment alternative comparison shall include potential effluent nutrient levels, assuming additional facilities for maximum nutrient reduction are added under a future construction budget.

Present results with treatment attainment, sensitivities through the expected range of parameters and conditions, limitations, capital costs and operations and maintenance costs for each alternative considered inclusive of the Process Alternatives Analysis TM.

- 2.4.5.2 Dynamic Modeling: Apply dynamic process simulation modeling to evaluate alternatives for technical feasibility, sensitivity and cost effectiveness.
  - Apply dynamic process simulation modeling to candidate treatment alternatives. Simulation runs for
    each candidate technology shall use data obtained from the Wastewater Characterization Study and
    baseline data. Critical model inputs shall be varied and sensitivities to the changes shall be tabulated.
    Sensitivity analyses for process parameters, wastewater characteristics and external conditions shall
    be performed for each candidate technology and will encompass the range of parameters and
    conditions identified.
  - 2. The Engineer shall describe the findings of the treatment alternatives analyses, calibrated model and results, summarizing the results. Additionally, the Engineer shall modify the alternatives to provide additional nutrient removals for potential future nutrient limits. Optimization of the facilities evaluated with suggested process adjustments to improve plant efficiency and effluent quality should be presented.
  - 3. As part of the modeling effort, the Engineer shall evaluate the system hydraulics, including but not limited to the following:

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- In-plant hydraulics
- Outfall connection hydraulics
- Upstream influent sewer hydraulics
- Compute all treatment design and cost calculations at design capacities of 9 and 12 mgd average daily flow, with adjustments for peak hourly and sustained maximum daily flows for each unit process alternative.
- Evaluate meting treatment goals, including future modifications for nutrient removal under minimal and peak conditions of both influent quantity and quality.

A written description of the process, data and results shall be submitted with the Process Alternatives Analysis TM.

#### 2.4.6 Site Layout

The Engineer shall prepare conceptual plant configuration or layouts that evaluate hydraulics and civil engineering issues, including liquid and sludge treatment and disposal. The Engineer shall provide a site layout showing all major treatment processes, access ways and facilities including preliminary site grading, stormwater improvements, utility corridors, security and site appearance, and process systems communication routes (duct banks, radio devices locations, etc.). The NDWWTP secondary treatment facilities shall be design for 9 mgd with provisions to facilitate future expansion to 12 mgd if average flows should increase. The provisions shall include potential future layouts for the expanded facilities as well as consideration of design features to facilitate this expansion. Provisions should also include space needed for future tertiary treatment and cooling water transmission for Guam Power Authority's proposed facility. In addition, plant modifications to achieve nutrient removal at both 9 mgd and 12 mgd conditions shall be provided.

#### 2.5 Design Development Report

The Engineer shall complete a Design Development Report (DDR) on the approved wastewater treatment system capable of treating to secondary standards and meeting all applicable standards and limits as noted by the Facility Plan. The DDR shall recommend a preferred design direction and design criteria to address the upgrade and shall include, but not be limited to the following:

- Final TMs from Task 2 Pre-Design
- Equipment list and preliminary specification on major equipment
- Specification List
- Operation and Control Strategies
- Key Engineering and Design Requirements
- Calculations including sizing and removal percentages in accordance with effluent limits
- Codes and standards
- Constructability issues
- Safety requirements
- Permits identification
- Environmental clearances
- Regulatory compliance
- Energy efficiency analysis
- Potential for providing energy source for GPA use
- Unit Processes
- Operations and Maintenance requirement and other operability considerations

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As part of the Draft Design Development Report, the Engineer and GWA shall develop a maximum construction bid target price for the Engineer to use as the basis for the design. The actual construction bid price for the facility construction projects(s) must fall within this amount or the Engineer is required to modify the design, with no additional compensation, until the construction cost is both within the budgeted cost and the project achieves the NPDES permit requirements without unreasonable O&M requirements. The Engineer shall provide a base design required to meet objectives, as well as additional additive bid items for consideration.

The Engineer shall document findings and recommendations in separate TMs to be submitted as completed, unless otherwise agreed upon with the Program Manager. The DDR shall include all technical memoranda compiled and submitted. A draft shall be submitted per the approved schedule. The pre-final DDR shall be submitted after a review and comment period with stakeholders along with the 60% Design submittal package, and the final DDR shall incorporate all changes, modifications and revisions and be submitted with the 90% Design submittal package.

#### 2.5.1 Design Criteria Confirmation

The Engineer shall perform the following tasks to confirm understanding of the design criteria:

- Visit the project site, review data and reference material, conduct interviews with GWA Program Management and Operations personnel.
- Identify all permit requirements from local authorities and utility agencies per Section 2.3.
- Arrange and conduct a Design Criteria Confirmation Workshop and prepare a summary report.

### 2.5.2 Geotechnical Investigation Report

A geotechnical survey shall be conducted for the site based on the approved site layout to guide the design of the new treatment plant. This investigation shall include test pits and samples sufficient in quantity and extent to provide appropriate information for design of all the components of the new treatment plant sitework and structures. The geotechnical report shall be submitted as part of the Pre-final DDR submittal and will make recommendations pertaining to the site and the design of the treatment plant upgrades and expansion. This report shall include a summary of the results of past geotechnical reports of the project site and a discussion of past geotechnical information which remain valid for use in the design of the new treatment plant.

#### 2.5.3 DDR Submittals

- 2.5.3.1 Draft Design Development Report: At minimum, the Draft DDR shall include draft information required to develop the design, including but not limited to the following components:
- 1. Site Layouts
- 2. Capacity, Hydraulic and Process Requirements
  - a. Process Alternative Analysis TM
  - b. Confirm population and flow projections for the next 50 years with consideration of I&I mitigation.
  - c. Process modeling, design criteria, basin design data and site plan.
  - d. Hydraulic Profiles, using average daily flow and peak flow data
  - e. Future Expansion, including provisions for potential nutrient reduction.
  - f. Flood plain elevations (if appropriate).
- 3. Areas and Equipment
  - a. Ingress/Egress requirements
  - b. Headworks/Preliminary Treatment, including existing or new facilities
  - c. Primary Treatment, including existing or new facilities (if needed)
  - d. Aeration Reactors

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- e. Secondary Clarification
- f. Disinfection including existing or new facilities
- g. Utilities including process drains, non-potable water, potable water and plumbing.
- h. Chemical Feed Systems and chemical handling
- i. Odor control
- j. Sludge pumping, thickening, stabilization, dewatering and handling
- k. Internal Water Re-use and utility water modifications
- I. New Electrical and/or Blower buildings and facilities
- m. Major piping, channels and conduit corridors including emergency generator
- n. Septage receiving modifications
- o. General Security
- p. Areas for future expansion, tertiary treatment and process water piping for GPA facilities
- 4. Design Disciplines
  - a. Preliminary process and instrumentation diagrams (P&IDs), equipment list and control strategies. The control system will be designed to incorporate PLCs for included treatment and process systems. This is in addition to the individual treatment plant components being interfaced with a central SCADA system to monitor and control treatment operations. The design will be accomplished to accommodate redundancy for the individual systems to operate and be controlled separately.
  - b. Electrical
  - c. Instrumentation and Control
  - d. Mechanical HVAC
  - e. Process Mechanical
  - f. Structural and Architectural
  - g. Civil
  - h. Geotechnical
- 5. General requirements and Permitting
  - a. Relevant Permits per Section 2.3
  - b. Stormwater Management
  - c. Encroachment Agreement
  - d. Noise, Odor and Vibration Concerns
- 6. Construction Related Items
  - a. Long Lead Items, for example, MCCs, equipment, etc.
  - b. Construction Cost Estimate: Prepare an opinion of probable construction cost for a Class 3 estimate in accordance with the Advancement of Cost Engineering International (AACE) classification system for the project including consideration of engineering, administration and construction management for the 30% design submittal. Provide a basis of how the cost estimate was prepared, including a description of how Guam-specific costs were developed. Include contingencies as appropriate in accordance with guidance from AACE International criteria. Include a monthly cash flow schedule to determine time frame for expected project expenditures. The Engineer shall immediately notify the Program Manager when any design decision causes any cost increase to the project. This notification should not be delayed until the construction schedule is submitted.
  - c. Preliminary Construction Schedules: Prepare an opinion of probable construction schedule for the project including consideration of engineering, administration and construction management for the 30% design submittal. Identify the construction critical path. The Engineer shall immediately notify the Program Manager when any design decision causes a time increase to the project. This notification should not be delayed until the construction schedule is submitted.

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The Engineer shall include all TMs and decision correspondence from previous tasks. The Engineer shall submit the Draft DDR with the 30% complete design package in accordance with the approved project schedule, following a review conference to be held with GWA and the Program Manager, at minimum.

2.5.3.2 Pre-Final Design Development Report: At minimum, the Pre-Final DDR shall include all pertinent information used to develop the 60% complete drawings and specifications, as well as information required in the Draft DDR. The Engineer shall include all TMs and decision correspondence from previous tasks. Any change to the cost estimate and construction schedule from the Draft DDR shall be requested through the Program Manager, and approved by GWA. The cost estimate and construction schedule shall only be revised per comments and review from GWA.

The Pre-Final DDR shall incorporate GWA and the Program Manager's comments and input resulting from the review of the Draft DDR. The Engineer shall submit the Pre-Final DDR with the 60% complete design package in accordance with the approved project schedule, following a review conference to be held with GWA.

### 2.5.3.3 Final Design Development Report

The Final DDR shall include any changes and revisions made to the Pre-Final DDR through the pre-final design submittal. The Engineer shall include all TMs and decision correspondence from previous tasks. Any change to the cost estimate and construction schedule from the Pre-Final DDR shall be requested through GWA. The cost estimate and construction schedule shall only be revised per comments and review from GWA.

Review comments from GWA, Program Manager, stakeholders, public meetings, regulatory agencies, manufacturer changes, etc. shall be incorporated. The Final DDR shall be submitted with the Pre-Final 90% Design submittal package unless otherwise agreed upon.

### 2.6 Design

### 2.6.1 Preliminary Engineering (30% Design).

The Engineer shall proceed with preliminary engineering design and deliver the following applicable items at minimum:

- A site development plan with identification of environmental mitigation measures (if required).
- 2. A site demolition plan with potential staging areas, haul routes and measures addressing mitigation of impacts to surrounding areas.
- 3. Select final location of process units and associated buildings on the plant site.
- 4. Identify major underground utility corridors, coordinate subsurface utility engineering (SUE) with the project surveyor, and coordinate with utility companies and private entities.
- 5. Generate process design including mass balance, process block flow diagram, and list of major equipment.
- 6. Establish building layouts and equipment accessibility needs and prepare preliminary process unit and building design drawings.
- 7. Design efforts to provide power and controls to all process units and buildings
- Coordination with project surveyor and geotechnical engineer, and determination and commissioning of additional needs.
- 9. General Discipline Preliminary Design including but not limited to:
  - a. Civil
  - b. Mechanical, Process and building

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- c. Structural
- d. Electrical
- e. Architectural

The preliminary design shall be submitted with the draft compiled DDR for concurrent review. Following the submission, a review conference shall be held with GWA and the Program Manager.

#### 2.6.2 Site Preparation Bid Packages

To accelerate the construction schedule, separate site preparation bid packages must be released prior to the bulk of the design. Separate site preparation design packages shall be prepared for, but not be limited to the following:

- 1. Demolition and removal of existing digester roofing and sludge removal
- 2. Clearing & Grading (including storm drainage and erosion control)

Related specifications shall also be provided per the format described in Section 3.

#### 2.6.3 60% Design

The Engineer shall develop the design of the project to 60% completion. The following tasks include, but not be limited to:

- 1. Prepare 60% complete drawings, specifications and cost estimate.
- 2. Incorporate all comments and input resulting from the review of the 30% design submittal.
- 3. Submission of the Pre-Final DDR with supporting design calculations.

The Engineer shall submit a 60% complete design package in accordance with the approved project schedule. A review conference shall be held with GWA and the Program Manager following the submission of the design package.

### 2.6.4 Pre-Final 90% Design

The Engineer shall prepare and submit 90% complete detailed design drawings, specifications, and draft bid and contract documents. The submittal shall provide sufficient information for securing all permits for the project including all construction permits. The Engineer shall assist GWA in applying for the construction permit using this submittal. The following tasks shall include, but not be limited to:

- 1. Preparation and submission of Pre-Final 90% complete drawings to include P&IDs, SCADA system architecture, specifications and cost estimate.
- 2. Incorporate all comments and input resulting from the review of the 60% design submittal.
- 3. Submission of the Final Design Development Report with supporting design calculations.
- 4. Preparation and submission of an opinion of probable construction cost for a Class 1 estimate in accordance with the AACE International classification system for the project.
- 5. Preparation and submission of the draft construction permit application.

A review conference shall be held with GWA and the Program Manager following the submission of the design package.

#### 2.6.5 Final Design

A final design review conference shall be held between the Engineer, GWA and the Program Manager and the resulting comments and corrections shall be incorporated in the final submittal. Guam EPA will be invited to attend the final review conference. The Engineer shall submit the final design/construction documents in hard copy originals, the desired number of print copies as well as native electronic files as provided in Section 3.

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### 2.7 Post Design Services

#### 2.7.1 Project Bidding Support

The Engineer shall assist in meetings during the bidding phase of the project. The Engineer shall provide comment and input as related to the design of the project and coordinate directly with the Program Manager. The Engineer's tasks shall include, but not be limited to:

- Providing responses to requests for information
- Providing input and preparing addenda as needed.
- Provide conformed construction documents.
- Attendance at the pre-bid meeting and bid evaluation conference.
- Providing responses to substitution requests.
- Review, evaluate and certify bid tabulations.
- Providing recommendation for construction contract award.

### 2.7.2 Project Construction Support

The Engineer shall assist in pre-construction, kick-off and periodic meetings as required by the Program Manager during the construction phase of the project. The Engineer shall review and comment on the contractor's schedule of values and shop drawings, project submittals, RFI's, change orders and contractor's construction schedule as requested by the Program Manager. Submittals that request for modifications to the design shall be reviewed and approved by the Engineer.

- Prepare final (100%) "Issued for Construction" conformed plans and specifications incorporating addenda, change orders and changes during the bid phase.
- Assist in preconstruction and partnering conferences.
- · Attend weekly progress meetings.
- Provide field assistance as required.
- Visit site monthly during construction to determine general conformance.
- Review Change Orders and Contractor's Schedule and provide comments as appropriate.
- Review schedule of values.
- Coordinate process control programming with construction contractor and controls vendor.
- Provide treatment process training to GWA operators during construction in advance of completion.
- Provide support for start-up and commissioning.
- Approve punch list items completed.
- Review and respond electronically to technical submittals, shop drawings, samples, tests results
  and other data that the Contractor is required to submit in accordance with the contract
  documents. The review will be for conformance with the design concept of the project and
  compliance with the information given in the construction documents. Such review or other
  action shall not extend to means, methods, techniques or procedures of construction selected by
  the Contractor, or to safety precautions and programs also required of the Contractor.
- Review and respond electronically To RFIs by the Contractor. Provide assistance, guidance and recommendations in the interpretation of the drawings and specifications especially for resolution on any issues between the Contractor and the Program/Construction Manager to minimize cost and schedule impacts.

### Exhibit D (18 of 23)

July 14, 2017

- Provide witnessed factory test observation and reporting for specified equipment requiring a representative as required. Review delivery acceptance test and inspection reports as required in individual equipment specifications such as large pumps, fans, blowers, and FRP products.
- Witness and observe field installation and performance testing, as required. Provide observation reports as required in individual equipment specifications.
- Facilitate technical coordination between parties during testing and outages. Provide technical assistance as needed.
- Perform constructed plant electrical system analysis, arc-flash and labeling.

#### 2.7.3 Process Startup and Optimization

Provide facility startup support and optimization recommendations as needed. Attend weekly startup meetings with Contractor, CM and GWA representatives starting approximately one month prior to the start of the component test phase, with meetings to continue through the commissioning period. Witness system test phases for each system and make recommendations regarding approvals. Witness operational test and commissioning phases for the complete facility, and make recommendations regarding approval. Verify coordination of communication and monitoring systems during system and operational testing periods. Verify control Actions and control system responses are per contract documents.

#### 2.7.4 Operations and Maintenance Manual

Upon substantial completion of the project, GWA shall provide the Engineer with vendor O&M Manuals. The Engineer shall provide a consolidated Operations and Maintenance (O&M) Manual per example standards to be requested from the Program Manager and at a minimum shall contain:

- Introductory material
- Permit requirements
- Wastewater Treatment
- Sludge Treatment (pumping, thickening, stabilization, dewatering, handling and reuse/disposal)
- Plant description
- Treatment process descriptions and controls
- Plant Management procedures
- Plant operation procedures (including troubleshooting)
- SCADA system, I&C devices, and communication systems
- Parameters specific to NDWWTP
- Asset List and Preventative Maintenance Schedule

The Engineer will package the O&M Manuals in a three-ring binder, tabbed format, outlined by process. A table of contents, introductory language and descriptions of the items listed shall be prepared and included prior to the packaged vendor O&M Manuals. A total of five (5) O&M hard copies and one electronic copy shall be delivered to GWA.

Once the Draft O&M Manual is complete and reviewed by GWA and the Construction Manager, the Engineer shall conduct start-up training for GWA operations. Final O&M Manuals shall include all comments and revisions for submission.

#### 2.7.5 Operator Training

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The Engineer shall conduct a series of workshops for GWA operators prior to plant start up. A minimum of six (6) workshops will be held on Guam. Each of these workshops will focus on the process operations of the new plant such as:

- Pretreatment
- Primary Treatment
- Secondary Treatment
- Sludge Handling and Stabilization
- System Controls SCADA
- Laboratory and Safety Procedures
- Troubleshooting

The start-up training shall cover all major components of the facility as well as start-up, shut down, emergency operation and compliance monitoring.

#### 2.7.6 As-Built (Record) Drawings

After completion of the construction punch-list items, GWA will provide the "red-line" mark ups prepared by the Construction Contractor to the Engineer. The "red-line" mark ups shall be prepared by the Contractor and concurred by Construction Manager prior to transmission to the Engineer. The Engineer shall use the redline mark ups to generate the project record drawings in AutoCAD format and per Section 3.

### 2.8 GWA Optional Task Assignments

The following services may be added to the scope of the Engineer's work at GWA's option. If exercised, the scope of and the fee for these optional services shall be engaged as amendments to the Contract.

#### 2.8.1 Value Engineering Support.

Support 30% Value Engineering (VE) Workshop and provide written response/clarifications resulting from 30% VE Workshop. Incorporation of the agreed upon recommendations into the design will be the Engineer's responsibility.

### 2.8.2 SCADA – Advanced System Options

The Engineer shall prepare and facilitate a SCADA workshop to demonstrate the enhanced abilities of the WWTP SCADA system such as data historian, distributed alarms, asset management, trending, scheduling, energy monitoring, and mobile operation to provide superior systems. process analysis, and cost savings.

### 3.0 PROJECT DELIVERABLES AND SUBMITTAL STANDARDS

Due to agreements between Guam Waterworks Authority (GWA), Guam Environmental Protection Agency (GEPA), U.S. Naval Facilities Command, Pacific (NAVFACPAC), and Department of Defense Office of Economic Adjustment (OEA), secondary treatment upgrades must obtain final acceptance by December 31, 2021. It is anticipated that GWA will procure a separate site preparation construction bid package and a separate multi-step bid vertical construction package. The site preparation package construction documents shall be available such that the formal bidding process shall be not later than October 22, 2018. All other construction documents shall be available such that the formal bidding process for the multi-step bid vertical construction package shall be no later than March 18, 2019, unless otherwise agreed upon.

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Each submittal shall be reviewed by stakeholders and as distributed by the Program Manager. All submittals shall be provided in the number of hard copies indicated, as well as 1 electronic copy for each.

Each deliverable shall be submitted per the schedule in calendar days as stated below. All deliverables and work tasks noted as "Per Approved Schedule" shall be provided per the approved project schedule to be developed as described in previous sections. As a guide, GWA/Program Manager has provided the Program Master Schedule. The Engineer is encouraged to develop an accelerated schedule.

### 3.1 Project Management, Project Initiation and Concept Design.

The Engineer shall provide the following deliverables. All submittals shall be provided in the number of copies indicated.

	Deliverable/Work Task	Copies	Schedule
1.	Project Management Plan	All Inc.	And a second
•	Quality Assurance/Quality Control Plan	5	Within 30 calendar days after NTP
•	Risk Evaluation	AN SOUTH	The same of the sa
2,	Project Milestones/Schedule	5	Within 30 calendar days after NTP
3.	Project Kick-Off Meeting & Exhibits	18 1	Within 40 calendar days after NTP
	3.2 Permitting		
	Deliverable/Work Task	Copies	Schedule
1.	Identification of Required Permits	5	Per approved schedule
2.	Environmental Info Document (EID)	5	Per approved schedule
3.	Area of Potential Effect (APE)	1	Per approved schedule
4.	Cultural Resources and Historical		
	Designation Applicability	1	Per approved schedule 2.3.4
	Preliminary Engineering (30%) Design Phase	2	
5.	Building Permit (DPW)	1	With Pre-Final Design
			Submittal Package
6.	Permits	1	Complete with Site Preparation
	100		Design Packages
	2.3 Pre-Design		
	Deliverable/Work Task	Copies	Schedule
1.	Document Review Request	-	Per approved schedule
2.	Process Alternatives Analysis	5	Per approved schedule
	<ul> <li>Wastewater Characterization Study</li> </ul>		
	<ul> <li>Dynamic Modeling</li> </ul>		
3.	Site Layout	5	Per approved schedule
	3.4 Design Development Report (DDR)		
	Deliverable/Work Task	Copies	Schedule
1	Design Criteria Confirmation Meeting		
	and Summary	5	Per approved schedule

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July 14, 2017

2.	Geotechnical Investigation Report	5	Per approved schedule
3.	Draft Design Development Report	5	With Preliminary 30%
			Design Package
4.	Pre-final Design Development Report	5	With 60% Design Package
5.	Final Design Development Report	5	With Pre-final 90%
			Design Package
	3.5 Design Development		
	Deliverable/Work Task	Copies	Schedule
1.	Preliminary 30% Plans, Specs, Cost Opinion	5	Per approved schedule
2.	Site Preparation Design Package	5	Per approved schedule
3.	60% Design Plans, Specs, estimate and		43
	Preliminary Construction Schedule	5	Per approved schedule
4.	Pre-final 90% Plans, Specs, Estimate		4970
	and Preliminary Construction Schedule	5	Per approved schedule
5.	Final Original Drawings, Specs & Estimate	1 (set)	Per approved schedule
6.	Final Prints of Construction Bid Package		
	and Construction Schedule	5	Per approved schedule
	3.6 Post Design Services		ll d
	Deliverable/Work Task	Copies	Schedule
1.	Project Bidding Support	- Copies	N/A
1. 2.	Project Blooming Support Project Construction Support including	-	N/A
۷.	"as constructed" electrical system analysis		No. of the last of
3.	Process Start-Up and Optimization	ATTENDED TO	Per approved schedule
4.	Operations and Maintenance Manual	5	Per approved schedule
<del></del> . 5.	Operator Training	5	Per approved schedule
6.	As-Built Drawings	5	Per approved schedule
o.	As-built brawings	VA	r c. approved temedate
	3.7 GWA Optional Task	W.	
	Deliverable/Work Task	Copies	Schedule
1.	Value Engineering Support	- 67	Per approved schedule
2.	SCADA – Advanced System Options		Per approved schedule

#### 3.8 Submittal Standards

- A. Drawings: Drawings shall conform to GWA Standards and Contract Design Drawings shall be completed in REVIT, AutoCAD 3D MEP, AutoCAD Civil 3D, or other BIM software as approved by GWA and as appropriate. 3D drawings created during design using the approved BIM software shall be included in all deliverables. Plant buildings, yard piping and appurtenances shall also be translated into ESRI GIS mapping. Five (5) sets of submittals shall be submitted for all deliverables.
- B. Specifications: CSI Format.
- C. Project Schedule: Construction Schedule shall be CPM-based and be in Primavera P6.

### 4.0 GWA RESPONSIBILITIES

GWA be responsible for providing the following:

A. Right-of-Entry permits for areas/properties that the Engineer must investigate and/or survey for performance of his work.

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July 14, 2017

- B. Property maps, past studies and other relevant documents in its possession (If available) that the Engineer will need to properly perform his work including the Phase 1 ESA Report.
- C. Wastewater loading projections and criteria for use in the Engineer's work.
- D. Timely reviews of and responses to the Engineer's submittals and inquiries.
- E. Arrange for meetings between the Engineer and appropriate Department of Defense officials to discuss to discuss wastewater flow requirements for the project.
- F. Timely initiation and issuance of optional tasks and appropriate contract amendments.
- G. Depict and mark clearly all connections and demarcation points to include, but not limited to, process, electrical, SCADA and communication.
- **POLICY GUIDE AND REFERENCE MATERIALS:** The design shall conform to current industry standards and the following policy guide and reference materials:

#### 5.1 Standards

- GWA Design and Construction Standards
- 2009 International Building Code (version adopted by the Government of Guam)
- Wastewater-Related Industry Standards adopted by GWA
- American National Standards Institute (ANSI)
- National Electrical Manufacturer's Association (NEMA)
- American Water Works Association (AWWA)
- National Fire Protection Association (NFPA)
- Federal Court Order relevant to this project.

### 5.2 Reference Exhibits

- Exhibit A U.S. Department of Defense Office of Economic Adjustment General Assistance Agreement Terms and Conditions, April 2016
- Exhibit B National Policy Requirements, October 2015
- Exhibit C U.S. Department of Defense Office of Economic Adjustment Grant Program -Specific Terms and Conditions, April 2016
- Exhibit D Model Form of Agreement Between Owner and Engineer for Professional Services
- Exhibit E Facility Plan: Northern District Wastewater Treatment Plant, April 2017
- Exhibit F Guam Water and Wastewater Infrastructure Improvements Draft Master Program Schedule March 2017
- Exhibit G USEPA Authorization to Discharge Under the National Pollutant Discharge Elimination System, NPDES Permit No. GU0020141, June 2002
- Exhibit H Veolia Northern District Wastewater Treatment Plan (NDWWTP) Interim Improvements, Preliminary Design Study Report V0.1, April 2016
- Exhibit I NAVFAC, Guam Water and Wastewater Assessment Report in Support of the Economic Adjustment Committee Implementation Plan, February 2015
- Exhibit J Pacific Soils Engineering & Testing, Limited Soils Investigation,

### Exhibit D (23 of 23)

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Proposed NDWWTP Sludge Tank and Drainage Project, January 2012

- Exhibit K- Final Remedial Investigation for Harmon Annex Operable Unit,
   Andersen Air Force Base Guam, January 2000
- Exhibit L Construction Drawings and Miscellaneous Information
  - 1. Administration & Laboratory Rooms, A/C & Duct As-Builts, Waterline Layout
  - 2. Clarifier MCC Wiring
  - 3. Desludge Scum Pump Control Panel Seepex
  - 4. Electrical As-Builts, DCK
  - 5. Equipment and Instruments Schedule, Interim Improvements Project
  - 6. Fixed Asset Inventory
  - 7. Interim Improvements, NDWWTP, Kennedy/Jenks
  - 8. Interim Improvements, Septage Handling Facility, Kennedy/Jenks
  - 9. Northern District Sewerage System, 1975 As-Builts, ASA
  - 10. PAC Dilution System, Shop Drawings, DCK
  - 11. Process and Instrumentation Diagram, Cross Panel Wiring
  - 12. Power and Control Schematic Diagram

#### 6.0 PROJECT DESIGN SCHEDULE

The Engineer shall prepare a Project Design Schedule and submit a draft schedule to GWA and the Program Manager for review and approval. The approved schedule shall become an integral part of this Scope of Work.





"Better Water, Better Lives."

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

Tel: (671) 300-6846

### **Issues for Decision**

### Resolution No. 48-FY2017

Relative to Increase Funding for the Agat Santa Rita Wastewater Treatment Plant Upgrades Construction Management Contract

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

The objective of the funding increase is to fund the additional construction management services by GHD to oversee construction activities at the Agat Santa Rita WWTP. The reason for the required funding increase is that GWA management executed Change Order to the Contractor, Sumitomo Construction that extended their contract completion date to December 2017 due to permitting and rain delays. Therefore in order to have continued CM services during the extended contract period, GHD contract services must also be extended to cover this period.

There is currently potential for further delays by the contractor related to adverse weather conditions and the H2-B visa program, which could impact the construction completion period for SMCC an additional one to three months past their current December 2017 deadline. If such potential delays are confirmed, CM services may also be needed to cover this additional period.

### Where is the project located?

The CM services will be at the new Agat Santa Rita WWTP as well as along Route 2 where offsite waterline improvements are on-going.

### How much will it cost?

GWA management seeks CCU approval of additional funding to executed Change Order No. 2 in the amount of Five Hundred Eighty One Thousand Four Hundred Thirty One Dollars (\$581,431.00) plus Four Hundred Thirty Two Thousand Nine Hundred Eighty One Dollars (\$432,981.00) to cover CM services should there be an extension to the SMCC contract completion period for a total funding increase of One Million Fourteen Thousand Four Hundred Twelve Dollars (\$1,014,412.00)

With this funding increase on top of the original approval of Three Million Two Hundred Eighty Eight Thousand Six Hundred Fifty Three Dollars (\$3,288,653.00), the funding total for the CM services is Four Million Three Hundred Three Thousand Forty Seven Dollars (\$4,303,047.00).

#### When will it be completed?

The CM services will continue up until December 2017 however should there be any extension to the construction contractor's completion the CM services will cover up until March 2018.

### What is the funding source?

The funding for this project will be from the bond funds under the line item - WW 11-08 "Agat/ Santa Rita STP Replacement".

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

#### **RESOLUTION NO. 48–FY2017**

# RELATIVE TO INCREASE FUNDING FOR THE AGAT SANTA RITA WASTEWATER TREATMENT PLANT UPGRADES CONSTRUCTION MANAGEMENT CONTRACT

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

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

WHEREAS, GWA currently has a number of critical Court Order ("CO") projects including work required at the Agat Santa Rita Wastewater Treatment Plant that is necessary for the plant to achieve compliance with the WWTP's NDPES permit, eliminate by-passes at the plant, ensure that solids generated by the WWTP are adequately stabilized and dewatered, and to comply with sludge and biosolids requirements 40 C.F.R. Part 503 as stated in Paragraph 11 of the 2011 Court Order; and

WHEREAS, GWA executed contracts with Sumitomo Mitsui Construction Company (SMCC) to construct the new WWTP and GHD, Inc. to provide construction management services as a means work towards achieving the Court Order requirements; and

WHEREAS, the GWA executed a Change Order to the SMCC contract that extended the phase II construction completion deadline to December 2017 due to SMCC claims related to permitting and rain delays; and

WHEREAS, the original scope and fee for the construction management services estimated an eighteen-month construction period for vertical construction activities that SMCC was contracted to do which resulted in the CM services ending sometime in June 2017; and

WHEREAS, GWA had negotiated with GHD continued CM services that equated to the ten percent contingency funding that was original authorized by the CCU via Resolution 36-FY2015 after which GWA executed Change Order No. 1 that extended the CM services an additional two months, or until August 2017 (SEE EXHIBIT A); and

WHEREAS, GWA requires that the construction manager be on-board the duration of the construction activities and as such negotiated with GHD for additional CM services that will cover up until the current construction completion of December 2017 in the amount of Five Hundred Eighty One Thousand Four Hundred Thirty One Dollars (\$581,431.00) which would be effectuated via a Change Order No. 2 (SEE EXHIBIT B); and

WHEREAS, the GWA project management and construction management team are in currently discussion with SMCC regarding additional claims of delay due to weather and work force shortages as a result of the H2-B visa program for which there is a potential of GWA approving the extension of the construction completion period for SMCC an additional one to three months; and

WHEREAS, as a means of allowing for continuity of construction management services as it relates to any construction extension, GHD has provided to GWA a fee proposal for CM services related to the potential extension of SMCC completion period an additional three months in the amount of Four Hundred Thirty Two Thousand Nine Hundred Eighty One Dollars (\$432,981.00); and

WHEREAS, GWA management seeks CCU approval of additional funding to executed Change Order No. 2 in the amount of Five Hundred Eighty One Thousand Four Hundred Thirty One Dollars (\$581,431.00) for the current contract performance period, plus up to Four Hundred Thirty Two Thousand Nine Hundred Eighty One Dollars (\$432,981.00) for CM services only to be used should there be an additional extension to the SMCC contract completion period for a

total funding increase of One Million Fourteen Thousand Four Hundred Twelve Dollars (\$1,014,412.00); and

WHEREAS, funding for this project will be from the bond funds under the line item - WW 11-08 "Agat/ Sta Rita STP Replacement"; and

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

- 1. The recitals set forth above hereby constitute the findings of the CCU.
- 2. The CCU finds that the terms of the fee proposal submitted by GHD are fair and reasonable.
- 3. The CCU finds that the terms of the conditions set by GWA relative to commencement of subsequent work activities are fair and reasonable and serve as a measure of Quality Assurance/Quality Control (QA/QC).
- 4. The CCU hereby approves the funding increase of Five Hundred Eighty One Thousand Four Hundred Thirty One Dollars (\$581,431.00) (EXHIBIT B) which would be effectuated via a Change Order No. 2 to cover the current contract performance period, plus, up to Four Hundred Thirty Two Thousand Nine Hundred Eighty One Dollars (\$432,981.00) to cover additional CM services only should there be an extension to the SMCC contract completion period for a total funding increase of One Million Fourteen Thousand Four Hundred Twelve Dollars (\$1,014,412.00).
- 5. The source of funding for the additional CM services will be from the bond funds under the line item WW 11-08 "Agat/ Sta Rita STP Replacement".

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

JOSEPH T. DUENAS Chairperson  J. GEORGE BAMBA Secretary  I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilitie evidenced by my signature above do hereby certify as follows:  The foregoing is a full, true and accurate copy of the resolution duly adopted at a meeting by the members of the Guam Consolidated Commission on Utilities, dul legally held at a place properly noticed and advertised at which meeting a quorun present and the members who were present voted as follows:  AYES:  NAYS:  ABSTENTIONS:  ABSENT:			Attested by:			
I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilitie evidenced by my signature above do hereby certify as follows:  The foregoing is a full, true and accurate copy of the resolution duly adopted at a meeting by the members of the Guam Consolidated Commission on Utilities, dul legally held at a place properly noticed and advertised at which meeting a quorun present and the members who were present voted as follows:  AYES:  NAYS:  ABSTENTIONS:		Certified by:	Attested by:			
evidenced by my signature above do hereby certify as follows:  The foregoing is a full, true and accurate copy of the resolution duly adopted at a meeting by the members of the Guam Consolidated Commission on Utilities, dul legally held at a place properly noticed and advertised at which meeting a quorun present and the members who were present voted as follows:  AYES:  NAYS:  ABSTENTIONS:						
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### GUAM WATERWORKS AUTHORITY \_ 9 PM >

Project Title:		Vastewater Treatm	ent Plant Construction		(20012) ·	
Project No.:	S14-002-BND			F18	Contract Date	19/3/2015
Contractor:	GHD, Inc.	<u> </u>		Ndt	ce to Proceed:	9/8/2015
FO: GHD, Inc.						
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GHD Representative	(PRINT)			Rylma Carino	Date	
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GHD Representative	(SIGNATURE)	Date		John Davis , P.E.	Date	
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			RECOMMEND APPROVAL:	Thomas Cruz, Pa	<u> </u>	
			APPROVAL:	Chief Engineer	Date	
				Office Engineer		
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### Exhibit A (2 of 4)



Date:

May 25, 2017 (Amended)

May 24, 2017 (Amended) May 23, 2017 (Amended)

March 24, 2017

Reference No.:

GHD/GWA - LTR-02

To:

Mr. John Davis, P.E., Project Manager

Guam Waterworks Authority

Gloria B. Nelson Public Utilities Complex

Route 15, Mangilao, Guam

Project:

Agat-Santa Rita WWTP Replacement Project - Phase II

Project No. S14-002-BND

Subject:

MOD 001, 002, & 003 - Additional Construction Management Services Scope of

Work and Fee Proposal - REVISED

Dear Mr. Davis:

In reply to your recent email request, we are pleased to submit this revised proposal for additional CM support services as described below.

### **SCOPE OF WORK:**

As you know, the Phase I and II construction have been subject to adverse weather conditions that have caused an extension of the construction duration and impacting our performance period as well. The WWTP Replacement project overall completion date has been extended from November 01, 2017 to December 24, 2017 via SMCC Change Order #04, with an anticipated completion date of March 31, 2018. The 03/31 completion date is based on the Contractors updated progress schedules as well as GHD's observation of the progress. These impacts will extend our construction management services by approximately ten (10) months or 294 calendar days.

Based on our discussions with GWA, we have provided the cost proposal as three (3) separate modifications to allow for review and acceptance of each independently based on our understanding of the current funding constraints.

- MOD 01 has been revised to provide CM services for the period of June 09, 2017 through August 14, 2017 (70 calendar days) to capture the available contingency provided via Guam Consolidated Commission on Utilities (CCU) Resolution No. 36-FY2015. Modification 01 is a portion of the funding required to bring our services in line with the current contract completion date of December 24, 2017. The balance will be provided via MOD 02 below.
- MOD 02 has been revised to provide additional CM services for the period of August 15, 2017 through December 24, 2017 (128 calendar days) and to bring our services in line

# Exhibit A (3 of 4)

website. This camera is located on the roof of the Existing Tipalao Pump Station. The total cost including software support and shipping was \$39,721.

e. We maintained the same hourly rates from our original fee proposal despite increases in the direct rates for most of our staff.

The following tables show the summary of hours and cost for MOD 001, MOD 002, and MOD 003 and the totals for all three (3).

TABLE 1. SUMMARY OF MOD 001 COSTS (June 09, 2017 through August 14, 2017)

Description/Labor Class	Labor Hours	Estimated Labor Cost	Estimated Expense Cost	GRT	Total Cost 06/09/17 to 11/01/17
Project Manager	384	\$71,808	\$2,304	\$3,088.25	\$77,200
Special Inspector	96	\$20,640	\$576	\$884.07	\$22,100
Civil Inspector	384	\$44,160	\$2,304	\$1,936.15	\$48,400
Assistant PM	384	\$44,160	\$2,304	\$1,936.15	\$48,400
Special Inspector	384	\$46,080	\$2,304	\$2,016.16	\$50,400
Submittal/ RFI Manager	384	\$46,080	\$2,304	\$2,016.16	\$50,400
Total	2016	\$272,928	\$12,096	\$11,877	\$296,901

TABLE 2. SUMMARY OF MOD 002 COSTS (August 15, 2017 through December 24, 2017)

Description/Labor Class	Labor	Estimated Labor Cost	Estimated Expense Cost	GRT	Total 9081 11/02/17 to 03/31/18
Project Manager	752	\$140,624	\$4,512	\$6,047.82	\$151,184
Special Inspector	188	\$40,420	\$1,128	\$1,731.31	\$43,279
Civil Inspector	752	\$90,480	\$4,518	\$3,791.64	\$94,784
Assistant PM	750	\$86,480	\$4,512	<b>\$5,791.64</b>	\$94,784
Special Inspector	752	\$90,240	\$4,512	\$3,948.32	\$98,700
Submittal/AFT Manager	752	\$90,240	\$4,512	\$3,948.32	\$98,706
Total	3948	\$534,484	\$23,688	\$23.259	\$581,431

NOT INCLUDED IN CHANGE ORDER NO. I

# Exhibit A (4 of 4)

Agat-Santa Rita Waste Water Treatment Plant Repalcemeny Project - Phase II (June 09, 2017 through August 14, 2017) MOD 001 - Additional CM Services Prepared on May 25, 2017

Morking Dans Boath	-	Jun-17	Jul-17	Aug-17	Total
Wolning Days Fel moli		17	21	10	38
Description/Labor Class	Rate				,
Bryan Ryley (FTE)		136	168	80	384
Projected Manager	\$187.00	\$25,432	\$3/1,416	\$14,960	\$71,808
Jeff Groom (Part Time)		34	42	20	96
Special Inspector	\$215.00	\$7,310	\$9,030	\$4,300	\$20,640
Peter Gervacio (FTE)		136	168	80	384
Civil Inspector	\$415.00	\$15,640	\$19,320	\$9,200	\$44,160
Steven Carbullido (FTE)		136	168	80	384
Assistant PM	\$115.00	\$15,640	\$19,320	\$9,200	\$44,160
Rodolfo Miaco (FTE)		136	168	80	384
Special Inspector	\$120.00	\$16,320	\$29,160	\$9,600	\$46,080
Heidi Cervania (FTE)		136	168	80	384
Submittal/ RFI Manager	\$95.00	\$16,320	\$20,160	\$9,600	\$46,080
TOTAL (hr)		714	882	420	2016

TOTAL (hr) 714 882 TOTAL GHD LABOR ESTIMATE \$ 96,662 \$ 119,

 714
 882
 420
 2016

 \$ 96,662
 \$ 119,406
 \$ 56,860
 \$ 272,928



### Exhibit B (1 of 8)

Date: May 25, 2017 (Amended)

May 24, 2017 (Amended) May 23, 2017 (Amended)

March 24, 2017

**Reference No.:** GHD/GWA – LTR-02

To: Mr. John Davis, P.E., Project Manager

Guam Waterworks Authority

Gloria B. Nelson Public Utilities Complex

Route 15, Mangilao, Guam

Project: Agat-Santa Rita WWTP Replacement Project - Phase II

Project No. S14-002-BND

**Subject:** MOD 001, 002, & 003 – Additional Construction Management Services Scope of

Work and Fee Proposal - REVISED

Dear Mr. Davis:

In reply to your recent email request, we are pleased to submit this revised proposal for additional CM support services as described below.

### **SCOPE OF WORK:**

As you know, the Phase I and II construction have been subject to adverse weather conditions that have caused an extension of the construction duration and impacting our performance period as well. The WWTP Replacement project overall completion date has been extended from November 01, 2017 to December 24, 2017 via SMCC Change Order #04, with an anticipated completion date of March 31, 2018. The 03/31 completion date is based on the Contractors updated progress schedules as well as GHD's observation of the progress. These impacts will extend our construction management services by approximately ten (10) months or 294 calendar days.

Based on our discussions with GWA, we have provided the cost proposal as three (3) separate modifications to allow for review and acceptance of each independently based on our understanding of the current funding constraints.

- MOD 01 has been revised to provide CM services for the period of June 09, 2017 through August 14, 2017 (70 calendar days) to capture the available contingency provided via Guam Consolidated Commission on Utilities (CCU) Resolution No. 36-FY2015. Modification 01 is a portion of the funding required to bring our services in line with the current contract completion date of December 24, 2017. The balance will be provided via MOD 02 below.
- MOD 02 has been revised to provide additional CM services for the period of August 15, 2017 through December 24, 2017 (128 calendar days) and to bring our services in line

### Exhibit B (2 of 8)

with the current contract completion date of December 24, 2017 granted via SMCC Change Order #04.

• MOD 03 has been prepared to provide additional CM services from December 25, 2017 to March 31, 2018 (96 calendar days). These services are required to correspond with the WWTP's projected contract completion date of March 31, 2018. GWA can elect to defer this amendment (MOD 02) until the required time extension can be better defined or negotiated with the Contractor but at a minimum we wanted to provide GWA with an estimate for the additional work as best as we can currently determine.

#### **CLARIFICATIONS AND ASSUMPTIONS:**

- 1. The CM's additional onsite presence shall consist of the following: one (1) full time Project Manager, one (1) full time Assistant PM, one (1) full time civil/general inspector, one full time Special Inspector, one (1) part-time Structural Special Inspector (assumed 25%), and one (1) full time RFI/Submittal Manager. No time has been provided for the Principal or any other staff position although they will be participating as needed on the project.
- 2. The total duration for additional CM Services for the Modifications (MOD 01, MOD 02, and MOD 03) shall be for 294 concurrent calendar days (June 9, 2017 through March 31, 2018).
- 3. No additional budget has been provided for QA Compaction Testing, QA Concrete Strength Testing, QA Material Testing and QA Survey Verification as the scope for these services is anticipated to remain unchanged. If additional QA services are required it will be brought to GWA's attention and negotiated.
- 4. We would like to point out the additional services and expense effort that was absorbed by GHD and provided to GWA at no additional cost.
  - a. No expense budget for QA Compaction Testing, Concrete Strength Testing, Material Testing and Survey Verification were provided for in the Clearing and Grading CM contract. This totalled \$16,238.00.
  - b. The Clearing and Grading Contractor (C&G) completion date extended twice. Once from February 29, 2016 to March 25, 2016 and a second time to April 28, 2016. This increased the C&G contract duration by 59 days. GHD did not issue a change proposal for extended services and absorbed approximately \$98,000 of the additional effort. This was further complicated when the C&G contractor did not complete their punch list work and demobilized equipment and materials from the site until the end of June, 2016.
  - c. In order to help facilitate the WWTP Contractor's completion of the Phase I works, GHD staff worked on numerous weekends to perform special inspections, formwork inspections, coating inspections, concrete pour inspections, and leak test witnessing.
  - d. We added a robotic mobile construction site camera and trailer with solar power, global modem, software support, archiving services and remote access via

Page 2 of 5

### Exhibit B (3 of 8)

website. This camera is located on the roof of the Existing Tipalao Pump Station. The total cost including software support and shipping was \$39,721.

e. We maintained the same hourly rates from our original fee proposal despite increases in the direct rates for most of our staff.

The following tables show the summary of hours and cost for MOD 001, MOD 002, and MOD 003 and the totals for all three (3).

TABLE 1. SUMMARY OF MOD 001 COSTS (June 09, 2017 through August 14, 2017)

Description/Labor Class	Labor Hours	Estimated Labor Cost	Estimated Expense Cost	GRT	Total Cost 06/09/17 to 11/01/17
Project Manager	384	\$71,808	\$2,304	\$3,088.25	\$77,200
Special Inspector	96	\$20,640	\$576	\$884.07	\$22,100
Civil Inspector	384	\$44,160	\$2,304	\$1,936.15	\$48,400
Assistant PM	384	\$44,160	\$2,304	\$1,936.15	\$48,400
Special Inspector	384	\$46,080	\$2,304	\$2,016.16	\$50,400
Submittal/ RFI Manager	384	\$46,080	\$2,304	\$2,016.16	\$50,400
Total	2016	\$272,928	\$12,096	\$11,877	\$296,901

TABLE 2. SUMMARY OF MOD 002 COSTS (August 15, 2017 through December 24, 2017)

Description/Labor Class	Labor Hours	Estimated Labor Cost	Estimated Expense Cost	GRT	Total Cost 11/02/17 to 03/31/18
Project Manager	752	\$140,624	\$4,512	\$6,047.82	\$151,184
Special Inspector	188	\$40,420	\$1,128	\$1,731.31	\$43,279
Civil Inspector	752	\$86,480	\$4,512	\$3,791.64	\$94,784
Assistant PM	752	\$86,480	\$4,512	\$3,791.64	\$94,784
Special Inspector	752	\$90,240	\$4,512	\$3,948.32	\$98,700
Submittal/ RFI Manager	752	\$90,240	\$4,512	\$3,948.32	\$98,700
Total	3948	\$534,484	\$23,688	\$23,259	\$581,431

### Exhibit B (4 of 8)

TABLE 3. SUMMARY OF MOD 003 COSTS (December 25, 2017 through March 31, 2018)

Description/Labor Class	Labor Hours	Estimated Labor Cost	Estimated Expense Cost	GRT	Total Cost 11/02/17 to 03/31/18
Project Manager	560	\$104,720	\$3,360	\$4,503.69	\$112,584
Special Inspector	140	\$30,100	\$840	\$1,289.27	\$32,229
Civil Inspector	560	\$64,400	\$3,360	\$2,823.56	\$70,584
Assistant PM	560	\$64,400	\$3,360	\$2,823.56	\$70,584
Special Inspector	560	\$67,200	\$3,360	\$2,940.24	\$73,500
Submittal/ RFI Manager	560	\$67,200	\$3,360	\$2,940.24	\$73,500
Total	2940	\$398,020	\$17.640	\$17.321	\$432.981

TABLE 4. SUMMARY OF MOD 001, MOD 002, & MOD 003 TOTAL COSTS

Description/Labor Class	Labor Hours	Estimated Labor Cost	Estimated Expense Cost	GRT	Total Cost MOD 01 & 02	
Project Manager	1696	\$317,152	\$10,176	\$13,639.76	\$340,968	
Special Inspector	424	\$91,160	\$2,544	\$3,904.65	\$97,609	
Civil Inspector	1696	\$195,040	\$10,176	\$8,551.35	\$213,767	
Assistant PM	1696	\$195,040	\$10,176	\$8,551.35	\$213,767	
Special Inspector	1696	\$203,520	\$10,176	\$8,904.71	\$222,601	
Submittal/ RFI Manager	1696	\$203,520	\$10,176	\$8,904.71	\$222,601	
	8904	\$1,205,432	\$53.424	\$52.457	\$1,311,313	

We look forward to your favorable and expeditious response to this proposal. If you have any questions or concerns please do not hesitate to contact me directly.

Yours sincerely,

Paul K. Baron Principal

Attachments: Detailed Spread Sheet Fee Proposal with GHD Rates

# Exhibit B (5 of 8)

### **EXHIBIT A: FEE PROPOSAL DETAILED SPREAD SHEET**

### Exhibit B (6 of 8)

# Agat-Santa Rita Waste Water Treatment Plant Repalcemeny Project - Phase II MOD 001 - Additional CM Services

(June 09, 2017 through August 14, 2017)

Prepared on May 25, 2017

Working Days Per Mont	Jun-17	Jul-17	Aug-17	Total	
Working Days Fer World	17	21	10	38	
Description/Labor Class	Rate				
Bryan Ryley (FTE)		136	168	80	384
Projected Manager	\$187.00	\$25,432	\$31,416	\$14,960	\$71,808
Jeff Groom (Part Time)		34	42	20	96
Special Inspector	\$215.00	\$7,310	\$9,030	\$4,300	\$20,640
Peter Gervacio (FTE)		136	168	80	384
Civil Inspector	\$115.00	\$15,640	\$19,320	\$9,200	\$44,160
Steven Carbullido (FTE)		136	168	80	384
Assistant PM	\$115.00	\$15,640	\$19,320	\$9,200	\$44,160
Rodolfo Miaco (FTE)		136	168	80	384
Special Inspector	\$120.00	\$16,320	\$20,160	\$9,600	\$46,080
Heidi Cervania (FTE)		136	168	80	384
Submittal/ RFI Manager	\$95.00	\$16,320	\$20,160	\$9,600	\$46,080

TOTAL (hr) 714 882 420 2016 TOTAL GHD LABOR ESTIMATE \$ 96,662 \$ 119,406 \$ 56,860 \$ 272,928

### Exhibit B (7 of 8)

# Agat-Santa Rita Waste Water Treatment Plant Repalcemeny Project - Phase II MOD 002 - Additional CM Services

(August 15, 2017 through December 24, 2018)

Prepared on May 25, 2017

Working Days Per Month		Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Total
		13	21	22	22	16	78
Description/Labor Class	Rate						
Bryan Ryley (FTE)		104	168	176	176	128	752
Projected Manager	\$187.00	\$19,448	\$31,416	\$32,912	\$32,912	\$23,936	\$140,624
Jeff Groom (Part Time)		26	42	44	44	32	188
Special Inspector	\$215.00	\$5,590	\$9,030	\$9,460	\$9,460	\$6,880	\$40,420
Peter Gervacio (FTE)		104	168	176	176	128	752
Civil Inspector	\$115.00	\$11,960	\$19,320	\$20,240	\$20,240	\$14,720	\$86,480
Steven Carbullido (FTE)		104	168	176	176	128	752
Assistant PM	\$115.00	\$11,960	\$19,320	\$20,240	\$20,240	\$14,720	\$86,480
Rodolfo Miaco (FTE)		104	168	176	176	128	752
Special Inspector	\$120.00	\$12,480	\$20,160	\$21,120	\$21,120	\$15,360	\$90,240
Heidi Cervania (FTE)		104	168	176	176	128	752
Submittal/ RFI Manager	\$95.00	\$12,480	\$20,160	\$21,120	\$21,120	\$15,360	\$90,240
TOTAL (hr)		546	882	924	924	672	3948

\$ 73,918 \$ 119,406 \$ 125,092 \$ 125,092 \$ 90,976

\$534,484

**TOTAL GHD LABOR ESTIMATE** 

### Exhibit B (8 of 8)

# Agat-Santa Rita Waste Water Treatment Plant Repalcemeny Project - Phase II MOD 003 - Additional CM Services

(December 25, 2017 through March 31, 2018)

Prepared on March 20, 2017

Working Days Bor Mont	Dec-17	Jan-18	Feb-18	Mar-18	Total	
Working Days Per Mont	5	23	20	22	70	
Description/Labor Class	Rate					
Bryan Ryley (FTE)		40	184	160	176	560
Projected Manager	\$187.00	\$7,480	\$34,408	\$29,920	\$32,912	\$104,720
Jeff Groom (Part Time)		10	46	40	44	140
Special Inspector	\$215.00	\$2,150	\$9,890	\$8,600	\$9,460	\$30,100
Peter Gervacio (FTE)		40	184	160	176	560
Civil Inspector	\$115.00	\$4,600	\$21,160	\$18,400	\$20,240	\$64,400
Steven Carbullido (FTE)		40	184	160	176	560
Assistant PM	\$115.00	\$4,600	\$21,160	\$18,400	\$20,240	\$64,400
Rodolfo Miaco (FTE)		40	184	160	176	560
Special Inspector	\$120.00	\$4,800	\$22,080	\$19,200	\$21,120	\$67,200
Heidi Cervania (FTE)		40	184	160	176	560
Submittal/ RFI Manager	\$95.00	\$4,800	\$22,080	\$19,200	\$21,120	\$67,200

TOTAL (hr) 210 966 840 924 2940 TOTAL GHD LABOR ESTIMATE \$ 28,430 \$ 130,778 \$ 113,720 \$ 125,092 \$398,020



Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913 Tel: (671) 300-6846

#### **Issues for Decision**

### Resolution No. 49-FY2017

Relative to Ratifying the Expenditures for the First Three Years of the Chlorine Contract in the Amount of \$2,258,853.00 and Approving the First One Year Contract with IECO for the Purchase of Liquid Chlorine

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

Liquid Chlorine is for the treatment of drinking water to disinfect improprieties and is a requirement by the Safe Drinking Water Act and required by local and federal laws.

### Where is the location?

Various locations Island-wide

### How much will it cost?

3 Year contract cost for the following:
150lbs. Chlorine Cylinder \$558.75 each
1 Ton Chlorine Cylinder \$5,807.40 each
Bid Specified amount estimated for 150lbs. is 1,260 cylinders Annually
Bid Specified amount estimated for 1 Ton is 12 cylinders Annually

Total expenditure for the 3-year contract term is \$2,258,853 (Average \$752,951/yr.)

### Term for 1 year for renewal with a 5% price increase:

150lbs. Chlorine Cylinder \$586.68 each 1 Ton Chlorine Cylinder \$6,097.78 each

Estimated Cost for 150lbs. Chlorine Cylinder \$586.68/\$739,216.80 Annually Estimated Cost for 1 Ton. Chlorine Cylinder \$6,097.78/\$73,173.36 Annually

Total Cost \$812,390.16 Estimated Annually

### When will it be completed?

After the 1 year term.

### What is the funding source? $\circ \& M$

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

Reference Bid No. GWA 2013-07



### CONSOLIDATED COMMISSION ON UTILITIES

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

### **RESOLUTION NO. 49-FY2017**

# RELATIVE TO RATIFICATION OF EXPENDITURES FOR THE FIRST THREE YEARS OF THE CHLORINE CONTRACT IN THE AMOUNT OF \$2,258,853.00 AND APPROVNG THE FIRST YEAR CONTRACT EXTENSION WITH ISLAND EQUIPMENT COMPANY FOR THE PURCHASE OF LIQUID CHLORINE

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

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

WHEREAS, the CCU approved Resolution No. 41-FY2013 authorizing GWA to issue a bid under Exhibit A and further authorizing to submit a petition to the Guam Public Utilities Commission for approval of the Multi-Year bid as required under the Contract Review Protocol (PUC) and approved on January 27, 2014.; and

WHEREAS, GWA has determined that issuing the bid, attached hereto as Exhibit A, for liquid chlorine 150 lbs. and 1 ton chlorine cylinders used for disinfecting GWA's drinking water with a Multi-Year contract term of up to three years in length and with an option to extend for two additional one-year options is in the best interest of GWA due to the fact that prices were fixed for the three year term and GWA would obtain a lower bid price than what GWA would otherwise receive for a shorter contract term; and

WHEREAS, GWA entered into contract dated on July 28, 2014 with Marianas Gas Company DBA Island Equipment Company whose mailing address is 151 West Harmon Industrial Park, Unit A, Tamuning, Guam 96923; and

**WHEREAS**, GWA intends to continue purchases of filled 150lbs. and "one ton" chlorine cylinders from Island Equipment Company for the purpose of disinfecting GWA's

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drinking water system which is essential for GWA to provide safe drinking water and protect the public health and safety of the Island of Guam

**WHEREAS,** GWA seeks CCU approval to ratify the three-year term contract expenditure of \$2,258,853.00 for the purchase of 150lbs. and one-ton chlorine cylinders and to execute the first option year contract with Island Equipment Company

WHEREAS, given the quantities of chlorine needed to meet Safe Drinking Water requirements, and the amounts that GWA has been paying for chlorine at this time, GWA purchases exceed One Million Dollars (\$1,000,000) and as such, the procurement and contract must be approved by both the CCU and PUC under the Contract Review Protocol; and

WHEREAS, considering the fact that GWA will continue to need liquid chlorine far into the future, a multiple year contract of up to five years is in the best interest of GWA for the reasons stated above, and based on the justification attached hereto at Exhibit D, the previously approved procurement (Exhibits A and B) and the subsequently executed contract contained in Exhibit C support the approval and ratification of previous and proposed future procurements; and

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

- 1. The recitals set forth above hereby constitute the findings of the CCU, and are ratified, confirmed and incorporated herein by reference.
- The CCU hereby affirms its previous approval to GWA to issue the bid attached to this resolution as Exhibits A and B, which provides for the purchase of liquid chlorine for a period of up to five years.
- 3. The CCU hereby ratifies the subsequent contract and purchases executed by GWA in line with such procurement, and as documented in Exhibit C, and approves the execution of the extension(s) to said contract in accordance with the terms and conditions contained therein.
- 4. The CCU hereby concurs with the findings of GWA as set forth in Exhibit D as required under the Contract Review Protocol.

1	5. GWA is further authorized to submit a petition to the Guam Public Utilities
2	Commission for approval of the contract, and proposed contract extension a
3	required under the Contract Review Protocol.
4	
5	RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption
6	of this Resolution.
7	
8	<b>DULY AND REGULARLY ADOPTED</b> , this 25 <sup>th</sup> day of July, 2017.
9	
10	Certified by: Attested by:
11	
12	
13	JOSEPH T. DUENAS Chairperson  J. GEORGE BAMBA Secretary
14	Secretary
15	
16	I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities a
17	evidenced by my signature above do hereby certify as follows:
18	The foregoing is a full, true and accurate copy of the resolution duly adopted at a regula
19	meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was
20 21	present and the members who were present voted as follows:
22	
23	
24	AYES:
25	NAYS:
26	ABSTENTIONS:
27	ABSTENTIONS.
28	ABSENT:
29	///
30	
31	
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- 1	II

# **EXHIBIT A**

# GUAM CONSOLIDATED COMMISSION ON UTILITIES RESOLUTION NO. 41 – FY2013

# RELATIVE TO APPROVING THE CHLORINE BID UNDER THE GUAM PUBLIC UTILITIES COMMISSION'S CONTRACT REVIEW PROTOCOL

WHEREAS, Pursuant to Public Law 26-76 and 12 G.C.A. § 14104(o), the Consolidated Commission on Utilities ("CCU") is the governing body and the contracting authority of the Guam Waterworks Authority and has authority to review and approve certain projects relative to the hiring a contractor to assist GWA with performing certain functions; and

WHEREAS, under the Contract Review Protocol that was approved by the Guam Public Utilities Commission ("PUC") on October 27, 2005, GWA is required to seek the approval of the PUC of procurements where the final award will exceed one million dollars (\$1,000,000); and

WHEREAS, GWA has determined that issuing the bid that is attached hereto as "Exhibit A" for liquid chlorine that is used for disinfecting GWA's drinking water for a multiple year contract of up to five years in length is in the best interest of GWA due to the fact that prices will be fixed for longer period of time and economies of scale may result in a lower bid price than what GWA would otherwise receive for a shorter contract term; and

WHEREAS, given the amounts that GWA has been paying for chlorine at this time, GWA estimates that the bid will exceed One Million Dollars (\$1,000,000) and as such, the bid must be approved by both the CCU and PUC under the Contract Review Protocol; and

WHEREAS, considering the fact that GWA will continue to need liquid chlorine far into the future, a multiple year contract of up to five years is in the best interest of GWA for the reasons stated above, and based on the justification attached hereto as "Exhibit B," the bid contained in "Exhibit A" is hereby approved; and

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1	NOW THEREFORE, BE IT RESOLVED BY THE CONSOLIDATED					
2	COMMISSION ON UTILITIES, AS THE GOVERNING BODY OF THE GUAM					
3	WATERWORKS AUTHORITY, AS FOLLOWS:					
4						
5	Section 1. The foregoing recitals hereto are hereby ratified, confirmed, and					
6	incorporated herein by reference.					
7						
8	Section 2. GWA is hereby authorized to issue the bid attached to this resolution					
9	in Exhibit A which provides for the purchase of liquid chlorine for a period of up to five					
10	years					
11						
12	Section 3. The CCU hereby concurs with the findings of GWA as set forth in					
13	Exhibit B as required under the Contract Review Protocol.					
14						
15	Section 4. GWA is further authorized to submit a petition to the Guam Public					
16	Utilities Commission for approval of the bid as required under the Contract Review Protocol.					
17						
18	RESOLVED, that the Chairman certifies and the Secretary attests to the adoption of					
19	this Resolution.					
20						
21.0	DULY AND REGULARLY ADOPTED AND APPROVED THIS 17th day of					
22	September 2013.					
23	•					
24	Certified by: Attested by:					
25	ritiosica by.					
26						
27	$\bigcap$ $\bigcap$ $\bigcap$ $\bigcap$					
28	Jun Uffer maria					
29						
30	SIMON A. SANCHEZ, II  Chairperson  JOSEPH (JOEY) T. DUENAS  Secretary/Treasurer					
31						
32						

I, Joseph T. Duenas, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

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

AYES: 5

NAYS: 0

ABSTENTIONS: 0



# **EXHIBIT B**

# **INVITATION TO BID**

The GUAM WATERWORKS AUTHORITY, will receive sealed bids for Liquid Chloring GWA IFB. NO. 2013-07. Bids in duplicate copy will be accepted until 10:00 a.m. Charman Standard Time, 2013 at the GWA Procurement & Supply Office at which and place all bids will be publicly opened and read aloud. All bids must be accompanied by a / Performance Bond in the amount of 15 percent (15%) of the total bid price. Bid security ma bid/performance bond, certified check or cashiers check made payable to Guam Waterw Authority. A non-refundable amount of \$15.00 is required for the purchase price of every subidding documents which are available at the GWA Procurement & Supply Office. Bidders download a bid package at <a href="https://www.guamwaterworks.org">www.guamwaterworks.org</a> without charge, although vendors strongly encouraged to contact or visit GWA Procurement & Supply to register to ensure updated information, notices or bid amendments are distributed to you.	time Bid y be orks et of can are
GWA reserves the right to revise or reject any or all proposals and to waive any mimperfection in the bid proposal in the interest of the Guam Waterworks Authority.	inor
Martin Roush General Man	
GWA STAMP ISSUE DATE:	



578 North Marine Corps Drive, Tamuning, Guam 96913

# Guam Waterworks Authority Invitation for Bid Number: GWA IFB 2013-07 For Liquid Chlorine

# **Indefinite Quantity Bid**

## I. BID ITEM(s)

Item No	<b>Description</b>	<u>Oty</u>	<b>Unit Cost</b>	<b>Total Cost</b>
1.0	Liquid Chlorine 150 lb. Cylinders	1,260		
			Grand Total \$	
BIDDING	ON:			
MFG:				
Brand:				
Place of O	rigin:			
Date of De	livery:After Receipt			

### **TECHNICAL SPECIFICATIONS ON ITEM 1.0**

A. GENERAL: The Guam Waterworks Authority ("GWA") uses liquid chlorine in 150 lb. cylinders in order to disinfect drinking water at approximately 100 well sites. GWA intends to enter into a three (3) year contract with the option to renew for two (2) additional one year terms for the purchase of liquid chlorine in 150 pound cylinders. All extensions of the contract are subject to the availability of funding. Price modifications for the extensions may be made if the contractor provides proof of changes in their invoice price as required under 2 G.A.R. Section 3118. This specification describes the requirements for the provision of liquid chlorine under this solicitation.

The product described herein shall be manufactured, packaged, shipped, and stored in accordance with the latest additions of the following codes and standards as well as any applicable referenced standards within.

- 1. AWWA B301-04: Standard for Liquid Chlorine.
- 2. ANSI/NSF Standard 60: Drinking Water Chemicals.
- 3. Chlorine Institute, Pamphlet 17: Cylinder and Ton Container Procedures for Chlorine Packaging.
- 4. Compressed Gas Association, Pamphlet C6: Standards for Visual Inspection of Steel Compressed Gas Cylinders.
- 5. US Department of Transportation, Hazardous Materials Regulations 49 C.F.R. § 100-177 (Chapter 1, Subchapter C).
- **B.** MATERIAL SPECIFICATION: Liquid Chlorine for disinfection of potable water supplies must meet the requirements of AWWA Standard B-301-04, Section 4.

The supplier under this contract shall be responsible for providing certified analysis from the manufacturer demonstrating compliance with the requirements set forth in this bid.

**CONTAINERS:** The supplier shall be responsible for providing, inspecting, testing and cleaning of cylinders in accordance with all referenced standards.

- GWA currently has an inventory of 150 GWA-owned cylinders that are currently being used by GWA. These cylinders shall be used by the successful bidder, but shall always remain the property of GWA. At the end of the contract term, Vendor shall return to GWA 150 ct. (150 lb.) chlorine cylinders in good useable condition aside from normal wear and tear. GWA shall have the right to certify whether or not said cylinders are in good useable condition.
- Cylinders shall be inspected, tested, and cleaned in accordance with AWWA Standard B301-04, Section 5. The supplier must maintain at all times documentation of compliance with this requirements at the supplier's facility.
- 3. GWA reserves the right to reject any cylinders that do not meet the chemical, physical, or safety requirements of this specification. In the event that a cylinder is rejected, the supplier shall replace it with a like amount of satisfactory liquid chlorine in an acceptable container.
- 4. No cylinder deposit or cleaning charge shall be separately levied. All fees for the maintenance of 150 lb. cylinders in accordance with applicable codes shall be included in the unit cylinder price.

#### **STORAGE AND MINIMUM INVENTORY REQUIREMENTS:**

Due to the potential for interruption of shipping networks to Guam due to typhoons and other causes, it is necessary to maintain a minimum inventory (backup reserve) of chlorine in order to insure availability at all times. The minimum backup reserve has been established for GWA by the USEPA as noted below.

- 1. The supplier shall maintain a sufficient inventory of 150 pound chlorine cylinders such that a backup reserve of at least 200 cylinders shall be available at any and all times. This reserve shall be exclusive of any reserve required by other customers.
- 2. The supplier shall provide an inventory plan (along with bid), based on the quantities described above, illustrating compliance with these backup reserve provisions.
- 3. The supplier shall responsible for maintaining a storage facility in compliance with OSHA and other applicable law, codes and standards regarding the receiving, handling, storage, delivery, and emergency response to chlorine gas. The supplier shall maintain documentation of compliance to be provided at the request of GWA.
- 4. No additional facility maintenance or storage charges (or any other charge) shall be separately levied. All fees for shipping, storage and facility maintenance shall be included in the unit cylinder price.

#### C. SPECIAL CONDITIONS:

- 1. The contract for the supply of liquid chlorine shall be for a period of three (3) years. GWA reserves the right to renew this contract for two (2) additional one year terms with both parties so agree in writing. All extensions of the contract are subject to the availability of funding. Price modifications for the extensions may be made if the contractor provides proof of changes in their invoice price as provided under 2 G.A.R. Section 3118.
- 2. Cost data pursuant to 2 G.A.R. § 3118 to support any proposed increase must be submitted to the Purchasing Director no less than 90 days prior to the effective date of any such requested price increase. Any adjustment allowed shall consist of verifiable material cost increases which may be passed on to the consumer.
- 3. No adjustment shall be made to compensate a supplier for inefficiency in operation, or for additional profit.
- 4. Bids indicating price in effect at time of shipment will be considered invalid.
- 5. Bidder shall respond to a GWA facility should an emergency situation develop, with the appropriate tools necessary to deal with a leak; said response shall be no longer than two hours from the time of notification. Emergency numbers for this procedure shall accompany the bid.
- 6. If the products proposed in the response to this bid vary in any way from the requirements contained in this specification or other solicitation documents, the bidder is responsible to clearly identify by specification section number, all such differences in writing at the time of bid. Otherwise, it will be assumed that bidder's offer is in total compliance with all aspects of the specification and bid.

#### II. GENERAL TERMS AND CONDITIONS

#### A. <u>AUTHORITY</u>.

This Invitation for Bids is issued subject to all of the provisions of the Guam Procurement Act and the Guam Procurement Regulations. The bid requires all parties involved in the preparation, negotiation, performance, or administration of contracts to act in good faith. Failure on the part of any bidder to act in good faith shall serve as a basis for voiding a bid or shall constitute a material breach of any contract entered into between GWA and any bidder which shall allow GWA to immediately terminate the contract.

#### B. EXPLANATION TO BIDDERS.

Except as otherwise provided herein, no oral explanation in regard to the meaning of any provision of this Bid will be made and no oral instructions will be given before the award of the bid. Discrepancies, omissions, or doubts as to the meaning of any provision of this Bid shall be communicated in writing to the named individual of GWA.

#### C. <u>QUESTIONS.</u>

All questions regarding the bid must be submitted in writing and be delivered personally, via US mail, via express delivery or via fax and directed to the following parties:

Martin Roush General Manager Guam Waterworks Authority 578 North Marine Corps Drive Tamuning, Guam 96913 Fax. No.: (671) 646-2335

Vince Guerrero Supply Management Administrator Guam Waterworks Authority 578 North Marine Corps Drive Tamuning, Guam 96913 Fax. No.: (671) 649-3750

#### D. <u>METHOD OF AWARD.</u>

GWA intends to review the bids immediately upon the opening of the bids as provided herein. The bids submitted will be the primary documents for evaluation. GWA reserves the right to waive any minor information or irregularity in bids received. GWA shall have the prerogative to award, amend or reject bids in whole or in part. GWA is not responsible for any and all costs incurred by any person or party incurred in preparing any bid. GWA reserves the right to retain all bids submitted regardless of whether a firm is selected. Submission of a bid indicates acceptance of all terms and conditions by the bidder.

#### E. REJECTION.

GWA has the right to reject all bids or offers which have been submitted in response to this Bid, at any time, including after delivery if goods are determined to be non-conforming, if GWA determines such to be in the best interest of GWA. All bids and contractual obligations are subject to the availability of funding.

#### F. TAXES.

Bidders are cautioned that they may be subject to Guam Business Privilege Taxes, including Gross Receipt Tax and Guam Income Taxes on Guam transactions. GWA shall not be responsible for paying any taxes owed by any vendor. Specific information of taxes may be obtained from the Director of the Guam Department of Revenue and Taxation.

#### G. LICENSING.

Bidders are cautioned that GWA will not consider for award any bid offer submitted by a bidder who has not complied with Guam Licensing Laws. Specific information on licenses may be obtained from the Director of Revenue and Taxation.

#### H. COVENANT AGAINST CONTINGENT FEES.

The bidder warrants that it has not employed any person to solicit or secure any resultant contract upon agreement for a commission, percentage, brokerage or contingent fee. Breach of this warranty shall give GWA the right to terminate the contract, or in its discretion, deduct from the contract price or consideration the amount of such commission, percentage, brokerage, or contingent fees. This warranty shall not apply to commissions payable by the bidder upon contracts or sales secure or made through bona fide established commercial or selling agencies maintained by the bidder for the purpose of securing business.

#### I. JUSTIFICATION OF DELAY.

The bidder who is awarded the bid guarantees that performance will be completed within the agreed upon completion date. If, however, the selected bidder cannot comply with the completion requirement, it is the selected bidder's responsibility to advise GWA in writing explaining the cause and reasons of the delay.

### J. <u>DISCLOSURE OF MAJOR SHAREHOLDERS.</u>

As a condition of bidder, any partnership, sole proprietorship or corporation doing business with GWA shall submit an affidavit executed under oath that list the name address of any person who has held more than ten percent (10%) of the outstanding interest or shares in said partnership, sole proprietorship or corporation at any time during the twelve (12) month period immediately preceding submission of a bid. The affidavit shall contain the number of shares or the percentage of all assets of such partnership, sole proprietorship or corporation, which have held by each such

person during the twelve (12) month period. In addition, the affidavit shall contain the name and address of any person who has received or is entitle to receive a commission, gratuity or other compensation for procuring or assisting in obtaining business related to the bid for the bidder and shall also contain the amounts of any such commission, gratuity or other compensation. A bid from any firm that has person on the list 10% or more affidavit that is a member of the CCU or a GWA or Guam Power Authority officer that reports directly to the Board will not be evaluated and will be rejected. The affidavit shall be open and available to the public inspection and copying.

#### K. EQUAL EMPLOYMENT OPPORTUNITY.

Section 3.01(1) of Presidential Executive Order No. 10935 dated March 7, 1965, that was adopted on Guam, requires that the bidder not discriminate against any employee or applicant for employment because of race, creed, color or national origin. The bidder will take whatever steps are necessary to ensure that its employees are treated equally during employment without regard to their race, creed, color or national origin.

#### L. <u>DETERMINATION OF RESPONSIBILITY OF OFFERORS.</u>

GWA reserves the right to secure information necessary to assess the competency and qualifications of the bidder, in accordance with the "Standard for Determination of the most Qualified bidder" section of the General Terms and Conditions. The competency of bidders, includes, but is not limited to testing of goods and/or services provided by the bidder.

## M. STANDARD FOR DETERMING WHETHER BIDDER IS QUALIFIED.

In determining whether a bidder is qualified, GWA shall be guided by the following:

- 1. the ability, capacity, and skill of the bidder to perform (i.e., is bidder qualified);
- 2. whether GWA believes that the bidder can perform promptly or within the specified time;
- 3. the character, integrity, reputation, judgment experience, and efficiency of the bidder;
- 4. the sufficiency of the financial resources and ability of the bidder to perform;
- 5. whether the bidder has submitted all documents required under this Bid; and
- 6. whether the bidder can meet the terms and conditions of the Bid.

#### N. PRE-BID CONFERENCES.

Pre-bid conferences may be held at any time prior to the date established herein for submission of bids to explain the procurement requirements for this Bid. GWA will notify all bidders of any substantive clarification provided in response to any inquiry. GWA may extend the due date if such information significantly amends the solicitation or makes compliance with the original proposed due date impractical.

#### O. BIDS.

The Bidder is required to read each and every page of the bid and by the act of submitting a bid shall be deemed to have accepted all conditions contained therein except as noted elsewhere in the

bid. In no case will failure to inspect constitute grounds for a claim or for the withdrawal of a bid after opening. Bids shall be filled out in ink or typewritten and signed in ink. Erasures or other changes in a bid must be explained or noted over the signature of the bidder. Bids containing any conditions, omissions, unexplained erasures or alterations or items not called for in the bid or irregularities of any kind may be rejected by GWA in whole or in part.

#### P. COMPETENCY OF BIDDERS.

Bids will be considered only from such bidders who, in the sole opinion of GWA, can show evidence of their ability, experience, equipment, and facilities to render satisfactory performance of the terms and conditions herein (see item "N" above for standards). GWA reserves the right to take all reasonable steps to determine the competency of bidders, including asking questions, testing or any other act deemed prudent by GWA based on the circumstances.

#### Q. REQUEST FOR BID FORMS.

Each bidder shall be provided with one (1) set of the Bid packet at a cost of \$15.00. If the bidder wishes to download a bid packet on GWA website, the fee will not be charged. All payments shall be by cash, certified check, credit card or money order and shall be made payable to GWA. Prospective bidders are encouraged to notify GWA's Procurement & Supply section @ 647-7818/7887 to be register as a prospective bidder. Failure to register as a bidder could result in not obtaining answers to questions or bid amendments since GWA will send these types of documents to only those vendors we are aware of. GWA shall not be liable for any reason for the failure of any vendor to register with GWA and provide accurate and complete contact information.

#### R. BID ENVELOPE.

Bid envelopes shall be sealed and marked with the bidder's name and GWA's Invitation for Bid Number.

#### S. FORM OF BID.

One (1) original hard copy, two (2) complete hard copies and one (1) electronic copy of the bid <u>must</u> be submitted. The original bid must be signed in ink by a person authorized to submit bids on behalf of the bidder. All bids should include a listing of current and former business clients and a description of the type of goods or services being provided. At a minimum, the bid should include a complete resume of the bidding firm, including a resume of the entity's principal(s) that will be preparing or presenting the completed work, sample documentation or other materials that will assist GWA in determining whether the bidder is capable of providing the goods and/or services called for in the bid and all materials required to be submitted along with the Bid as specified herein. All bids shall be submitted entirely in English (including brochures). No bid shall exceed 100 pages in total without the express written consent of GWA.

The electronic copy of the bid shall be submitted on a compact disk ("CD"). All documents shall be in ".pdf" format. Electronic bids shall constitute an exact replica of the original hard copy of the bid that is being submitted.

#### T. MODIFICATION / ALTERATION.

After the opening of bids, GWA or its designee(s) may conduct discussions with bidders that have submitted valid bids for the purpose of clarification to provide GWA with a full understanding as to the responsiveness and capabilities of the proposed bidder in meeting the requirements of the bid. In conducting discussions there shall be complete confidentiality of any information derived from bids submitted by competing bidders.

#### U. MODIFICATION OR WITHDRAWAL OF BIDS.

Bids may be modified or withdrawn at any time prior to submission, as otherwise provided herein or by the Guam Procurement Code.

#### V. CONTACT FOR CONTRACT NEGOTIATION.

All vendors are required to designa	ite a person whom GWA may contact for prompt negotiation
NAME:	TITLE:
ADDRESS:	TELEPHONE:

#### W. <u>AWARD OF CONTRACT AND NEGOTIATION (IF APPLICABLE).</u>

The lowest responsible bidder may be required to enter into a contract with GWA on terms and conditions acceptable to GWA. If the services are to be secured via Purchase Order, the bidder must still comply with all applicable laws, bid requirements and directives from GWA regardless of whether or formal "contract" has been issued.

The bidder who submits the lowest responsible bid for the required services or supplies may be required to enter into a contract within twenty (20) days following Bidder's receipt of the Notice of Award of Bid. Contract negotiations will be directed toward: (1) making certain that the bidder has a clear understanding of the scope of work, specifically, the essential requirements involved in providing the required services; and (2) determining that the bidder will make available the necessary personnel and facilities to perform the services within the required time. Bidders will be required to follow all laws applicable to this bid at all times and the Bidder is responsible for ascertaining what laws are applicable to this bid.

#### X. NOTICE OF AWARD.

Written notice of award will be public information and made a part of the procurement file.

# Y. <u>CERTIFICATION AGAINST THE EMPLOYMENT OF CONVICTED SEX</u> <u>OFFENDERS.</u>

All vendors must complete and fill out a Certification Against the Employment of Convicted Sex Offenders (part of bid packet – if not present, make sure you ask for one).

#### Z. TERMINATION OF BID.

After opening, but prior to award, GWA may terminate the bid in whole, or in part if:

- 1. It is in the best interest of GWA to do so.
- 2. The goods or services being sought are no longer required.
- 3. Bid amounts exceed available funding.
- 4. No bidder is qualified.

#### III. SPECIAL TERMS AND CONDITIONS

Note, these special terms and conditions apply in the event that GWA uses a purchase order. However, in the event a formal contract is entered into, the terms of the Contract shall control in the event of a conflict between these terms and conditions and the contract.

#### A. GENERAL COMPLIANCE WITH LAWS.

The Bidder is required to comply with all Federal and territorial laws and ordinances applicable to the work and it is the responsibility of the Bidder to examine all necessary laws, rules, regulations and guidelines to determine its duties thereunder. Bidder shall attach a copy of appropriate business license or an affidavit executed under penalty of perjury that indicates that Bidder is exempt under Guam law (must include legal citations proving exemption).

#### B. ACCESS TO RECORDS AND OTHER REVIEW.

The Bidder, including his subcontractors, if any, shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred and to make such materials available at their respective offices at all reasonable times during the contract period and for three (3) years from the date of the final payment under the contract, for inspection by GWA.

Each subcontract by Bidder pursuant to this agreement shall include a provision containing all of the conditions of this Special Terms and Conditions Section.

#### C. OWNERSHIP OF DOCUMENTS.

All briefs, memoranda and other incidental Bidder work or materials furnished hereunder shall be and remain the property of GWA including all publication rights and copyright interests, and may be used by GWA without any additional cost to GWA.

#### D. INDEMNITY.

Bidder agrees to save and hold harmless the CCU, GWA, its officers, agents, representatives, successors and assigns and other governmental agencies from any and all suits or actions of every nature and kind, which may be brought for or on account of any injury, death, or damage to the extent arising or growing out of the negligent acts or omissions of the Bidder, Bidder's officers, agents (including subcontractors), servants or employees under this agreement.

#### E. CHANGES.

GWA may at any time, by written order make any change in the services to be performed hereunder. If such changes cause a material increase or decrease in the costs of doing the work under this agreement, or in the time required for this performance, an equitable adjustment shall be made and the agreement shall be modified in writing accordingly to the provisions of the Guam Procurement Law and Procurement Rules and Regulations pertaining to price adjustments.

#### F. TERMINATION.

#### **TERMINATION FOR DEFAULT:**

- (1). Default. If the Bidder refuses or fails to perform any of the provisions of this contract with such diligence as will ensure its completion within the time specified in this contract, or any extension thereof, otherwise fails to timely satisfy the contract provisions, or commits any other substantial breach of this contract as determined by GWA, then GWA may notify the Bidder in writing of the delay or non-performance and if not cured in ten days or any longer time specified in writing by GWA. GWA may terminate the Bidder's right to proceed with the contract or such part of the contract as to which there has been delay or a failure to properly perform. In the event of termination in whole or in part GWA may procure similar services in a manner and upon terms deemed appropriate by GWA. The Bidder shall continue performance of the contract to the extent it is not terminated and shall be liable for excess costs incurred in procuring similar services.
- (2) Bidder's Duties. Notwithstanding termination of the contract and subject to any directions from GWA, the Bidder shall take timely, reasonable, and necessary action to protect and preserve property in the possession of the Bidder in which GWA has an interest.
- (3) Compensation. Payment for completed services delivered and accepted by GWA shall be at the contract price. Payment for the protection and preservation of property shall be in an amount agreed upon by the Bidder and GWA; if the parties fail to agree, GWA shall set an amount subject to the Bidder's rights under Chapter 9 (Legal and Contractual Remedies) of the

Guam Procurement Regulations. GWA may withhold from amounts due the Bidder such sums as GWA deems to be necessary to protect GWA against loss because of outstanding liens or claims of former lien holders and to reimburse GWA for the excess costs incurred in procuring similar goods and services.

- (4) Excuse for Nonperformance or Delayed Performance. Except with respect to defaults of sub-contractor(s) of Bidder, the Bidder shall not be in default by reason of any failure in performance of this contract in accordance with its terms (including any failure by the Bidder to make progress in the prosecution of the work hereunder which endangers such performance) if the Bidder has notified GWA within 15 days after the cause of the delay and the failure arises out of causes such as: acts of God; acts of the public enemy; acts of the government of Guam and any other governmental entity in its sovereign or contractual capacity; fires; floods; epidemics; quarantine restrictions; strikes or other labor disputes; freight embargoes; or unusually severe weather. If the failure to perform or to make progress due to such causes similar to those set forth above, the Bidder shall not be deemed to be in default, unless the services to be furnished by the sub-contractor were reasonably obtainable from other sources in sufficient time to permit the Bidder to meet the contract requirements. Failure of the sub-contractor to perform for reasons other than cited above shall constitute a default of the Bidder unless cured by Bidder with a reasonable time. Upon request of the Bidder, GWA shall ascertain the facts and extent of such failure, and, if GWA determines that any failure to perform was occasioned by any one or more of the excusable causes, and that, but for the excusable cause, the Bidder's progress and performance would have met the terms of the contract, the delivery schedule shall be revised accordingly, subject to the rights of GWA and the government of Guam under the laws of Guam.
- (5) Erroneous Termination for Default. If, after notice of termination of the Bidder's right to proceed under the provisions of this clause, it is determined for any reason that the Bidder was not in default under the provisions of this clause, or that the delay was excusable under the provisions of Paragraph (4) (Excuse for Nonperformance or Delayed Performance) of this clause, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to Subsection C, below.
- (6) Additional Rights and Remedies. The rights and remedies provided in this clause are in addition to any other rights and remedies provided by law or under this contract

#### **TERMINATION FOR CONVENIENCE:**

- (1) <u>Termination</u>. GWA may, when the interest of GWA so requires, terminate this contract in whole or in part, for the convenience of GWA. GWA shall give written notice of the termination to the Bidder specifying the part of the contract terminated and when termination becomes effective.
- (2) <u>Bidder's Obligations</u>. The Bidder shall incur no further obligations in connection with the terminated work and on the dated set in the notice of termination the Bidder will stop work to the extent specified. The Bidder shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The Bidder shall settle the liabilities and

claims arising out of the termination of subcontracts and orders connected with the terminated work. GWA may direct the Bidder to assign the Bidder's right, title, and interest under terminated orders or subcontracts to GWA. The Bidder must still complete the work not terminated by the notice of termination and may incur obligations as are necessary to do so.

(3) Right to Work Product. Upon termination of the contract for the convenience of GWA or for any other reason, Bidder shall transfer title and deliver to GWA all documents and reports, plans, drawings, information and other material produced by Bidder or any of its subcontractors in connection with the performance of this contract. The Bidder shall protect and preserve property in its possession or in the possession of any of its sub-contractors in which GWA has an interest.

#### (4) <u>Compensation</u>.

- (a) The Bidder shall submit a termination claim specifying the amount due because of the termination for convenience together with cost or pricing data to the extent required by 2 G.A.R. § 3118 (Cost or Pricing Data) of the Guam Procurement Regulations bearing on such claim. If the Bidder fails to file a termination claim within one year from the effective date of termination, GWA may pay the Bidder, if at all, an amount set in accordance with Subparagraph (c) of this Paragraph.
- (b) GWA and the Bidder may agree to a settlement provided the Bidder has filed a termination claim supported by cost or pricing data to the extent required by 2 G.A.R. § 3118 (Cost or Pricing Data) of the Guam Procurement Regulations and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by GWA and the contract price of the work not terminated.
- (c) Absent complete agreement under Subparagraph (2) of this Paragraph, GWA shall pay the Bidder the following amounts, provided payments agreed to under Subparagraph (2) shall not duplicate payments under this Subparagraph:
  - (i) contract prices for services accepted under the contract;
  - (ii) costs incurred in preparing to perform and performing the terminated portion of the work plus a fair and reasonable profit on such portion of the work (such profit shall not include anticipatory profit or consequential damages) less amounts paid or to be paid for accepted supplies or services; provided, however, that if it appears that the Bidder would have sustained a loss if the entire contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss;
  - (iii) costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to Subparagraph (b) of this clause;
  - (iv) the reasonable settlement costs of the Bidder including accounting, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the contract for the termination and settlement of subcontracts hereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to the terminated portion of this contract. Attorney's fees if for any reason it files suit against the government must be paid by the Bidder. The total sum to be paid the Bidder under this Subparagraph shall

not exceed the total contract price plus the reasonable settlement costs of the Bidder reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under Subparagraph (b) of this Paragraph, and the contract price of work not terminated.

(d) Cost claimed, agreed to, or established under Subparagraph (b) and (c) of this Paragraph shall be in accordance with Chapter 7 (Cost Principles) of the Guam Procurement Regulations.

#### G. SEVERABLE PROVISIONS.

If any provision of this agreement shall be deemed by a court of competent jurisdiction to be invalid, then such provision shall be deemed stricken from the agreement and the agreement shall be enforced according to its valid and subsisting terms and provisions.

#### H. GOVERNING LAW.

The validity of this agreement and any of its terms or provisions, as well as the rights and duties of the parties to this agreement, shall be governed by the laws of Guam. Moreover, any and all actions governing this agreement shall be brought in either the Guam Superior Court or the Guam District Court if applicable.

#### I. EFFECTIVE DATE OF AGREEMENT.

Any agreement under this Bid shall take effect upon the date said agreement is signed by the GWA General Manger (who shall sign last). Agreements under this provision includes Purchase Orders in the absence of a formal written contract.

#### J. GOVERNMENT NOT LIABLE.

- 1. GWA assumes no liability for any accident or injury that may occur to the Bidder, his or her agents, dependents, or personal property while en route to or from Guam or during any travel mandated by the terms of this agreement.
- 2. GWA shall not be liable to Bidder for any work performed by the Bidder prior to the written and signed approval of this Agreement by the General Manager for GWA and the Bidder hereby expressly waives any and all claims for service performed in expectation of this agreement prior to its signature of the General Manager.

### K. ASSIGNMENT.

An assignment of any portion of the performance required under this Bid is not valid unless written approval is first obtained from GWA. Requests for approval of the right to assign any portion of the contract or obligation, if awarded, must be made in writing and submitted with the bid. No other requests for assignment will be accepted.

#### L. <u>LIQUIDATED DAMAGES</u>.

By submitting a bid, the Bidder agrees to commence work on the date to be specified in a written "Notice to Proceed" from GWA and to fully complete the project within the allotted time thereafter. In the event that the Bidder fails to complete the work called for in the bid, fails to provide the goods or services in the allotted time, then Bidder shall pay to GWA ¼ of 1% of the total bid price per day as liquidated damages for the non-performance as specified by the Guam Code Annotated. The liquidated damages herein are not a penalty, but rather a reasonable estimate by GWA of the loss it would suffer as a result of non-performance.

#### IV. ADDITIONAL SPECIAL TERMS AND CONDITIONS

This is an "Indefinite Quantity Bid" pursuant to the Guam Procurement Regulations. The quantities reflected in the bid are estimated requirements only and not guaranteed minimums. The amounts listed are GWA's best estimate of its average annual needs. Quantities may increase or decrease thru the duration of the contract and continued purchase is subject to the availability of funds. No commitment is made to vendors in terms of purchasing quantity.

- A. The purpose of this bid is to provide GWA with a sufficient quantity of 150 lb liquid chlorine cylinders and to provide GWA with a sufficient supply of liquid chlorine to allow GWA to safely operate its water system and to comply with the terms and conditions of the USEPA / GWA Stipulated Order for Preliminary Relief (as amended) entered into on June 5, 2003. In addition, these specifications have been written to describe minimum performance requirements of the items to be supplied.
- B. GWA reserves the right to conduct a reasonable test following delivery and prior to acceptance to confirm that the products (both the cylinders and the chlorine) meet the minimum specifications set forth herein or otherwise performs as required.
- C. These specifications have been written to describe the minimum requirements to be supplied by the vendor bidding. This bid is subject to Guam's Procurement Laws.
  - GWA hereby notifies vendors that a reasonable test may be conducted upon delivery of each shipment and prior to acceptance, which may include, but is not limited to testing the goods to be provided under this Bid for quality, manufacturing defects, other irregularities and for compliance with these specifications. GWA also reserves the right to have any goods provided hereunder tested by an independent firm to ensure quality and compliance with requirements set forth in this bid. GWA also reserves the right to have the manufacturing process inspected for all goods provided hereunder.
  - D. The Guam Waterworks Authority reserves the right to accept and/or reject any and all bids, to waive any defects, irregularities, or specification discrepancies and to award the bid as deemed to be the best interest to GWA.

- E. As required under Guam law, GWA reserves the right to cancel this bid if it is in the best interest of GWA to do so.
- F. The successful bidder shall warrant that all goods and services to be provided herein are fit for the intended purpose stated in this Bid, are manufactured in the **United States** and meet the standards set forth in this Bid. The bidder shall also warrant all goods provided under this Bid to have a useful product shelf life of a period of not less than one year. However, if the manufacturer of such goods provides a shelf life warranty for any period of time greater than one year for any item, that same warranty period shall be extended to GWA.
- G. In addition, the successful bidder will handle all warranty issues arising out of this agreement and shall act as the warranty administrator for the duration of any warranty provided under this Bid. Thus, if the vendor is not the manufacturer of the products provided under this Bid, GWA will not be required by the bidder to contact any manufacturer directly unless the bidder is the manufacturer of all goods provided hereunder and the bidder shall designate a delivery point on Guam for goods to be delivered or bidder shall pay all freight and handling charges associated with the return of the goods to the manufacturer and all costs for replacement.
- H. The successful bidder may be required to enter into a written contract on terms and conditions acceptable to GWA (also please note that a Purchase Order is a contract).
- I. Bidders are advised that they are required to follow all laws, rules and regulations relating to the provision of goods and services. Ignorance of any law, rule or regulation by the bidder at any time during the bidding process or performance under the bid shall not relieve the vendor from the applicability thereof.
- J. All Bidders shall maintain \$1,000,000 liability insurance policy throughout the duration of the performance of any contract entered into. Bidders shall provide a copy of the insurance policy to GWA as a condition for entering into the contract with GWA. Bidders shall also provide GWA with proof the policy has been renewed and kept in force throughout the contract term.
- k. Prior to entering into any contract with GWA, any and all successful bidders shall provide GWA with a valid and up-to-date copy of their Guam Business License which provides proof that they are able to engage in the type of business required for this bid.
- L. Bidders are also advised to use and fill out all forms attached to this Bid, including but not limited to the Affidavit of Non-Collusion, Certification Regarding Hiring Convicted Sex Offenders, Bid Bond, and any other form required to complete their bid.
- M. Bidders are reminded that submission of a bid constitutes an acknowledgement that they have read and understood all bid terms and agree to be bound by such an that failure to read the bid shall not excuse performance or otherwise give rise to any claim by bidder, including mistake, neglect or for any other reason.

#### V. SPECIAL PROVISIONS

#### 1. Bid and Performance Bond Requirements:

All bidders are required to submit bid security in the amount of 15% of their total bid amount which must also indicate that the security is not only for a bid bond, but also for performance under this Bid as required by 5 G.C.A. 5312. Failure to submit a proper bid bond will cause the bid to be rejected.

As required by law, the bid security shall not be released upon award of the bid, but instead shall continue in full force and effect until after delivery of the supplies or services required by the contract awarded to the contractor under the associated Invitation for Bid is completed to secure the faithful performance under this Bid (e.g., until warranty period has ended as any warranty is a service provided in conjunction with the delivery of goods).

### THE BID/PERFORMANCE GUARANTEE MAY BE IN THE FORM OF:

- a. Cashier's Check or Certified Check
- b. Letter of Credit
- c. Surety Bond Valid only if accompanied by:
  - i. Current Certificate of Authority;
  - ii. Power of Attorney issued by the Surety to the Resident General Agent;
  - iii. Power of Attorney issued by two (2) major officers of the Surety to whoever is signing on their behalf
- 2. Performance Bond: see Section 1 above.

#### 3. Failure To Submit Required Documentation.

Failure by Contractor to submit the required information or data will be cause to declare the bidder as non-compliant with the bid. Any declaration of non-compliance shall be at the sole discretion of the General Manager of the Guam Waterworks Authority.

#### 4. Shipping and Cost:

Total cost must include CIF delivery to GWA's Ugum Water Treatment Facility located in Talofofo, Guam. Deliveries shall be made via flatbed truck or other means acceptable to GWA. If necessary, a forklift must be provided during deliveries by the successful vendor to unload the truck and place the chemicals at places at the Ugum facility designated by GWA staff. The contractor shall contact GWA's Procurement Division at least 72 hours in advance of each delivery to determine whether or not a forklift will need to be provided

#### 5. Delivery and Payment

- a. The vendor will be responsible for all cost and all risks associated with the provision of these goods until delivery is made and the items are formally accepted by GWA. Formal acceptance under this bid shall not be deemed to be the mere delivery of the goods. Acceptance will only occur after delivery and inspection / testing is performed by GWA. Delivery time is 30 days from the date on the Notice to Proceed. GWA reserves the right to reject non-conforming goods at any time prior to use after the goods have been delivered.
- b. All goods shall be delivered CIF to GWA's Ugum Water Treatment Facility.
- c. The initial shipment shall be delivered to GWA within thirty days after the Notice to Proceed has been provided to the vendor. A Material Safety Data Sheet (MSDS) must be provided with <u>each</u> delivery, regardless of amount. Aside from the initial delivery, all goods must be delivered within 5 businesses from the date the vendor is notified of the need for goods and the amount of goods required to be delivered.
- d. Vendors must maintain at least a three (3) month supply of goods they are responsible for supplying on Guam at all times. Goods shall be stored in a manner to ensure that typhoons or other natural disasters do not make them unavailable to GWA when needed since weather and natural disasters are exactly why the three (3) month supply is being required given the fact that water is a necessary element to ensuring public health.
- e. Please note that usage of the chemicals is dependent upon many factors, including time of year, weather, etc.

Payment for all goods delivered shall be net 30 following the date that an invoice for goods delivered to GWA has been provided to GWA and verified by GWA. Verification shall take no longer than 10 business days. Vendors may not bill GWA for the inventory stock required to be maintained hereunder.

#### 6. Quality:

All items to be delivered under this bid shall be of high quality and be of U.S. manufacture and they shall at all times conform to the specifications set out under this bid.

GWA reserves the right to reject items based on failure to meet the standards set forth herein or based upon quality.

GWA reserves the right to request samples from each bidder to test independently. If bidders do not provide a sample for testing if such a request is made, the bidder may not be deemed to be a qualified bidder and as such their bid may be rejected.

#### 7. Contract Term:

The lowest responsive and responsible bidder for the item above will enter into a contract on terms acceptable to GWA. Form contracts from vendors shall not be used. The contract term shall commence on the date of the vendor's acknowledged receipt of a formal Notice to Proceed from GWA. The initial term is for three (3) years for chemicals to be used by GWA to operate the Ugum Surface Water Treatment Facility in compliance with the Long Term 2 Enhanced Surface Water Treatment Rule of the Safe Drinking water Act during the operation of a membrane water treatment facility. GWA finds that a multi-year fixed price contract will ensure the best price in the long-term to hedge against fluctuating prices which tend to increase over time and to increases efficiency in operations by not having to proceed through the bid process annually. This contract may be extended out annually for a maximum period of two (2) years subject to the consent of both parties. In the third year price adjustments may be made subject to the provision of verified cost and pricing data from the vendor.

- **8.** These specifications have been written to describe minimum performance requirements to be supplied by the manufacturers bidding.
- 9. The successful bidder shall furnish all necessary information and instructions for the proper operation / completion of all requirements in bid specifications.
- 10. GWA reserves the right to accept and/or reject any and all bids, to waive any defects, irregularities, or specification discrepancies and to award the bid in the best interest of Guam Waterworks Authority.

These specifications were approved and/or prepared by Martin L. Roush, P.E. GWA General Manager and hereby constitute the findings and determinations of the General Manager.

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# NON-COLLUSION AFFIDAVIT

Guam	)	
)ss: Tamuning	)	
Ţ		first being duly arrows damage and arrow
٠,	(Name of Declara	first being duly sworn, depose and say:
1. That I am the		of
	(Title)	_ of  (Name of Company or Person Bidding/RFP
collusive or sham, the or indirectly, with an proposal and has not communication or coor to secure any over	at said bidder/offerd by bidder or person, t in any manner, di onference, with any thead, project or cost against the GUAM	osal or bid, that such proposal or bid is genuine and not or has not colluded, conspired, connived or agreed, directly to put in a sham or to refrain from bidding or submitting a rectly or indirectly, sought by agreement or collusion, or person, to fix the bid price of affiant or any other bidder, at element of said bid price, or of that of any bidder, or to WATERWORKS AUTHORITY or any person interested
3. That all statements i	in said proposal or b	id are true.
4. This affidavit is made	de in compliance wi	th 2 G.A.R. § 3126(b).
So sayeth(Decla	urant)	<del></del>
acknowledged to me th	, kn , whose n at he executed the	_, before me a Notary Public in and for Guam, personally town to me to be the authorized representative of ame is subscribed to the foregoing instrument and same as his free and voluntary act and deed on behalf of and purposes therein set forth.
IN WITNESS WHER above written.	REOF, I have hereu	nto set my hand and affixed my official seal the date last
) Seal (		
Notary Public		

# **CERTIFICATION OF NON-EMPLOYMENT OF CONVICTED SEXUAL OFFENDERS**

Pursuant to Guam Public Law 28-24, as amended by Guam Public Law 28-98, if a contract for services is awarded to the bidder or offeror, then the service provider must warrant that no person in its employment who has been convicted of a sex offense under the provisions of Chapter 25 of Title 9 of the Guam Code Annotated or of an offense defined in Article 2 of Chapter 28 of Title 9 of the Guam Code Annotated, or who has been convicted in any other jurisdiction of an offense with the same elements as heretofore defined, or who is listed on the Sex Offender Registry, shall provide services on behalf of the service provider while on government of Guam property, with the exception of public highways. If any employee of a service provider is providing services on government property and is convicted subsequent to an award of a contract, then the service provider warrants that it will notify the Government of the conviction within twenty-four hours of the conviction, and will immediately remove such convicted person from providing services on government property. If the service provider is found to be in violation of any of the provisions of this paragraph, then the Government will give notice to the service provider to take corrective action. The service provider shall take corrective action within twenty-four hours of notice from the Government, and the service provider shall notify the Government when action has been taken. If the service provider fails to take corrective steps within twenty-four hours of notice from the Government, then the Government in its sole discretion may suspend temporarily any contract for services until corrective action has been taken.

I, being a duly authorized representative acknowledge the (print name)						
directive as describe above and ensure the Bid Proposal as submitted addresses the directive.						
	(Company Name)					
(Title)						
(Signature)	(Date)					

# MAJOR SHAREHOLDER DISCLOSURE AFFIDAVIT

TERRITORY OF	GUAM }		
HAGATNA, GUA	M ' }		
I, the undersigned			, being first duly sworn, depose and sa
That the persons w twelve months pre-	who have held mos ceding the submis	re than ten per ssion of the bio	rcent (10%) of the company's share during the dare as follows (if none, so state):
NAME	ADDRESS	PE	RCENTAGE OF SHARES HOLD
TOTAL	NUMBER OF SH	ARES	
Persons who have a for procuring or assare as follows:	received or are en sisting in obtainin	titled to receiv g business rela	re a commission, gratuity or other compensation ated to the bid for which this affidavit is subm
<u>NAME</u>	ADD	<u>DRESS</u>	AMOUNT OF COMMISSIONS, GRATUITY OR OTHER COMPENSATION
Further, affiant saye	_	4-4-1	
_			
Date:		partner, if th	f individual if bidder is a sole proprietorship; ne bidders is a partnership; officer, if the biddertion (or other authorized person).
_		partner, if the is a corporat	ne bidders is a partnership; officer, if the biddertion (or other authorized person).

# BID AND PERFORMANCE BOND FOR GOODS AND SERVICES AS REQUIRED UNDER 5 G.C.A. § 5212

KNOW ALL MEN BY THESE PRESENTS, that

	(Name o	f Contractor)	_				
as	Principal,	herein	after	called	the	Principal	and
(Name	of Surety)						
as duly	y admitted insure	r under the la	ws of the T	erritory of Gu	ıam. as Sur	ety hereafter c	alled the
Surety	, are held and	firmly boun	d unto the	Guam Wat	terworks A	Authority for t	ha cun
of	•	,		Guill Wu	OI WOIRS 1	Dollars	ne sun
(\$	), for pa	vment of which	ch sum will	and truly to b	e made th	Dunais	and the
said Sı	rety bind ourselv	es our heirs	executors a	ima adiy to t	successors	e said Finicipal	
several	ly firmly by these	nracente:	executors, a	amminstrators,	successors	and assigns, jor	nuy and
30 VOIL	ny minny by mesi	piesenis.					
		al baa aub!ee	ed a bid for	and is anticina			
WHER	LAS the Princin						
WHER	EAS, the Princip t specified below.	ai nas sudmitt	cu a biu ioi a	and is anticipa	ica to ente	i into a contract	in the

NOW, THEREFORE, if the Guam Waterworks Authority shall accept the bid and the Principal shall not withdraw said bid within sixty (60) calendar days after the opening of bids, and shall within twenty one (21) calendar days after the prescribed forms are presented to him for signature, enter into a Contract with the Guam Waterworks Authority in accordance with the terms of such bid. This bond shall also be held by the Guam Waterworks Authority to secure the faithful performance of such Contract and for the prompt payment of labor, goods, services and materials furnished in the prosecution thereof. In the event of the failure of the Principal to enter into such Contract, or if the Principals (Contractor) fails to perform in accordance with the requirements set out under the Bid or any other written instrument requirement performance thereunder, the Surety, on behalf of the Principals shall pay to the Guam Waterworks Authority the differences not to exceed the penalty hereof between the amounts specified in said bid and such larger amount for which the Guam Waterworks Authority may in good faith contract with another party to perform work covered by said bid or an appropriate liquidated amount as specified in the Invitation for Bids then this obligation shall be null and void, otherwise to remain in full force and effect.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION is such that, if the contractor shall promptly and faithfully perform said Contract, and shall promptly make payment to all claimants as hereinafter defined for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

A. The Surety hereby waives notice of any alteration or extension of the time made by the Authority provided the same is within the scope of the Contract or any modification thereto.

- B. Whenever the contractor shall be and is declared in default by the Authority to be in default under the Contract, the Authority having performed its obligations hereunder, the Surety may promptly remedy the default or shall promptly:
  - 1. Complete the Contract in accordance with its terms and conditions; or
  - 2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by the Authority and the Surety of the lowest responsible bidder, arrange for a Contract between such bidder and the Authority, and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts or completion arranged under this paragraph) sufficient funds to pay the cost of completion, less than balance of the Contract price, but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Price," as used in this paragraph shall mean the total amount payable by the Authority to Contractor under the Contract and any amendments thereto, less the amount properly paid by the Authority to Contractor. No right of action shall accrue on this bond to or for use of any person or corporation other than the Authority or successors of the Authority.
- C. A claimant is defined as one having a direct contract with the Contractor or with a subcontractor of the Contractor for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.
- D. The above named Contractor and Surety hereby jointly and severally agree with the Authority that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date of which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for use of such claimant, prosecute the suit to final judgment to final judgment for such sum or sums as may be justly due the claimant, and have execution thereon. The Authority shall not be liable for the payment of any costs or expenses of any such suit.
- E. No suit or action shall be commenced hereunder by any claimant:
- 1. Unless claimant, other than one having a direct contract with the contractor, shall have given written notice to any two (2) of the following entities named below:
  - (a) the Contractor; (b) the Guam Waterworks Authority, or (c) the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be personally served by mailing the same by registered mail or certified mail, postage prepaid,

in an envelope addressed to the Contractor at any place the principal maintains an office or conducts its business.

- 2. After the expiration of one (1) year following the date on which the last of the labor was performed or material was supplied by the party bringing suit.
- 3. Other than in a court of competent jurisdiction in and for the Territory of Guam.
- F. The amount of the bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder.

SIGNED AND SEALED THIS	day of, 20, A.D.
IN THE PRESENCE OF: (Note: If the Principals are Partners, each t	must execute the Bond)
(WITNESS)	(CONTRACTOR) (SEAL)
(TITLE)	(TITLE)
(MAJOR OFFICER OF SURETY)	(MAJOR OFFICER OF SURETY)
TITLE)	(TITLE)
	(RESIDENT GENERAL AGENT)

# **EXHIBIT C**

# FORMAL CONTRACT

THIS AGREEMENT AND FORMAL CONTRACT is made and entered into this 9TH day of JULY 2014 by and between the GUAM WATERWORKS AUTHORITY ("GWA"), whose business address is 578 North Marine Corps Drive, Tamuning, Guam 96913, and MARIANAS GAS COMPANY DBA ISLAND EQUIPMENT COMPANY ("Contractor"), whose mailing address is 151 West Harmon Industrial Park, Unit A, Tamuning, Guam 96913 licensed to conduct business on Guam and having Guam business license Nos. 1411177, 1411178 and 1411180.

WITNESSETH, that whereas, GWA intends to purchase filled 150 lb. and "one ton" chlorine cylinders from Island Equipment Company for the purpose of disinfecting GWA's drinking water system which is considered by the United States Environmental Protection Agency a necessary task in order for GWA to provide safe drinking water and not harm the public of Guam.

NOW THEREFORE, GWA and the Contractor for the considerations hereinafter set forth herein and in other documents associated with the performance hereunder, agree as follows:

### **SECTION 1. THE CONTRACTOR AGREES:**

To sell to GWA subject to the terms and conditions of this Agreement and all GWA Bid No. 2013 - 07, approximately 1,260 count, 150 lb. and 12 "one ton" chlorine cylinders annually. This Agreement shall be for a period of three years beginning from the date both parties have executed this agreement. GWA reserves the right to renew this contract for two (2) additional twelve month periods on the same terms and conditions set forth herein if both parties so agree in writing. Contractor also agrees maintain at all times at least \$1,000,000.00 of general liability insurance which covers injuries resulting from the storage and handling of chlorine cylinders and the performance as described herein. Contractor agrees to maintain all time all licenses, labor, insurance, material, equipment, tools and services necessary to perform and comply with this Contract and the Contract Documents as defined in Section 3 herein. Contract also understands that it is responsible for all taxes and fees which may be due relative to payment or performance hereunder (including but not limited to, all employee, corporate and gross receipt taxes). GWA reserves the right to amend this Agreement or request a change order, but the right is subject to the mutual agreement of both parties and all amendments or change orders shall be in writing signed by both parties.

Contractor understands that it shall have at a minimum, at least 200 filled 150 lb. and 2 "one ton" chlorine cylinder on island at all times during the contract term available for exclusive use of the Guam Waterworks Authority and it shall not permit any other person or entity to claim said cylinders for their use. Contractor further agrees to provide GWA with the cylinders which have been stored the longest first to GWA so that GWA is assured of having cylinders that are less likely to have problems due to extended storage periods.

- (a) CONTRACT TIME: The Contractor agrees to commence work under this contract upon written notice to proceed and to provide filled 150 lb. and one tone chlorine cylinders as specified in the Bid Documents in the time, place and manner provided in the Bid Documents (as amended). Contractor agrees by placing their signature hereto that they have been placed on notice that the provision of the goods and services hereunder is necessary to protect the public health and that time is always of the essence.
- (b) SUB-CONTRACTORS: The Contractor agrees to bind every sub-contractor to the terms of the Contract Documents. Contractor further agrees that no sub-contractor may be allowed to perform in any fashion whatsoever under this contract until such time as the express written approval of GWA is obtained. The Contract Documents shall not be construed as creating any contractual relation between a sub-contractor and the Guam Waterworks Authority.

#### **SECTION 2. GWA AGREES:**

To pay, and the Contractor agrees to accept in full payment the Contract amount of \$558.75 per filled 150 lb. cylinder and \$5,807.40 per filled one ton cylinder during the first year of this Contract for an estimated Seven Hundred Seventy-Eight Thousand Seven Hundred Thirteen Dollars and Eighty Cents (\$773,713.80) for the provision of an estimated 1,260 filled cylinders and 12 one ton cylinders annually. The price for Chlorine shall be established annually by mutual agreement of the remaining years under this Contract for the estimated 1,260 filled cylinders and 12 one ton cylinders annually. Since this is an indefinite quantity contract, the amounts purchased may vary and the contract amount is subject to quantities ordered by GWA. GWA agrees to pay Contractor for goods and services provided hereunder on a net 30 day basis following receipt by GWA of a monthly invoice that is confirmed and approved by GWA. The Contractor has the duty of coordinating with GWA to confirm total cylinder use during any given monthly period. GWA further agrees to pay contractor 6% interest on any and all invoices more than 60 days late. GWA will not pay for attorney fees or collection costs unless awarded by a court of competent jurisdiction.

GWA further agrees to "loan" Contractor with all cylinders it currently possesses (estimated at 100 to 150) but only for the life of the Contract or any extension thereof. Contractor will provide GWA with a written report indicating the total number of cylinders it has accepted with copies of such report being provided to GWA's General Manager, and Staff Attorney. All cylinders rejected by Contractor shall be returned to GWA at GWA's expense if they are determined by Contractor's chlorine supplier to be defective. However, proof of such defect shall be provided to GWA in writing prior to GWA making any payment for returned cylinders. At the end of the Contract term Contractor will turn over to GWA the same number of cylinders if "borrowed" from GWA with said cylinder being filled and GWA shall pay the Contract price to fill such cylinders. Cylinders returned at the end of the contract shall be in the same condition as what was originally provided to Contractor by GWA (aside from normal wear and tear) and GWA shall have the right to reject any defective cylinders and reduce the amount of the final payment due Contractor by such amount.

### **SECTION 3. CONTRACT DOCUMENTS:**

It is hereby mutually agreed that the following list of instruments, plans, specifications and documents which are attached hereto, bound herewith or incorporated herein by reference shall constitute the Contract (also "Contract Documents"), all of which are made a part hereof and incorporated herein, and collectively evidence and constitute the Contract between the parties, hereto, and they are as fully a part of this Agreement as if they were set out verbatim and in full herein, and are designated as follows:

- a. Invitation to Bid and amendments thereto.
- b. Instructions to Bidders
- c. Bid
- d. Form of Non-Collision Affidavit
- e. Bid Bond
- f. Certification of Bidders Regarding Equal Employment Opportunity
- g. Formal Contract (which shall control in the event of conflict between this and any other contract document)
- h. Performance Bond
- i. General Terms and Conditions
- j. Bid Specifications
- k. Plans (defined as the PSM Plan, the Emergency Response Plan and the Inventory Plan)

### **SECTION 4. LIQUIDATED DAMAGES:**

Liquidated damages shall be calculated per Section III, subsection L of the bid documents.

# SECTION 5. COVENANT AGAINST CONTINGENT FEES:

The Contractor warrants that it has not employed any person to solicit or secure this contract upon any agreement for a commission, percentage, brokerage, or contingent fee. Breach of this warranty shall give GWA the right to immediately terminate the contract, or at its direction, deduct from the contract price or consideration the amount of such commission, percentage, brokerage or contingent fee. This warranty shall not apply to commissions payable by Contractors upon contracts or sales secured or made through bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business.

#### **SECTION 6. DISPUTES:**

Disputes shall be resolved pursuant to Section III, subsection N of the Bid.

# **SECTION 7. CONTRACT BINDING:**

It is agreed that this Contract and all the Covenants hereof shall inure to the benefit of and binding upon GWA and the Contractor respectively and his parties, successors, assignees and

legal representative. Neither GWA nor the Contractor shall have the right to assign, transfer or sublet his interests or obligations hereunder without written consent of the other party.

It is hereby mutually agreed by and between the parties hereto that no mechanic, contractor, subcontractor, material man or other person can or will contract for or in any other manner have or acquire any lien upon the binding or works covered by this contract, or the land upon which the same is situated.

### **SECTION 8. LIABILITY:**

GWA, its officers, agents, employees and governing board assumes no liability for any accident or injury that may occur to the Contractor, Contractor's agents, employees, or to Contractor's property or for Contractors intentional acts, negligence, strict liability, error or omissions of any of contractor, its employees or agents while performing under this contract (including shipping) or from the job during any travel required by the terms of this Contract and that all such liability shall be the sole liability of Contractor.

#### **SECTION 9. NOTICES:**

All notices between the parties shall be in writing and shall be deemed served when personally delivered or when deposited in the mail, registered or certified, first-class postage prepaid, addressed as follows:

# To: GUAM WATERWORKS AUTHORITY

Martin Roush, P.E. GWA General Manager 578 North Marine Corps Drive Tamuning, Guam 96913

# To: **CONTRACTOR**

Mathews Pothen
President
Island Equipment Company
151 W. Harmon Industrial Park, Unit A
Tamuning, Guam 96913

# **SECTION 10. TERMINATION:**

Termination of this Contract shall be pursuant to Section III, subsection F of the bid documents.

# **SECTION 11. SEVERABLE PROVISIONS:**

If any provision of this agreement shall be deemed by a court of competent jurisdiction to be invalid, then such provision shall be deemed stricken from the agreement and the agreement

shall be enforced according to its valid and subsisting terms and provisions. The terms of this Contract shall control in the event of any conflict between this Contract and any other document incorporated or referenced herein.

# **SECTION 12. GOVERNING LAW AND VENUE:**

The validity of this agreement and any of its terms or provisions, as well as the rights and duties of the parties to this agreement, shall be governed by the laws of Guam. Moreover, any and all actions governing this agreement shall be brought in the Superior Court of Guam or the Guam District Court if applicable.

# SECTION 13. OWNERSHIP OF DOCUMENTS:

All briefs, memoranda and other incidental work or materials, aside from materials such as cylinders owned by Contractor, furnished by Contractor hereunder shall be and remain the property of GWA, including all publication rights and copyright interests, and may be used by GWA without any additional cost to GWA.

# **SECTION 14. INDEMNITY:**

Contractor agrees to save and hold harmless GWA, its board members, officers, agents, representatives, successors and assigns and other governmental agencies from any and all suits or actions of every nature and kind, which may be brought for or on account of any injury, death, or damage arising or growing out of the acts or omissions of the Contractor, Contractor's officers, agents (including subcontractors), servants or employees under this Agreement.

# SECTION 15. GENERAL COMPLIANCE WITH LAWS:

The Contractor agrees to comply with all federal and territorial laws, rules, regulations and ordinances applicable to the work being performed hereunder. Contractor further understands that chlorine is an ultra-hazardous substance and understands that it must comply with all permit requirements for the shipping, handling and storage of such substances and assumes all risk and liability for doing so. The Contractor further agrees to maintain all appropriate business licenses and permits during the entire term of this Contract and any extension thereof.

# SECTION 16. ACCESS TO RECORDS AND OTHER REVIEW:

The Contractor, including his subcontractors, if any, shall maintain copies of all books, documents, papers, accounting records and other evidence pertaining to costs incurred relating to this Agreement and to make such materials available at their respective offices at all reasonable times during the contract period and for three (3) years from the date of the final payment under the contract, for inspection by the Guam Waterworks Authority. All originals of any documents related to this Contract shall be provided to GWA as soon as possible, but not later than one day prior to the conclusion of this Agreement. Each subcontract by Contractor pursuant to this agreement shall include a provision containing the conditions of this Section.

# **SECTION 17. SUBCONTRACTING:**

GWA reserves the right to approve all subcontractors with whom Contractor intends to employ regarding this project in advance of any work being performed by any subcontractor in the furtherance of this project. In any agreement between the Contractor and any subcontractor regarding work performed for this project, the subcontractor must agree and be bound by all terms and conditions of this Contract, including those documents referenced and incorporated herein.

# SECTION 18. TOTAL AGREEMENT BETWEEN THE PARTIES:

This contract constitutes the total agreement between the parties hereto and this agreement may not be altered or amended except via a written instrument signed by both parties to this Contract. No oral representation or modification of this Contract or any performance thereunder will be accepted.

IN WITNESS WHEREOF the parties hereto have executed this contract as of the day and year the GWA General Manager has affixed his signature below.

GUAM WATERWORKS AUTHORITY:	CONTRACTOR:
Martin Roush, P.E General Manager, GWA  Date: 7/28/14	Mathews Pothen President, Island Equipment Co.  Date: 7/9/2014
Certified Funds Available:  53/0-4/802-430 #300 000 000  Certifying Officer  Guam Waterworks Authority  Date:  7-14-14	Approved as to Legality:  Samuel J. Taylor Staff Attorney, GWA  Date: 2/27/14
Guam Business License or Certificate of Authori Contract No.: Contract Amount: \$773,713.80 (estimated annua Vendor No:	ization Nos.: 1411177, 1411178 and 1411180.

CORPORATE CERTIFICATION AS TO AUTHORIZATION TO BIND

I, Mathews Pothen, certify that I am the Secretary of the corporation named as Contractor herein; and I further certify that Mathews Pothen who signed this contract on behalf of the Contractor, was then President and Acting Secretary of said corporation by authority of said corporation of its governing body, and is within the scope of its corporate powers to bind said corporation to the terms and conditions of this Contract.



END OF CONTRACT \*\*\*\*

PORTO BY:

BANG C. MEDIA

16 MID EDVIPWANT CO.

NOURE 7 2014

2:48 P.M.

# **EXHIBIT D**



#### GUAM WATERWORKS AUTHORITY

"Better Water, Better Lives."

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

Tel: (671) 300-6846

#### **Issues for Decision**

### Resolution No. - FY2017

# Relative to 150 LBS. and 1 Ton Liquid Chlorine Cylinders for the Guam Waterworks Authority Deep Well facilities Island-Wide

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

Liquid Chlorine is for the treatment of drinking water to disinfect improprieties and is a requirement by the safe Drinking Water Act and required by local and federal laws.

#### Where is the location?

Various locations Island-wide

#### How much will it cost?

### 3 Year contract cost for the following:

150lbs. Chlorine Cylinder \$558.75 each
1 Ton Chlorine Cylinder \$5,807.40 each
Bid Specified amount estimated for 150lbs. is 1,260 cylinders Annually
Bid Specified amount estimated for 1 Ton is 12 cylinders Annually

#### Total expenditure for the 3-year contract term is \$2,258,853

# Term for 1 year for renewal with a 5% price increase:

150lbs. Chlorine Cylinder \$586.68 each 1 Ton Chlorine Cylinder \$6,097.78 each

Estimated Cost for 150lbs. Chlorine Cylinder \$586.68/\$739,216.80 Annually Estimated Cost for 1 Ton. Chlorine Cylinder \$6,097.78/\$73,173.36 Annually

Total Cost \$812,390.16 Estimated Annually

#### When will it be completed?

After the 1 year term.

## What is the funding source?

O & M

# The RFP/BID responses (if applicable):

Reference Bid No. GWA 2013-07



"Better Water, Better Lives."

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

Tel: (671) 300-6846

#### **Issues for Decision**

#### Resolution No. 50-FY2017

Relative to Approval of the Contract with JMI-Edison for the Additional Purchase of Membrane Modules (Filters) for the Ugum Water Treatment Plant

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

To replace the balance of four hundred sixty-four (464) existing membrane filters that have met their manufacturer life expectancy at the Ugum Water Treatment Plant and to ensure the plant continues to meet Surface Water Treatment Rules and Safe Drinking Water Standards. GWA has already replaced four hundred (400) membrane filters procured under previous authorization from the CCU.

#### Where is the location?

Ugum Water Treatment Plant, Talofofo.

#### How much will it cost?

The purchase of 464 membrane filters at a cost of One Thousand Four-Hundred Twenty Dollars (\$1420.00) each will cost Six Hundred Fifty-Eight Thousand Eight-Hundred Eighty Dollars (\$658,880.00)

#### When will it be completed?

September 30, 2017

#### What is the funding source?

Internally Funded Capital Improvement Projects (IFCIP)

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

N/A

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

#### **RESOLUTION NO. 50-FY2017**

# RELATIVE TO APPROVAL OF THE CONTRACT WITH JMI-EDISON FOR THE ADDITIONAL PURCHASE OF MEMBRANE MODULE (FILTERS) FOR THE UGUM WATER TREATMENT PLANT

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

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

WHEREAS, GWA advertised an Invitation for Bid (IFB) 2016-04 soliciting bid proposals from experienced and responsive bidders to provide Ugum Water Treatment Plant with Membrane Module (Filters) and provide adequate stock replenishment when needed to continue to operate the Ugum Treatment Plant required under Safe Water Drinking Act; and

**WHEREAS**, there was one responsive and responsible bidder who met Membrane Module Filters requirements of IFB 2016-04; and

WHEREAS, the IFB 2016-04 offers were evaluated by GWA's review committee; and

WHEREAS, GWA's review committee determined that the offer for Membrane Modules made by JMI-Edison is fair and reasonable by the basis of past purchases made [EXHIBIT A]; and

WHEREAS, GWA accepted JMI-Edison's bid proposal of indefinite quantity bid of Ugum Membrane Modules of One Thousand Four Hundred Twenty Dollars (\$1,420.00) each at

a quantity of Four Hundred (400) for Membrane Modules at total cost of estimated total amount of Five Hundred Sixty Eight Thousand Dollars (\$568,000.00) [EXHIBIT B]; and

WHEREAS, CCU approved the initial contract of Five Hundred Sixty Eight Thousand Dollars (\$568,000.00) for Membrane Modules at Ugum Water Treatment Plant [EXHIBIT C];

WHEREAS, GWA Management seeks CCU approval to purchase additional Four Hundred Sixty Four (464) Membrane Modules with a total cost of Six Hundred Fifty Eight Thousand Eight Hundred Eighty Dollars (\$658,880.00) [EXHIBIT D]; and

WHEREAS, the total purchases to include the previously authorized initial procurement and the additional procurement for which GWA Management is seeking approval, will result in a total procurement value over the One Million Dollar (\$1,000,000.00) threshold requiring PUC approval under Docket 00-04; and

**WHEREAS**, the source of funding for the Membrane Modules will be Internally Funded Capital Improvement Projects (IFCIP).

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

- 1. The recitals set forth above hereby constitute the findings of the CCU.
- The CCU hereby further authorizes the management to purchase additional Four Hundred Sixty Four (464) Membrane Modules for a total amount of Six Hundred Fifty Eight Thousand Eight Hundred Eighty Dollars (\$658,880.00) (EXHIBIT D);
- 3. The CCU hereby further approves the funding total of One Million Two Hundred Twenty Six Thousand Eight Hundred Eighty Dollars (\$1,226,880.00).
- GWA Management is hereby authorized to seek PUC approval as required by Docket No. 00-04.

this Resolution.	nairman certified and the Board Secretary attests to the a
DULY AND REGULAR	RLY ADOPTED, this 25 <sup>th</sup> day of July 2017.
Certified by:	Attested by:
JOSEPH T. DUENAS Chairperson	J. GEORGE BAMBA Secretary
	ard Secretary of the Consolidated Commission on Util re above do hereby certify as follows:
meeting by the members legally held at a place pro	of the Guam Consolidated Commission on Utilities, depends noticed and advertised at which meeting a quor who were present voted as follows:
AYES:	
NAYS:	
NAYS: ABSTENTIONS:	
ABSTENTIONS:	

# **EXHIBIT A**



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

### **MEMORANDUM**

TO: Miguel C. Bordallo, P.E., General Manager

CC Vincent Guerrero, SMA

FROM: Evaluation Committee Members

SUBJECT: Recommendation of Award

(Membrane Modules)

**DATE:** March 25, 2016

Invitation for Bid No: GWA 2016-04 was officially announced and advertised in the Pacific Daily News, Marianas Variety and Guam Waterworks Authority Website on January 25, 2016 and open as scheduled on March 01, 2016 @ 2:00 pm. eight (8) prospective bidders expressed their interests by acknowledging receipt of the bid package thru GWA's website.

## Bidders Register:

1. HDR Inc. 6. Sai Machinery

2. Utilities Services Specialists Inc. 7. Monhar Construction Inc.

3. JMI-Edison 8. Marianas Irrigation

4. dhhhhhh (as seen on email)

5. Gus Construction

Of the eight (8), one (1) submitted a proposal, namely:

JMI-Edison

An evaluation committee was formally assembled and met on March 09, 2016 @ 10:00 am in the Procurement's office.

Evaluation committee members consist of:

Ron Topasna

2

- Karen Grape
- Antonio Camacho
- Nicolas Cabo
- Peter Salas

The committee members determined that JMI Edison's proposal have complied with all requirements set forth in the IFB, the committee members further agrees the cost proposal submitted is fair and reasonable and thereby respectfully recommends to proceed with award, as follows:

Bid amendment No. 2 (version)

Item No	<b>Description</b>	Est. Oty	<b>Unit Cost</b>	Total Cost
1.0	MEMCOR S10N MEMBRANE FILTERATION	400 each (Packed in Sets of 4)	\$1,420.00	\$568,000.00

### **Bid Provision:**

# II. GENERAL TERMS AND CONDITIONS

This is an "Indefinite Quantity Bid" pursuant to the Guam Procurement Regulations. The quantities reflected are only estimated and not guarantee of amounts to be purchased. Quantities may increase or decrease thru the duration of the contract and continued purchase is subject to the availability of funds. No guarantee or other commitment is made to vendors in terms of purchasing quantity and the amounts set forth in this bid are only estimates of needs for the near term. Bids will be awarded to the lowest responsive and responsible bidder submitting a bid based on the estimated quantities specified herein.

#### **GWA Delivery:** (As stated on Amendment No. 2)

Delivery time is 12 weeks from the date on the Notice to Proceed.

## **GWA Contract:**

GWA and the lowest responsible bidder may enter into a contract (which may be in the form of a Purchase Order) on terms acceptable to GWA which shall commence upon vendor's acknowledged receipt of a Notice to Proceed from GWA. The initial term of the contract is three (3) years with two (2) one year options to renew, subject to availability of funds and agreement between the parties.

IFB 2016-04 RECOMMENDATION OF AWARD

Concurred and accepted by the committee members:
The Att
Ron Topasna, Water Treatment Plant Superintendent
0
Tempe
Karen Cheryl O. Grape, Management Analyst III, Operations
Anti-Carlo Barrier
Antonio Camacho, Buyer II
Nicolas Cabo, Buyer II
Your approval is greatly appreciated.
Deta-Var
Peter Salas
To consideration City Construction and the construction of the con
In consideration of the foregoing, please indicate your approval of this recommendation by your signature below.
[ ] CONCURRED [ ] UNCONCURRED
VINCENT ED. GUERRERO, SMA
[ ] APPROVED [ ] DISAPPROVED
111300-11-
MIGUEL C. BORDALLO, P.E. GENERAL MANAGER
The state of the s

IFB 2016-04 RECOMMENDATION OF AWARD

MCB/vg/cm

**EXHIBIT B** 

# GUAM WATERWORKS AUTHORITY

"Better Water. Better Lives."
Gloria B. Nelson Public Services Building
688 Route 15, Mangilao, Guam 96913
Tel: (671) 300-6026/27 Fax: (671) 649-3750

# NOTICE TO PROCEED

JUL 2 9 2018

Mr. Jeff Paeste JMI-Edison 125 North Marine Corps Drive Tamuning, Guam 96913

Telephone: 646-6400

Project No: GWA IFB 2016-04 Project Name: Membranes Modules

Dear Jeff,

You are hereby notified to commence work in accordance with the contract dated 6th day of April 2016. This letter constitutes your official Notice to Proceed (NTP) for the above referenced bid.

Sincerely,

Vince Guerrero, CPM Supply Management Adm. o Lil

Ref: GWA IFB 2015-04 Membrane Modules

# ACCEPTANCE OF NOTICE

Receipt of the abov	e Notice to	Proceed is	hereby acknowled	ged this	29TH day of
Contractor:	JUI	Edison			
Print Name & Title:	JEFF	PAESTE	. Operations	Manager	
Signature:				U	
	//				

GUAM

Gloria B. Nelson Public Service Building 688 Route 15, Mangilao GU, 96913 Tel: (671) 300-6027 Fax: (671) 649-3750

## **NOTICE OF CONDITIONAL AWARD**

Date: March 24, 2016

Mr. Jeff Paeste JMI Edison 125 North Marine Corps Drive Tamuning, Guam 96913

Phone: 671-646-6400/ Fax: 671-649-4835

Re: Invitation for Bid Number: IFB 2016-04 Membrane Modules

Hafa Adai.

The Guam Waterworks Authority ("GWA") has considered the bid submitted by JMI-Edison for the above described reference in response to its Advertisement for Bids dated January 25, 2016 and you are hereby notified that the bid price of Item No. 1.0 has been accepted by GWA. Please be advised that you must now deliver all other documents required by the bid, including, but not limited to, proof of insurance and the Performance and Payment Bond (which must remain in full force and effect until all performance has ended, which includes all warranty periods).

You are also advised that any obligation incurred by your firm prior to execution of the contract is entirely at your own risk and GWA shall have no obligation to reimburse costs incurred prior to execution of the contract.

Please note this Notice of Award is conditional on obtaining the approval of the Guam Consolidated Commission on Utilities for any award over \$250,000 and the approval of the Guam Public Utilities Commission where the total value over the life of the contract could exceed \$1M. Also, award is conditional upon providing any documents such as proof of licensure, proof of insurance or other documents required to be submitted to GWA under the Bid or Guam law.

Ref: GWA IFB 2016-04 Membrane Modules

You are required to return an acknowledged copy of this Conditional Notice of Award to the Procurement Administrator.

Sincerely,

Miguel C. Bordallo, P.E. General Manager 3.31-16

# ACCEPTANCE OF CONDITIONAL NOTICE OF AWARD

Receipt of the above Notice of Conditional Award for GWA Bid No. 2016-04 is hereby acknowledged

By: Signature

Title: Operations Manager

(please print)

Dated this 6th day of April , 2016.

# **EXHIBIT C**

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# GUAM CONSOLIDATED COMMISSION ON UTILITIES RESOLUTION NO. 32-FY2016

RELATIVE TO APPROVAL OF THE CONTRACT WITH JMI-EDISON FOR THE PURCHASE OF MEMBRANE MODULES (FILTERS) FOR THE UGUM TREATMENT PLANT

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

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

WHEREAS, GWA has advertised by an Invitation for Bid (IFB) 2016-04 soliciting bid proposals from experienced and responsive bidders to provide the Ugum Treatment Plant with Membrane Modules (Filters) and provide adequate stock replenishment when needed to continue to operate the Ugum Treatment Plant required under the Safe Water Drinking Act; and

**WHEREAS**, there was one responsive and responsible bidder who offered Membrane Modules meeting the requirements of IFB 2016-04; and

WHEREAS, the IFB 2016-04 offers were evaluated by GWA's review committee; and

WHEREAS, GWA's review committee determined that the offer for Membrane Modules made by JMI-Edison is fair and reasonable by the basis of past purchases made [EXHIBIT A]; and

WHEREAS, GWA accepts JMI-Edison's bid proposal of One Thousand Four Hundred Twenty Dollars (\$1,420.00) each at a quantity of Four Hundred (400) for Membrane Modules at a total cost of Five Hundred Sixty-Eight Thousand Dollars (\$568,000.00); and

WHEREAS, GWA Management seeks CCU approval of the contract amount of Five Hundred Sixty-Eight Thousand Dollars (\$568,000.00) for Membrane Modules for the Ugum Water Treatment Plant; and

WHEREAS, the source of funding for the Membrane Modules will be from the FY2016 GWA Water Production and Treatment Operations & Maintenance Budget.

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

- 1. The recitals set forth above hereby constitute the findings of the CCU.
- 2. The CCU finds that the terms of the bid proposal submitted by "JMI-Edison" are fair and reasonable.
- 3. The CCU finds that the terms of the conditions set by GWA relative to providing necessary membrane modules are fair and reasonable.
- 4. The CCU hereby authorizes the management of GWA to proceed based on the notice of award to "JMI-Edison" attached hereto as EXHIBIT B, and which is incorporated into this Resolution in its entirety.
- 5. The CCU hereby further authorizes the management to enter into a contract with "JMI-Edison", to purchase up to Five Hundred Sixty-Eight Thousand Dollars (\$568,000.00) worth of Membrane Modules, on an as-needed basis for the contract amount of One Thousand Four Hundred Twenty Dollars (1,420.00) for each membrane module, for the duration of the initial contract term of three (3) years as specified in the IFB 2016-04 "Indefinite Quantity Bid," and with two (2) one-year options to renew, subject to availability of funds and agreement between the parties.
- 6. The CCU hereby further approves the funding total of Five Hundred Sixty-Eight Thousand Dollars (\$568,000.00) for the initial 3-year contract term.

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

DULY AND REGULARLY ADOPTED, this 26th day of April 2016.

Certified by:	Attested by:
4T. Q	Sh D. DI
JOSEPH T. DUENAS	J. GEORGE BAMBA
Chairperson	Secretary

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

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

AYES:	5
NAYS:	0
ABSTENTIONS:	0
ABSENT:	0



# **EXHIBIT** A



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

#### **MEMORANDUM**

TO: Miguel C. Bordallo, P.E., General Manager

CC Vincent Guerrero, SMA

FROM: Evaluation Committee Members

SUBJECT: Recommendation of Award

(IFB 2016-04 Membrane Modules)

**DATE:** March 25, 2016

Invitation for Bid No: GWA 2016-04 was officially announced and advertised in the Pacific Daily News, Marianas Variety and Guam Waterworks Authority Website on January 25, 2016 and open as scheduled on March 01, 2016 @ 2:00 pm. eight (8) prospective bidders expressed their interests by acknowledging receipt of the bid package thru GWA's website.

### Bidders Register:

1. HDR Inc.

6. Sai Machinery

2. Utilities Services Specialists Inc.

7. Monhar Construction Inc.

3. JMI-Edison

8. Marianas Irrigation

4. dhhhhhh

5. Gus Construction

Of the eight (8), one (1) submitted a proposal, namely:

JMI-Edison

An evaluation committee was formally assembled and met on March 09, 2016 @ 10:00 am in the Procurement's office.

Evaluation committee members consist of:

- Ron Topasna
- Karen Grape
- Antonio Camacho
- Nicolas Cabo
- Peter Salas

The committee members determined that JMI Edison's proposal have complied with all requirements set forth in the IFB, the committee members further agrees the cost proposal submitted is fair and reasonable and thereby respectfully recommends to proceed with award, as follows:

Bid amendment No. 2 (version)

Item No	<b>Description</b>	Est. Oty	<b>Unit Cost</b>	Total Cost
1.0	MEMCOR S10N MEMBRANE FILTERATION	400 each (Packed in Sets of 4)	\$1,420.00	\$568,000.00

#### **Bid Provision:**

# II. GENERAL TERMS AND CONDITIONS

This is an "Indefinite Quantity Bid" pursuant to the Guam Procurement Regulations. The quantities reflected are only estimated and not guarantee of amounts to be purchased. Quantities may increase or decrease thru the duration of the contract and continued purchase is subject to the availability of funds. No guarantee or other commitment is made to vendors in terms of purchasing quantity and the amounts set forth in this bid are only estimates of needs for the near term. Bids will be awarded to the lowest responsive and responsible bidder submitting a bid based on the estimated quantities specified herein.

# GWA Delivery: (As stated on Amendment No. 2)

Delivery time is 12 weeks from the date on the Notice to Proceed.

#### **GWA Contract:**

GWA and the lowest responsible bidder may enter into a contract (which may be in the form of a Purchase Order) on terms acceptable to GWA which shall commence upon vendor's acknowledged receipt of a Notice to Proceed from GWA. The initial term of the contract is three (3) years with two (2) one year options to renew, subject to availability of funds and agreement between the parties.

IFB 2016-04 RECOMMENDATION OF AWARD

Concessed and acceptable of		
Concurred and accepted by the committee members:		
W 1.1		
The A form		
Ron Topasna, Water Treatment Plant Superintendent		
0		
Kense		
Karen Cheryl O. Grape, Management Analyst III, Operations		
( )///		
Antonio Camacho, Buyer II	•	
Nicolas Cabo, Buyer II		
Your approval is greatly appreciated.		
Delta approval is greatly appreciated.		
Peter Salas		
In consideration of the foregoing, please indicate your approval	of this recommend	lation by voue
signature below.	or ans recommend	iation by your
[ ] CONCURRED [ ] UNCONCURRED		
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VINCENT ED. GUERRERO, SMA		
[ ADDROVED		
[ ] APPROVED [ ] DISAPPROVED		
Many -		
MIGUEL C. BORDALLO, P.E. GENERAL MANGER		
MANUER OF THE GENERAL MANUER		
MODIL		
MCB/vg/cm		

IFB 2016-04 RECOMMENDATION OF AWARD

# **EXHIBIT B**



# **AUTHORITY**

Gloria B. Nelson Public Service Building 688 Route 15, Mangilao GU, 96913 Tel: (671) 300-6027 Fax: (671) 649-3750

### NOTICE OF CONDITIONAL AWARD

Date: March 24, 2016

Mr. Jeff Paeste
Jh.II Edison
125 North Marine Corps Drive
Tamuning, Guam 96913
Phone: 671-646-6400/ Fax: 671-649-4835

Re: Invitation for Bid Number: IFB 2016-04 Membrane Modules

Hafa Adai,

The Guam Waterworks Authority ("GWA") has considered the bid submitted by JMI-Edison for the above described reference in response to its Advertisement for Bids dated January 25, 2016 and you are hereby notified that the bid price of Item No. 1.0 has been accepted by GWA. Please be advised that you must now deliver all other documents required by the bid, including, but not limited to, proof of insurance and the Performance and Payment Bond (which must remain in full force and effect until all performance has ended, which includes all warranty periods).

You are also advised that any obligation incurred by your firm prior to execution of the contract is entirely at your own risk and GWA shall have no obligation to reimburse costs incurred prior to execution of the contract.

Please note this Notice of Award is conditional on obtaining the approval of the Guam Consolidated Commission on Utilities for any award over \$250,000 and the approval of the Guam Public Utilities Commission where the total value over the life of the contract could exceed \$1M. Also, award is conditional upon providing any documents such as proof of licensure, proof of insurance or other documents required to be submitted to GWA under the Bid or Guam law.

,

Ref: GWA IFB 2016-04 Membrane Modules

You are required to return an acknowledged copy of this Conditional Notice of Award to the Procurement Administrator.

Sincerely,

Miguel C. Bordallo, P.E. General Manager 3-31-46

# ACCEPTANCE OF CONDITIONAL NOTICE OF AWARD

Receipt of the above Notice of Conditional Award for GWA Bid No. 2016-04 is hereby acknowledged

By:

Signature

Title: Operations Manager

(please print)

Dated this 6th day of\_

April

, 2016.

# **EXHIBIT D**



Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913 Tel: (671) 300-6846

#### Additional Purchases Relative to IFB 2016-04

## Total Membrane Count for Replacement

	Membrane		
Ugum	Qty	Unit cost	Total
Cell 1	432	\$1,420.00	\$613,440.00
Cell 2	432	\$1,420.00	\$613,440.00
Total	864		\$1,226,880.00
Approved IFCIP Funding			\$800,000.00
Additional Funding Request			\$426,880.00

## IFCIP Approved Funding

	Qty	Unit Cost	Cost	Remarks
IFCIP Approved				
Funding			\$800,000.00	Funding Approved November 6, 2015
PO 299455	400	\$1,420.00	\$568,000.00	Projected Completion July 30, 2017
OR 30450 - Jun 9,				3-4 weeks delivery upon PO
2017	128	\$1,420.00	\$181,760.00	Acknowledgement.
Balance to Purchase			\$50,240.00	

## **GWA GM Procurement Authority**

	Qty	Unit Cost	Cost	Remarks
PO 299455	400	\$1,420.00	\$568,000.00	
OR 30450 - Jun 9,				
2017	128	\$1,420.00	\$181,760.00	
GMs Procurement				
Authority	528		\$749,760.00	PO 299455 and OR 30450



"Better Water, Better Lives."

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

Tel: (671) 300-6846

#### **Issues for Decision**

#### Resolution No. 51-FY2017

Relative to Authorizing the Refunding of the 2010 Series Guam Waterworks Authority Water and Wastewater System Revenue Bonds, Approving Forms of Related Documents, Agreements, and Actions, and Authorizing the Execution and Delivery Thereof

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

To refund GWA's 2010 system Revenue Bonds and capitalize on lower municipal bond interest rates which in turn will produce lower debt service.

#### Where is the location?

Pricing and sale will take place in New York City, New York.

#### How much will it cost?

Approximately \$1.7 million is estimated to pay for typical issuance costs to cover expenses and fees of GWA's Bond Underwriter, the Guam Public Utilities Commission, GWA and GEDA.

#### When will it be completed?

Upon the approval of the CCU, GEDA and the Public Utilities Commission, it is estimated the sale will be completed sometime around the end of September 2017.

#### What is the funding source?

The cost of the refunding will be paid from proceeds of the refunding bonds.

## The RFP/BID responses:

Not Applicable. The refunding is authorized pursuant to Article 2, Chapter 14, Title 12 of the Guam Code Annotated.

GUAM CCU

# CONSOLIDATED COMMISSION ON UTILITIES

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

#### **RESOLUTION NO. 51-FY2017**

RESOLUTION AUTHORIZING THE ISSUANCE AND SALE OF GUAM WATERWORKS AUTHORITY WATER AND WASTEWATER SYSTEM REVENUE REFUNDING BONDS, APPROVING FORMS OF RELATED DOCUMENTS, AGREEMENTS AND ACTIONS, AND AUTHORIZING THE EXECUTION AND DELIVERY THEREOF.

WHEREAS, Article 2, Chapter 14, Title 12 of the Guam Code Annotated (the "Act") authorizes Guam Waterworks Authority ("GWA") to issue revenue bonds to raise funds for the purpose of acquiring, constructing, improving, equipping, maintaining, repairing, renewing, replacing, reconstructing or insuring the System (as that term is defined in the Act), or any part thereof, or for the purpose of redeeming or retiring any such bonds or any other prior obligations of GWA, or for any combination of such purposes, in accordance with and subject to the requirements and limitations set forth in the Act; and

WHEREAS, GWA has informed this Consolidated Commission on Utilities (the "CCU") that the opportunity has arisen to issue refunding bonds to redeem or retire all or a portion of the outstanding Guam Waterworks Authority Water and Wastewater System Revenue Bonds, Series 2010 (the "Prior Bonds") for debt service savings, which is expected to result in savings to ratepayers; and

WHEREAS, GWA has determined it is necessary and desirable to issue one or more series of Guam Waterworks Authority Water and Wastewater System Revenue Bonds (the "Bonds") to redeem or retire all or a portion of the Prior Bonds; and

 WHEREAS, GWA has previously made and entered into an Indenture dated as of December 1, 2005 (as previously supplemented and amended, the "General Indenture"), by and among GWA, Bank of Guam, as trustee (the "Trustee") and U.S. Bank National Association, as co-trustee (the "Co-Trustee"), which authorized one or more series of Guam Waterworks Authority Water and Wastewater System Revenue Bonds; and

WHEREAS, there has been presented to this meeting the form of a sixth supplemental indenture (Exhibit A), by and among GWA, the Trustee and the Co-Trustee (the "Supplemental Indenture" and, together with the General Indenture, the "Indenture"), pursuant to which the Authority proposes to issue the Bonds in one or more series; and

WHEREAS, GWA previously has executed a Master Continuing Disclosure Agreement with Digital Assurance Certification, L.L.C., as dissemination agent (the "Dissemination Agent"), dated as of December 1, 2005, which authorized one or more supplemental continuing disclosure agreements to be entered into in connection with the issuance of one or more series of bonds; and

WHEREAS, there has been presented to this meeting the form of a supplemental continuing disclosure agreement (the "Supplemental Continuing Disclosure Agreement"), by and between GWA and the Dissemination Agent, in connection with the Bonds (Exhibit B); and

WHEREAS, there has been presented to this meeting the form of a bond purchase agreement (the "Bond Purchase Agreement"), between GWA and Citigroup Global Markets Inc., as representative of itself and Barclays Capital, Inc., as underwriters (the "Underwriters"), relating to the sale of the Bonds (Exhibit C); and

WHEREAS, the Supplemental Indenture, the Supplemental Continuing

Disclosure Agreement and the Bond Purchase Agreement are collectively referred to herein as
the "Bond Documents"; and

WHEREAS, there has been presented to this meeting the form of preliminary

official statement of GWA (the "Preliminary Official Statement") relating to the Bonds (Exhibit D); and

WHEREAS, the Guam Economic Development Authority ("GEDA") has approved the issuance and sale of the Bonds pursuant to the Act and Section 50103(k) of Title 12, Guam Code Annotated; and

WHEREAS, GWA has requested that the Public Utilities Commission of Guam (the "PUC") approve the issuance of the Bonds pursuant to the Act; and

**WHEREAS**, in accordance with the Act, the authorization provided by this resolution to sell and issue the Bonds has been approved by *I Liheslaturan Guåhan* (the "Legislature") pursuant to the terms and conditions set forth in Public Law No. 28-71, as amended by Public Law Nos. 30-145 and 32-069 (collectively, the "Legislation");

NOW, THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities as follows:

<u>Section 1</u>. The foregoing recitals are true and correct.

Section 2. Issuance of one or more series of additional Bonds from time to time pursuant to the Act and the General Indenture as supplemented by the Supplemental Indenture is hereby authorized, to be designated as "Revenue Refunding Bonds" (or as otherwise set forth in the Supplemental Indenture), in an aggregate principal amount not to exceed an aggregate principal amount sufficient to provide funds for such redemption or retirement of all or a portion

of such Prior Bonds, plus related costs of issuance and of such redemption or retirement [and to fund a deposit to the debt service reserve fund]. Such Bonds shall be issued in such series and amounts and at such times as the Chair of the Commission, the Vice-Chair of the Commission or the General Manager of GWA (the "Designated Officers") deem appropriate, provided that such bonds have a final maturity not later than the final maturity of the Prior Bonds, bear interest at such rate or rates and are sold for such price or prices not exceeding any limitation established by the Legislation, and are issued and sold pursuant to the Indenture and otherwise in compliance with the provisions of the Act.

The Bonds shall be limited obligations of GWA payable solely from revenues and other assets of GWA pledged for such purpose and shall not be a debt or liability of the Government of Guam.

The Chair of the Commission and the appropriate officials of GWA are hereby authorized and directed, subject to the approval of the PUC, to execute and countersign, for and on behalf and in the name of GWA and under its seal, the Bonds, in an aggregate principal amount not to exceed the amount authorized hereby, in accordance with the Indenture.

Section 3. The form of Preliminary Official Statement presented to this meeting is hereby approved, with such additions, changes and modifications as the Designated Officers may approve upon consultation with legal counsel, such approval to be conclusively evidenced by the execution thereof or of a certificate deeming final the Preliminary Official Statement for purposes of Rule 15c2-12 of the Securities and Exchange Commission by one or more of the Designated Officers, who are each hereby authorized and directed, subject to the approval of the PUC, to execute the same and to authorize the Underwriters to distribute such Preliminary Official Statement to potential purchasers of the Bonds and other interested parties.

30 31 32

The Designated Officers are also hereby authorized to execute and cause to be delivered a final Official Statement to purchasers of the Bonds and other interested parties, with such additions, changes and modifications from the Preliminary Official Statement as the Designated Officers may approve upon consultation with staff and legal counsel, such approval to be conclusively evidenced by the execution and delivery of the final Official Statement by one or more of the Designated Officers. The Underwriters are hereby authorized to cause the Official Statement to be delivered to the purchasers of the Bonds and to be distributed in preliminary form in connection with the marketing and sale of the Bonds.

Section 4. The Bond Documents presented to this meeting are hereby approved, with such additions, changes and modifications as the Designated Officers may approve upon consultation with legal counsel, such approval to be conclusively evidenced by the Bond Documents executed by such Designated Officers, who are each hereby severally authorized and directed, subject to the approval of the PUC, to execute the same.

Section 5. The Designated Officers are hereby authorized to approve such bond insurance or other supplemental security arrangements for the Bonds as are approved by the Designated Officers, and to approve any other similar agreements deemed by the Designated Officers to be necessary or appropriate in connection therewith.

Section 6. The appropriate officials of GWA are hereby authorized and directed to do any and all things and to execute and deliver any and all documents, certificates, notices, directions, consents and agreements which they may deem necessary or advisable in order to effectuate the purposes of this resolution, including, without limitation, closing documents and certificates, including a tax certificate, amendments to any existing agreements

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1	and any documents or agreements necessary in order to obtain credit enhancement for the Bonds
2	or the obligations of GWA with respect thereto.
4	Section 7. All actions heretofore taken by the officers, representatives or
5	agents of GWA in connection with the issuance and sale of the Bonds are hereby ratified
6	confirmed and approved.
7	Section 8. The Bonds shall not be issued without the approval of the Guam
9	Public Utilities Commission in accordance with the Act and Chapter 12 of Title 12, Guam Code
10	Annotated, and shall be in all respects subject to such approval and to the terms and conditions of
11	the approval of GEDA, and to the terms and conditions of the Legislation.
13	
14	Section 9. This resolution shall take effect from and after its adoption.
15	
16	<b>RESOLVED</b> , that the Chairman certified and the Board Secretary attests to the adoption
17	of this Resolution.
18 19	DULY AND REGULARLY ADOPTED, this 25th day of July, 2017.
20	
21	Certified by: Attested by:
22	
23	JOSEPH T. DUENAS  J. GEORGE BAMBA
24	Chairperson Secretary
25	//
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1	GWA July 19, 2017 Work Session - ISSUES FOR DECISION
	I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as
1	evidenced by my signature above do hereby certify as follows:
2	
3	The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and
4	legally held at a place properly noticed and advertised at which meeting a quorum was
5	present and the members who were present voted as follows:
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7	AYES:
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9	NAYS:
10	ABSTENTIONS:
11	- DOWN
	ABSENT:
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### **EXHIBIT A**

## ORRICK, HERRINGTON & SUTCLIFFE LLP DRAFT – DISTRIBUTED: 11/6/2016

### **GUAM WATERWORKS AUTHORITY**

and

BANK OF GUAM, as Trustee,

and

U.S. BANK NATIONAL ASSOCIATION, as Co-Trustee

### SIXTH SUPPLEMENTAL INDENTURE

Dated as of February 1, 2017

Relating to

\$[2017 Par]
Guam Waterworks Authority
Water and Wastewater System Revenue Refunding Bonds
Series 2017

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THIS SIXTH SUPPLEMENTAL INDENTURE, made and entered into and dated as of February 1, 2017, by and among the GUAM WATERWORKS AUTHORITY, a duly organized public corporation of the government of Guam (the "Authority"), BANK OF GUAM, a domestic banking corporation duly organized and existing under and by virtue of the laws of Guam, having a corporate trust office in Guam, and being qualified to accept and administer the trusts hereby created and to do business within Guam, as trustee (the "Trustee"), and U.S. BANK NATIONAL ASSOCIATION, a national banking association organized under the laws of the United States of America and qualified to accept and administer the trusts hereby created, as co-trustee (the "Co-Trustee"),

### WITNESSETH:

WHEREAS, pursuant to Article 2, Chapter 14 of Title 12 of the Guam Code Annotated (the "Act"), the Authority is authorized to issue and sell revenue bonds to raise funds for the purpose of acquiring, constructing, improving, equipping, maintaining, repairing, renewing, replacing, reconstructing or insuring the System (as defined in the Indenture), or any part thereof, or for the purpose of refunding any such bonds or any other prior obligations of the Authority, or for any combination of such purposes;

WHEREAS, the Authority has determined to issue revenue bonds for such purposes and to that end has duly entered into that certain Indenture, dated as of December 1, 2005 (the "Indenture"), between the Authority and the Trustee, to secure the payment of the principal thereof and the interest and premium, if any, thereon, and the observance of the covenants and conditions therein contained;

WHEREAS, revenue bonds may be issued pursuant to the Indenture and one or more indentures supplemental thereto ("Supplemental Indentures"), from time to time, in an aggregate principal amount not limited except as therein provided, and said revenue bonds are to be designated as the "Guam Waterworks Authority Water and Wastewater System Revenue Bonds" (the "Bonds");

WHEREAS, the Authority, the Trustee and the Co-Trustee have heretofore entered into a Supplemental Indenture dated as of December 1, 2005 pursuant to which \$101,175,000 aggregate principal amount of Bonds further designated as "Series 2005 Bonds" were issued, a Supplemental Indenture dated as of November 1, 2010, pursuant to which \$118,825,000 of Bonds further designated as "Series 2010 Bonds" were issued, a Third Supplemental Indenture dated as of December 1, 2013, pursuant to which \$172,630,000 of Bonds further designated as "Series 2013 Bonds" were issued, a Fourth Supplemental Indenture, dated as of August 1, 2014, pursuant to which \$[2017 PAR] aggregate principal amount of Bonds further designated as "Series 2014 Bonds" were issued, and a Fifth Supplemental Indenture, dated as of February 1, 2017, pursuant to which \$143,310,000 aggregate principal amount of Bonds further designated as "Series 2016 Bonds" were issued;

WHEREAS, it is now desirable and necessary and in the best interests of the Authority to authorize the issuance of \$[2017 Par] aggregate principal amount of Bonds further designated as "Series 2017 Bonds" (the "Series 2017 Bonds") to raise funds for the purpose of refunding [all / a portion of] of the remaining Outstanding Series 2010 Bonds and paying costs of issuance and of such refunding;

WHEREAS, pursuant to and subject to the terms and conditions set forth in Public Law No. 28-71, as amended by Public Law Nos. 30-145 and 32-069, the Legislature of Guam (as required by Section 50103(k) of Title 12, Guam Code Annotated (the "GEDA Law")) approved the terms and conditions of the issuance of said Series 2017 Bonds, so long as the Series 2017 Bonds meet the requirements set forth in the Act;

WHEREAS, the Guam Economic Development Authority has approved the issuance and sale of said Series 2017 Bonds as required by the GEDA Law;

WHEREAS, all acts, conditions and things required by the laws of the United States of America and the laws of Guam to exist, to have happened and to have been performed precedent to and in connection with the issuance of said Series 2017 Bonds exist, have happened, and have been performed in regular and due time, form and manner as required by law, and the Authority is now duly authorized and empowered, pursuant to each and every requirement of law, to issue said Bonds for the purpose, in the manner and upon the terms herein provided;

WHEREAS, no Event of Default (as defined in the Indenture) has occurred or is now occurring;

NOW, THEREFORE, THIS SUPPLEMENTAL INDENTURE WITNESSETH, in consideration of the premises and of the mutual covenants herein contained and of the purchase and acceptance of the Series 2017 Bonds by the owners thereof, and for other valuable considerations, the receipt of which is hereby acknowledged, the Authority does hereby covenant and agree with the Trustee and the Co-Trustee as follows:

### ARTICLE XXXIII

### **DEFINITIONS**

SECTION 33.01 <u>Definitions</u>. Unless the context otherwise requires, the terms defined in the Indenture shall, for all purposes of this Supplemental Indenture and of any certificate, opinion or other document herein mentioned, have the meanings specified in the Indenture.

In addition, unless the context otherwise requires, the terms defined in this Section shall for all purposes of the Indenture and this Supplemental Indenture and of any certificate, opinion or other document herein mentioned, have the meanings herein specified.

"Bond Year" means, with respect to the Series 2017 Bonds, the period of twelve consecutive months ending on [Closing Day] of each year if Series 2017 Bonds are or will be Outstanding in such twelve-month period; <u>provided</u> that the first Bond Year shall commence on the date of delivery of the Series 2017 Bonds and end on [Closing Day], 2018.

"DTC" means The Depository Trust Company, New York, New York, and its successors and assigns.

"Escrow Agent" means, with respect to the Series 2017 Bonds, the Co-Trustee in its capacity as Escrow Agent under the 2010 Escrow Agreement.

"Series 2017 Bonds" means the \$[2017 Par] aggregate principal amount of Guam Waterworks Authority Water and Wastewater System Revenue Refunding Bonds, Series 2017.

"Series 2017 Serial Bonds" means the Series 2017 Bonds designated as Serial Bonds by Section 25.02, and for which no Mandatory Sinking Account Payments are provided.

"Series 2017 Term Bonds" means the Series 2017 Bonds designated as Term Bonds by Section 25.02, and for which Mandatory Sinking Account Payments are provided.

"2010 Bond Escrow Fund" means the fund by such name established pursuant to the 2010 Escrow Agreement.

2

"2010 Escrow Agreement" means, with respect to the Series 2017 Bonds, that certain Escrow Agreement, dated as of February 1, 2017, executed by the Authority and the Co-Trustee, as escrow agent thereunder, relating to the refunding of the Series 2010 Bonds to be refunded.

### ARTICLE XXXIV

### **AUTHORIZATION AND TERMS OF THE SERIES 2017 BONDS**

SECTION 34.01 <u>Authorization of Series 2017 Bonds</u>. One Series of Bonds is hereby authorized and created under the Act to raise funds for the purpose of refunding the Series 2010 Bonds remaining outstanding and to pay related Costs of Issuance. Such Series of Bonds is further designated as the "Guam Waterworks Authority Water and Wastewater System Revenue Refunding Bonds Series 2017." The aggregate principal amount of Series 2017 Bonds which may be issued and Outstanding under this Supplemental Indenture shall not exceed \$[2017 PAR].

The Series 2017 Bonds shall be treated as a single Series under the Indenture.

### SECTION 34.02 Terms of Series 2017 Bonds; Appointments; Designations.

- (a) The Series 2017 Bonds shall be issued as fully registered Bonds without coupons in the denominations of \$5,000 or any integral multiple thereof. The Series 2017 Bonds shall be dated their date of delivery, and interest thereon (based on a 360-day year of twelve thirty-days months) shall be payable on January 1 and July 1 of each year, commencing [July 1, 2017] (each, an "Interest Payment Date" for the Series 2017 Bonds).
- (b) The Series 2017 Bonds shall mature on the dates and in the amounts and shall bear interest at the rates per annum specified in the following table:

Maturity Date	Principal	Interest
(July 1)	Amount	Rate
	\$	%

- (c) [The Series 2017 Bonds maturing on July 1, [20\_] through and including July 1, [20\_] are Serial Bonds, and the Series 2017 Bonds maturing on July 1, [20\_] and July 1, [20\_] are Term Bonds.]
- (d) The Principal Payment Period for the Series 2017 Bonds shall be the twelve calendar months next preceding each maturity date or Mandatory Sinking Account Payment date for such Bonds.

- (e) The Record Date for all scheduled payments of principal of and interest on the Series 2017 Bonds shall be the 15<sup>th</sup> day of the calendar month next preceding the date each such payment is due, whether or not such 15<sup>th</sup> day is a Business Day.
- (f) The Co-Trustee is hereby appointed Paying Agent for the Series 2017 Bonds and Registrar for the Series 2017 Bonds, and the Co-Trustee's corporate trust office in Los Angeles, California, is hereby designated as the Principal Office of the Co-Trustee.
- The principal of and premium, if any, on each Series 2017 Bond shall be payable in lawful money of the United States of America to the Owner of such Bond, upon the surrender of such Bond at the Principal Office of any Paying Agent for such Bond. The interest on each Series 2017 Bond shall be payable in like lawful money to the person whose name appears on the bond registration books of the Registrar for such Bond as the Owner of such Bond as of the close of business on the Record Date for such Bond preceding the Interest Payment Date, whether or not such Record Date is a Business Day, such interest to be paid by check or mailed by first class mail to such Owner at such address as appears on such registration books or at such address as such Owner may have filed with the Registrar for that purpose. Upon the written request of a registered owner of one million dollars (\$1,000,000) or more in aggregate principal amount of Series 2017 Bonds, payment of interest on and principal (including Redemption Price) of such Bonds shall be made by wire transfer from the Paying Agent to the registered owner of such Bonds. Any such principal payment by wire transfer shall nevertheless be subject to prior surrender of the Series 2017 Bonds with respect to which such payment is made. Each payment of interest or principal on Series 2017 Bonds, whether by check, draft or wire transfer, shall be accompanied by information specifying for each maturity of such Bonds with respect to which such payment is being made, the amount and the CUSIP number (if available).
- (h) Each Series 2017 Bond shall bear interest from the Interest Payment Date next preceding the date of authentication thereof unless it is authenticated as of a day during the period from the Record Date preceding any Interest Payment Date to the Interest Payment Date, inclusive, in which event it shall bear interest from such Interest Payment Date, or unless it is authenticated on or before [June 15, 2017], in which event it shall bear interest from its date of delivery; provided, however, that if, at the time of authentication of any Series 2017 Bond, interest is in default on Outstanding Bonds of such Series, such Bond shall bear interest from the Interest Payment Date to which interest has previously been paid or made available for payment on the Outstanding Bonds of such Series.
- (i) The Series 2017 Bonds shall be subject to redemption as provided in Section 34.03.
- (j) The Registrar for the Series 2017 Bonds shall assign each Series 2017 Bond authenticated and registered by it a distinctive letter, or number, or letter and number, and shall maintain a record thereof which shall be available to the Authority for inspection.
- (k) The Series 2017 Bonds, the Registrar's certificate of authentication and registration and the form of assignment to appear thereon shall be in substantially the forms set forth in Exhibit A hereto, with necessary or appropriate variations, omissions and insertions as permitted or required by this Indenture.

### SECTION 34.03 <u>Terms of Redemption of the Series 2017 Bonds.</u>

(a) <u>Extraordinary Optional Redemption</u>. The Series 2017 Bonds are subject to redemption on any date prior to their respective stated maturities, as a whole, or in part so that the

reduction in Annual Debt Service for the Series 2017 Bonds for each Bond Year after such redemption shall be as nearly proportional as practicable, from and to the extent of proceeds received by the Authority due to a governmental taking of the System or portions thereof by eminent domain proceedings, if such amounts are not used for additions, improvements or extensions to the System, under the circumstances and upon the conditions and terms set forth in the Indenture, at the greater of par or Amortized Value, plus accrued interest to the date fixed for redemption, without premium. "Amortized Value" means on any interest payment date, the then current value of the bond amortizing the original issue premium over the period ending on the first call date using the constant yield method.

- (b) Optional Redemption. The Series 2017 Bonds maturing on or after July 1, [20\_\_] are subject to redemption prior to their respective stated maturities, at the option of the Authority, from any source of available moneys, on any date on or after July 1, [20\_\_], as a whole, or in part by such maturities or portions of maturities as shall be determined by the Authority (or by lot within a maturity in the absence of such a determination), at a redemption price equal to the principal amount of each Series 2017 Bond called for redemption plus interest accrued to the date fixed for redemption, without premium.
- (c) <u>Mandatory Sinking Account Redemption</u>. The Series 2017 Term Bonds maturing on July 1, [20\_\_] are subject to redemption prior to their stated maturity in part, by lot, on July 1 of each year from Mandatory Sinking Account Payments, commencing July 1, [20\_\_], at a redemption price equal to their principal amount, plus accrued interest thereon to the date fixed for redemption, without premium, in the years and in the amounts, as set forth below:

Year Amount
\$

(d) <u>Mandatory Sinking Account Redemption</u>. The Series 2017 Term Bonds maturing on July 1, [20\_\_] are subject to redemption prior to their stated maturity in part, by lot, on July 1 of each year from Mandatory Sinking Account Payments, commencing July 1, [20\_\_], at a redemption price equal to their principal amount, plus accrued interest thereon to the date fixed for redemption, without premium, in the years and in the amounts, as set forth below:

Year Amount

† Final maturity.

† Final maturity.

SECTION 34.04 Special Covenants as to Book-Entry Only System for Series 2017 Bonds. Except as otherwise provided in subsections (b) and (c) of this Section 34.04, all of

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the Series 2017 Bonds initially issued shall be registered in the name of Cede & Co., as nominee for The Depository Trust Company, New York, New York ("DTC"), or such other nominee as DTC shall request pursuant to the Representation Letter. Payment of the interest on any Series 2017 Bond registered in the name of Cede & Co. shall be made on each interest payment date for such Series 2017 Bonds to the account, in the manner and at the address indicated in or pursuant to the Representation Letter.

- The Series 2017 Bonds initially shall be issued in the form of a single (a) authenticated fully registered bond for each stated maturity of each portion of each series of Series 2017 Bonds, representing the aggregate principal amount of the Series 2017 Bonds of such portion, series and maturity. Upon initial issuance, the ownership of all such Series 2017 Bonds shall be registered in the registration records maintained by the Registrar pursuant to Section 2.05 hereof in the name of Cede & Co., as nominee of DTC, or such other nominee as DTC shall request pursuant to the Representation Letter. The Trustee, the Co-Trustee, the Registrar, the Authority and any paying agent may treat DTC (or its nominee) as the sole and exclusive owner of the Series 2017 Bonds registered in its name for the purposes of payment of the principal or redemption price of and interest on such Series 2017 Bonds, selecting the Series 2017 Bonds or portions thereof to be redeemed, giving any notice permitted or required to be given to Bondowners hereunder, registering the transfer of Series 2017 Bonds, obtaining any consent or other action to be taken by Bondowners of the Series 2017 Bonds and for all other purposes whatsoever; and the Trustee, the Co-Trustee, the Registrar, the Authority and any paying agent shall not be affected by any notice to the contrary. Neither the Trustee, the Co-Trustee, the Authority nor any paying agent shall have any responsibility or obligation to any Participant (which shall mean, for purposes of this Section 34.04, securities brokers and dealers, banks, trust companies, clearing corporations and other entities, some of whom directly or indirectly own DTC), any person claiming a beneficial ownership interest in the Series 2017 Bonds under or through DTC or any Participant, or any other person which is not shown on the registration records as being a Bondowner, with respect to (i) the accuracy of any records maintained by DTC or any Participant, (ii) the payment by DTC or any Participant of any amount in respect of the principal or redemption price of or interest on the Series 2017 Bonds, (iii) any notice which is permitted or required to be given to Holders of Series 2017 Bonds hereunder, (iv) the selection by DTC or any Participant of any person to receive payment in the event of a partial redemption of the Series 2017 Bonds, or (v) any consent given or other action taken by DTC as Holder of Series 2017 Bonds. The Paying Agent shall pay all principal of and premium, if any, and interest on the Series 2017 Bonds only at the times, to the accounts, at the addresses and otherwise in accordance with the Representation Letter, and all such payments shall be valid and effective to satisfy fully and discharge the Authority's obligations with respect to the principal of and premium, if any, and interest on the Series 2017 Bonds to the extent of the sum or sums so paid. Upon delivery by DTC to the Trustee and Co-Trustee of written notice to the effect that DTC has determined to substitute a new nominee in place of its then existing nominee, the Series 2017 Bonds will be transferable to such new nominee in accordance with subsection (f) of this Section 34.04.
- (b) In the event that the Authority elects to discontinue the book-entry system for any Series 2017 Bonds, the Trustee shall, upon the written instruction of the Authority, so notify DTC, whereupon DTC shall notify the Participants of the availability through DTC of bond certificates. In such event, such Series 2017 Bonds will be transferable in accordance with subsection (f) of this Section 34.04. DTC may determine to discontinue providing its services with respect to the Series 2017 Bonds at any time by giving written notice of such discontinuance to the Authority or the Trustee and Co-Trustee and discharging its responsibilities with respect thereto under applicable law. In such event, the Series 2017 Bonds will be transferable in accordance with subsection (f) of this Section 34.04. Whenever DTC requests the Authority, the Trustee and the Co-Trustee to do so, the Trustee, the Co-Trustee and the Authority will cooperate with DTC in taking appropriate action after reasonable notice to arrange for another securities depository to maintain custody of all certificates

evidencing the Series 2017 Bonds then Outstanding. In such event, the Series 2017 Bonds will be transferable to such securities depository in accordance with subsection (f) of this Section 34.04, and thereafter, all references in this Supplemental Indenture to DTC or its nominee shall be deemed to refer to such successor securities depository and its nominee, as appropriate.

- (c) Notwithstanding any other provision of this Supplemental Indenture to the contrary, so long as all Series 2017 Bonds Outstanding are registered in the name of any nominee of DTC, all payments with respect to the principal of and premium, if any, and interest on each such Series 2017 Bond and all notices with respect to each such Series 2017 Bond shall be made and given, respectively, to DTC as provided in the Representation Letter.
- (d) The Co-Trustee is hereby authorized and requested to execute and deliver the Representation Letter and, in connection with any successor nominee for DTC or any successor depository, enter into comparable arrangements, and shall have the same rights with respect to its actions thereunder as it has with respect to its actions under this Supplemental Indenture.
- (e) In the event that any transfer or exchange of Series 2017 Bonds is authorized under subsection (b) or (c) of this Section 34.04, such transfer or exchange shall be accomplished upon receipt by the Registrar from the registered owner thereof of the Series 2017 Bonds to be transferred or exchanged and appropriate instruments of transfer to the permitted transferee, all in accordance with the applicable provisions of Sections 2.03 and 2.04 of the Indenture. In the event Series 2017 Bond certificates are issued to Holders other than Cede & Co., its successor as nominee for DTC as holder of all the Series 2017 Bonds, another securities depository as holder of all the Series 2017 Bonds, or the nominee of such successor securities depository, the provisions of Sections 2.03 and 2.04 of the Indenture shall also apply to, among other things, the registration, exchange and transfer of the Series 2017 Bonds and the method of payment of principal of, premium, if any, and interest on the Series 2017 Bonds.

SECTION 34.05 Waiver of Brokerage Confirmations. The Authority acknowledges that to the extent regulations of the Comptroller of the Currency or another applicable regulatory entity grant the Authority the right to receive brokerage confirmations of security transactions as they occur, the Authority specifically waives receipt of such confirmations to the extent permitted by law. The Co-Trustee shall furnish the Authority and the Trustee periodic cash transaction statements which shall include detail for all investment transactions made by the Co-Trustee.

### ARTICLE XXXV

ISSUANCE OF SERIES 2017 BONDS; APPLICATION OF PROCEEDS; FUNDS AND ACCOUNTS

SECTION 35.01 <u>Issuance of Series 2017 Bonds</u>. At any time after the execution and delivery of this Sixth Supplemental Indenture, the Authority may sell and execute and the Registrar for the Series 2017 Bonds shall authenticate and, upon the Order of the Authority, deliver the Series 2017 Bonds in an aggregate principal amount not to exceed \$[2017 PAR].

	SECTION 35.02	Application of Proceeds of Series 2017 Bonds and Other
Moneys.	The net proceeds received by	the Authority from the sale of the Series 2017 Bonds in the
amount of	[\$[] shall be depo	sited with the Co-Trustee, who shall forthwith apply such
proceeds i	n the following manner, as di	rected by a Request of the Authority:

(a) the Co-Trustee shall transfer to the Trustee, for deposit in the Series 2017 Costs of Issuance Account, the amount of \$[\_\_\_\_\_]; and

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(b) the Co-Trustee, as Escrow Agent, shall deposit \$[\_\_\_\_\_] in the 2010 Bond Escrow Fund established pursuant to the 2010 Escrow Agreement for the purpose of refunding the Series 2010 Bonds to be refunded, as described in the 2010 Escrow Agreement.

### SECTION 35.03 Establishment of Funds and Accounts.

(a) To ensure the proper application of such portion of proceeds from the sale of the Series 2017 Bonds, including to pay Costs of Issuance of the Series 2017 Bonds, there is hereby established within the Construction Fund the "Series 2017 Costs of Issuance Account", which shall be held by the Trustee, as Depositary therefor. Any of such funds that remain on deposit in the Series 2017 Costs of Issuance Account 180 days after the Closing Date shall be transferred and deposited in the Revenue Fund and the Series 2017 Costs of Issuance Account shall be closed.

### ARTICLE XXXVI

### TAX COVENANTS

### SECTION 36.01 2017 Rebate Account.

(A) The Trustee, as Depositary for the Revenue Fund, shall establish and maintain within the Rebate Fund a separate subaccount designated as the "2017 Rebate Account." There shall be deposited in the 2017 Rebate Account from amounts in the Operation and Maintenance Fund or other lawfully available moneys such amounts as are required to be deposited therein pursuant to the Tax Certificate delivered by the Authority in connection with the issuance of the Series 2017 Bonds. All money at any time deposited in the 2017 Rebate Account shall be held by the Trustee in trust, to the extent required to satisfy the Rebate Requirement for the Series 2017 Bonds (as defined in such Tax Certificate), for payment to the United States of America, and the United States of America is hereby granted a first lien on such money until such payment. All amounts required to be deposited into or on deposit in the 2017 Rebate Account shall be governed exclusively by this Section and by such Tax Certificate (which is incorporated herein by reference).

In the event that the amount in the 2017 Rebate Account exceeds the Rebate Requirement for the Series 2017 Bonds, upon the Request of the Authority, the Trustee shall transfer the excess from the 2017 Rebate Account to the Revenue Fund.

(B) Notwithstanding any provisions of this Section, if the Authority shall provide to the Trustee an opinion of Bond Counsel that any specified action required under this Section is no longer required or that some further or different action is required to maintain the exclusion from federal income tax of interest on any Series of Bonds, the Trustee and the Authority may conclusively rely on such opinion in complying with the requirements of this Section, and, notwithstanding Article IX of the Indenture, the covenants hereunder shall be deemed to be modified to that extent.

SECTION 36.02 Tax Covenants for Series 2017 Bonds. (A) The Authority intends that interest on the Series 2017 Bonds be excluded from gross income for federal income tax purposes, that the Series 2017 Bonds and the interest thereon be exempt from taxation by any state or political subdivision or the District of Columbia and that interest on the Series 2017 Bonds not be treated as a specific preference item for purposes of the federal individual and corporate alternative minimum taxes. The Authority reserves the right to determine the desired tax status of any additional Series of Bonds.

- (B) The Authority shall not use or permit the use of any proceeds of the Series 2017 Bonds or any other funds of the Authority, directly or indirectly, to acquire any securities or obligations, and shall not use or permit the use of any amounts received by the Authority in any manner, and shall not take or permit to be taken any other action or actions, which would cause any such Bond to be an "arbitrage bond" within the meaning of Section 148 of the Code or to be "federally guaranteed" within the meaning of Section 149(b) of the Code.
- (C) The Authority shall at all times do and perform all acts and things permitted by law and this Indenture which are necessary or desirable in order to assure that interest paid on the Series 2017 Bonds (or on any of them) shall be excluded from gross income for federal income tax purposes and that interest paid on the Series 2017 Bonds shall not be treated as a specific preference item for purposes of the federal individual and corporate alternative minimum taxes.

SECTION 36.03 <u>Continuing Disclosure</u>. The Authority hereby covenants and agrees to comply with the Series 2017 Continuing Disclosure Agreement, by and between the Authority and the Co-Trustee (the "Series 2017 Continuing Disclosure Agreement"), as it may from time to time hereafter be amended or supplemented. Notwithstanding any other provision of the Indenture, failure of the Authority to comply with the requirements of the Series 2017 Continuing Disclosure Agreement shall not be considered an Event of Default and the Co-Trustee shall have no right to accelerate amounts due under the Indenture as a result thereof; provided, however, that the Trustee and the Owners of not less than 25% in principal amount of the Outstanding Series 2017 Bonds may take such action as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Authority to comply with its obligations in this Section with respect to the Series 2017 Continuing Disclosure Agreement.

IN WITNESS WHEREOF, the GUAM WATERWORKS AUTHORITY has caused this Sixth Supplemental Indenture to be signed in its name by its duly authorized officers; and BANK OF GUAM and U.S. BANK NATIONAL ASSOCIATION, in token of their acceptance of the respective trusts created hereunder, and being hereby appointed by the GUAM WATERWORKS AUTHORITY to such trusts, have caused this Sixth Supplemental Indenture to be signed in their respective corporate names by one of their authorized officers, all as of the day and year first above written.

# By \_\_\_\_\_\_\_ Chairperson of the Board By \_\_\_\_\_\_ General Manager BANK OF GUAM, as Trustee By \_\_\_\_\_\_ Authorized Officer U.S. BANK NATIONAL ASSOCIATION, as Co-Trustee By \_\_\_\_\_\_ Authorized Officer

**GUAM WATERWORKS AUTHORITY** 

Sixth Supplemental Indenture – Guam Waterworks Authority

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ĕ	NATIONAL ASSOCIATION, hereby accepts and agrees are and Paying Agent under this Sixth Supplemental
	U.S. BANK NATIONAL ASSOCIATION, as Registral and Paying Agent
	ByAuthorized Officer

Sixth Supplemental Indenture – Guam Waterworks Authority

The undersigned BANK OF GUAM, hereby accepts and agrees to perform the duties and
obligations of Depositary for the Series 2017 Costs of Issuance Account under this Sixth Supplemental
Indenture.

indenture.	
	BANK OF GUAM, as Depositary
	ByAuthorized Officer
	Authorized Officer
Sixth Supplemental Indenture – Guam Waterwo	rks Authority

### **EXHIBIT A**

### FORM OF BOND

No. R		\$		
WATER AN	GUAM WATERWO D WASTEWATER SYST SERIE	EM REVENUE REFUNDIN	G BOND,	
INTEREST RATE	MATURITY DATE July 1, 20	<u>DATED DATE</u> [Closing Day], 2017	<u>CUSIP</u>	
Registered Owner:	CEDE AND CO.			
Principal Sum:		Dollars		

The GUAM WATERWORKS AUTHORITY, a duly organized public corporation of the government of Guam (herein called the "Authority"), for value received, hereby promises to pay (but only out of the Revenues pledged therefor as hereinafter mentioned) to the registered owner identified above or registered assigns, on the maturity date specified above (subject to any right of prior redemption hereinafter mentioned), the principal sum specified above in lawful money of the United States of America; and to pay interest thereon, in like lawful money and solely from said Revenues, from the Interest Payment Date next preceding the date of authentication of this Bond unless this Bond is authenticated as of a day during the period from the Record Date preceding any Interest Payment Date to the Interest Payment Date, inclusive, in which event it shall bear interest from such Interest Payment Date, or unless this Bond is authenticated on or before [June 15, 2017], in which event it shall bear interest from its date of delivery, until payment of such principal sum shall be discharged as provided in the indenture hereinafter mentioned, at the interest rate specified above per annum, payable on January 1 and July 1 in each year, commencing [July 1, 2017]; provided, however, that if, at the time of authentication of this Bond, interest is in default hereon, this Bond shall bear interest from the Interest Payment Date to which interest has previously been paid or made available for payment. The principal (or redemption price) hereof is payable upon surrender hereof at the Principal Office of U.S. Bank National Association (herein called the "Paying Agent") in Los Angeles, California (or such other office as may be subsequently designated), and the interest hereon is payable by check or draft mailed by first class mail to the person in whose name this Bond is registered at the close of business on the fifteenth day of the month immediately preceding an interest payment date, at such person's address as it appears on the bond registration books of U.S. Bank National Association (herein called the "Registrar"). Upon the written request of a registered owner of \$1,000,000 or more in aggregate principal amount of Series 2017 Bonds, payment of interest on and principal (including redemption price) of such Bonds will be made by wire transfer as provided in the Indenture; provided that any such principal payment shall nevertheless be subject to prior surrender of the Series 2017 Bonds with respect to which such payment is made.

This Bond is one of a duly authorized issue of bonds of the Authority designated as the "Guam Waterworks Authority Water and Wastewater System Revenue Bonds" (herein called the "Bonds"), unlimited in aggregate principal amount, except as otherwise provided in the laws of the United States of America and the government of Guam and in the Indenture hereinafter mentioned, which issue of Bonds consists or may consist of one or more Series of varying dates, maturities, interest rates, and redemption and other provisions, all issued or to be issued pursuant to Article 2, Chapter 14 of Title 12 of the Guam Code Annotated, as amended, and that certain Indenture, dated as of December 1, 2005 (as heretofore and hereafter supplemented and amended, the "Indenture"), by and between the

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Authority, Bank of Guam, as trustee (herein called the "Trustee") and U.S. Bank National Association, as co-trustee (herein called the "Co-Trustee"). This Bond is also one of a duly authorized series of Bonds additionally designated "Series 2017" (herein called the "Series 2017 Bonds"), in the aggregate principal amount of [\_\_\_\_\_\_\_\_] Dollars (\$[2017 PAR]), all issued under the provisions of the Indenture and the Sixth Supplemental Indenture, dated as of February 1, 2017, by and among the Authority, the Trustee and the Co-Trustee. Reference is hereby made to the Indenture (a copy of which is on file at said office of the Trustee), including all indentures supplemental thereto, for a description of the rights thereunder of the registered owners of the Bonds, of the nature and extent of the security and provisions for payment of the Bonds, of the rights, duties and immunities of the Trustee and other fiduciaries and of the rights and obligations of the Authority thereunder, to all the provisions of which Indenture the registered owner of this Bond, by acceptance hereof, assents and agrees.

The Bonds and the interest thereon (to the extent set forth in the Indenture) are payable solely from Revenues (as that term is defined in the Indenture) pledged as provided in the Indenture. Subject only to the provisions of the Indenture permitting the application thereof for or to the purposes and on the terms and conditions set forth therein, said Revenues are pledged under the Indenture to secure the payment of the principal of, premium, if any, and interest on the Bonds in accordance with their terms and the provisions of the Indenture and the payment of Credit Agreement Payments and Parity Payment Agreement Payments in accordance with their terms.

The Series 2017 Bonds are subject to redemption on any date prior to their respective stated maturities, as a whole, or in part so that the reduction in Annual Debt Service for the Series 2017 Bonds for each Bond Year after such redemption shall be as nearly proportional as practicable, from and to the extent of proceeds received by the Authority due to a governmental taking of the System or portions thereof by eminent domain proceedings, if such amounts are not used for additions, improvements or extensions to the System, under the circumstances and upon the conditions and terms set forth in the Indenture, at the greater of par or Amortized Value, plus accrued interest to the date fixed for redemption, without premium. "Amortized Value" means on any interest payment date, the then current value of the bond amortizing the original issue premium over the period ending on the first call date using the constant yield method.

[The Series 2017 Bonds maturing on July 1, [20\_] and July 1, [20\_] are subject to redemption prior to their stated maturity in part, by lot, on July 1 of each year from Mandatory Sinking Account Payments, commencing July 1, [20\_] and July 1, [20\_], respectively, at a redemption price equal to the Mandatory Sinking Account Payment amount for such date set forth in the Indenture, plus accrued interest thereon to the date fixed for redemption, without premium.]

Notice of any redemption, identifying the Bonds or portions thereof to be redeemed, shall be given by the Registrar not less than 30 nor more than 60 days before the date fixed for redemption by first class mail to each of the registered owners of Bonds designated for redemption at their addresses appearing on the bond registration books of the Registrar on the date the Bonds to be redeemed are selected. Receipt of such notice by such registered owners shall not be a condition precedent to such redemption.

If this Bond is called for redemption and payment is duly provided herefor as specified in the Indenture, interest shall cease to accrue hereon from and after the date fixed for redemption.

The Series 2017 Bonds are issuable only in fully registered form in denominations of \$5,000 or any integral multiple thereof. Subject to the limitations and upon payment of the charges, if any, provided in the Indenture, this Bond may be exchanged, at the Principal Office of the Registrar, in Los Angeles, California, or such other office as the Registrar shall designate, for a new fully registered

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Bond or Bonds, of the same Series, maturity and tenor and of any authorized denomination or denominations and for the aggregate principal amount of this Bond then remaining outstanding.

This Bond is transferable by the registered owner hereof, in person or by its attorney duly authorized in writing, at said office of the Registrar, but only in the manner, subject to the limitations and upon payment of the charges, if any, provided in the Indenture, and upon surrender and cancellation of this Bond. Upon such transfer a new registered Bond or Bonds, of the same Series and maturity and of any authorized denomination or denominations and for the same aggregate principal amount of this Bond then remaining outstanding, will be issued to the transferee in exchange therefor. The Registrar shall not be required to register the transfer of this Bond during the period established by the Trustee for the selection of Bonds for redemption or at any time after selection of this Bond for redemption.

The Authority, the Trustee, the Paying Agent and the Registrar may treat the registered owner hereof as the absolute owner hereof for all purposes, and neither the Authority, the Paying Agent nor the Registrar shall be affected by any notice to the contrary.

The Indenture and the rights and obligations of the Authority, the registered owners of the Bonds, the Trustee, the Registrar and other fiduciaries may be modified or amended at any time in the manner, to the extent, and upon the terms provided in the Indenture, provided that no such modification or amendment shall (a) extend the fixed maturities of the Bonds, or extend the time for making any Mandatory Sinking Account Payments, or reduce the rate of interest thereon, or extend the time of payment of interest, or reduce the amount of principal thereof, or reduce any premium payable on the redemption thereof, without the consent of the Owner of each Bond so affected, (b) reduce the aforesaid percentage of Owners of Bonds whose consent is required for the execution of any amendment or modification of this Indenture or permit the creation of any lien on the Revenues prior to or on a parity with the lien created by this Indenture or deprive the Owners of the Bonds of the lien created by this Indenture upon such Revenues, without in each case the consent of the Owners of all of the Bonds then Outstanding.

The Bonds are limited obligations of the Authority, payable solely from and secured by a pledge of the Revenues as provided in the Indenture. The Bonds are not a legal or equitable pledge, charge, lien or encumbrance upon any property of the Authority or upon any of its income, receipts or revenues except the Revenues pledged to the payment thereof as provided in the Indenture.

Neither the Government of Guam nor any political subdivision thereof is obligated to pay the principal of, Redemption Price, if applicable, or interest on the Bonds, except from Revenues, and neither the Authority, the Government of Guam nor any political subdivision thereof has pledged its faith or credit to the payment of the principal of, redemption price, if applicable, or interest on the Bonds.

This Bond shall not be entitled to any benefit under the Indenture, or become valid or obligatory for any purpose, until the certificate of authentication and registration hereon endorsed shall have been dated and signed by the Registrar.

It is hereby certified and recited that any and all conditions, things and acts required to exist, to have happened and to have been performed precedent to and in the issuance of this Bond exist, have happened and have been performed in due time, form and manner as required by the laws of the United States of America and the government of Guam, and that the amount of this Bond, together with all other indebtedness of the Authority, does not exceed any limit prescribed by such laws, and is not in excess of the amount of Bonds permitted to be issued under the Indenture.

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IN WITNESS WHEREOF, the GUAM WATERWORKS AUTHORITY has caused this Bond to be executed in its name and on its behalf by the manual or facsimile signature of the Chairman of the Consolidated Commission on Utilities and the Chief Financial Officer of the Authority, all as of the dated date first set forth above.

Ву_	Chairman of the Board of Directors
Ву_	
	Chief Financial Officer

GUAM WATERWORKS AUTHORITY

# [FORM OF] CERTIFICATE OF AUTHENTICATION AND REGISTRATION This is one of the Bonds described in the within-mentioned Indenture, which has been registered as of \_\_\_\_\_. U.S. BANK NATIONAL ASSOCIATION, as Registrar By \_\_\_\_\_

Authorized Officer

### [FORM OF] ASSIGNMENT

For value received the undersigned do(es) hereby sell, assign and transfer unto the within-mentioned registered Bond and hereby irrevocably constitute(s) and appoint(s) attorney, to transfer the same on the books of the Registrar with full power of substitution in the premises.

Dated:	
	NOTICE: The signature on this Assignment must correspond with the name as it appears on the face of the within Bond in every particular, without alteration or enlargement or any change whatsoever.
Signature Guaranteed:	Social Security Number, Taxpayer Identification Number or other Identifying Number of Assignee:
Notice: Signature must be guaranteed by a member firm of the New York Stock Exchange or a commercial bank or true company.	st
Note: Transfer fees must be paid to the Registin the within-mentioned Indenture.	strar in order to transfer or exchange this bond as provided

### **EXHIBIT D**

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### **NEW ISSUE - BOOK-ENTRY ONLY**

RATINGS: (See "RATINGS" herein)

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Authority, based upon an analysis of existing laws, regulations, rulings, and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the 2017 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the "Code"). In the further opinion of Bond Counsel, interest on the 2017 Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, nor is it included in adjusted current earnings when calculating corporate alternative minimum taxable income. Bond Counsel is also of the opinion that, under 48 U.S.C. Section 1423a, interest on the 2017 Bonds is exempt from taxation by the Government of Guam, or by any State or Territory or any political subdivision thereof or by the District of Columbia. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the 2017 Bonds. See "TAX MATTERS" herein.

### **GUAM WATERWORKS AUTHORITY**

# \$\_\_\_\_\_\* Water and Wastewater System Revenue Refunding Bonds

Dated: Date of Delivery Due: July 1, as shown on the inside front cover

The Guam Waterworks Authority Water and Wastewater System Revenue Refunding Bonds, Series 2017 (the "2017 Bonds") mature on the dates and in the amounts and will bear interest at the rates per annum listed on the inside front cover. Interest on the 2017 Bonds will be payable on January 1 and July 1 of each year, commencing [January 1, 2018].

The Series 2017 Bonds are subject to mandatory, optional and extraordinary optional redemption prior to maturity.

The issuance, sale and delivery of the 2017 Bonds have been approved by the Board of Directors of the Guam Economic Development Authority and by the Consolidated Commission on Utilities, the governing board of the Guam Waterworks Authority (the "Authority"). The issuance, terms and conditions of the 2017 Bonds have been approved by the Legislature of Guam. The 2017 Bonds are authorized to be issued pursuant to Chapter 14 of Title 12 of the Guam Code Annotated, as amended (the "Act"), and pursuant to an indenture, dated as of December 1, 2005 (the "General Indenture"), by and among the Authority, Bank of Guam as Trustee and as Depositary, and U.S. Bank National Association, as Co-Trustee and Paying Agent, as supplemented, including as supplemented by a sixth supplemental indenture to be dated as of [\_\_\_\_\_\_] 1, 2017 (the "Sixth Supplemental Indenture" and, together with the General Indenture and the previous supplemental indentures, the "Indenture"). [The terms of the Indenture and the amounts and terms of the 2017 Bonds have been approved by the Guam Public Utilities Commission.]

The Authority is issuing the 2017 Bonds to (i) refund all or a portion of the Authority's outstanding 2010 Bonds (as defined herein) and (ii) pay costs incurred in connection with the issuance of the 2017 Bonds.

The Bonds (as herein defined, including but not limited to the 2017 Bonds) are limited obligations of the Authority payable solely from and secured by a pledge of Revenues (as defined in the Indenture and more particularly described herein) consisting primarily of all gross income and revenue received by the Authority from the ownership or operation of the System, all as more fully described herein, subject to the provisions of the Indenture permitting the application of Revenues for or to the purposes (including payment of Operation and Maintenance Expenses) and exclusive of certain surcharges described herein.

The Bonds are not a legal or equitable pledge, charge, lien or encumbrance upon any property of the Authority or upon any of its income, receipts or revenues except the Revenues pledged to the payment thereof as provided in the Indenture. Neither the Government of Guam (the "Government") nor any political subdivision thereof is obligated to pay the principal of, Redemption Price of, if applicable, or the interest on the Bonds, except from such Revenues, and neither the Authority, the Government nor any political subdivision thereof has pledged its faith or credit to the payment of the principal of, Redemption Price of, if applicable, or the interest on the 2017 Bonds.

The 2017 Bonds will be issued as fully registered bonds and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository of the 2017 Bonds. Individual purchases of the 2017 Bonds will be made in book-entry form only. The 2017 Bonds will be issued only in denominations of \$5,000 or any integral multiple thereof. Payments of principal of, Redemption Price, if applicable, and interest on the 2017 Bonds are to be made to purchasers by DTC through DTC participants. See APPENDIX F - "BOOK-ENTRY ONLY SYSTEM." Purchasers will not receive physical delivery of 2017 Bonds purchased by them.

Investment in the 2017 Bonds involves risks which may not be appropriate for certain investors. Therefore, only persons with substantial financial resources who understand the risks of investment in the 2017 Bonds should consider such an investment. See the section in this Official Statement entitled "CERTAIN INVESTMENT CONSIDERATIONS" for a discussion of certain factors that should be considered, in addition to the other matters set forth herein, in evaluating the investment quality of the 2017 Bonds. This cover page contains certain information for quick reference only. It is not a summary of this issue. Investors must read the entire Official Statement to obtain information essential to making an informed investment decision. Capitalized terms not defined on this cover page are defined inside.

Citigroup	Rarelave
DTC book-entry system on or about	
& Sutcliffe LLP as disclosure counsel to the Authority. It is expected that	at the 2017 Bonds in book-entry form will be available for delivery through the
counsel for the Authority, and for the Underwriters by their counsel, [	]. Certain legal matters will be passed upon by Orrick, Herrington
Sutcliffe LLP, San Francisco, California, Bond Counsel to the Authority.	Certain legal matters will be passed upon for the Authority by [Kelly Clark]
The 2017 Bonds are offered when, as and it issued and received by	the Underwriters, subject to the approval of legality by Orrick, Herrington $\delta$

	Citigroup	Barclays
, 2017		

Preliminary, subject to change.

### MATURITY SCHEDULE

# GUAM WATERWORKS AUTHORITY Water and Wastewater System Revenue Bonds Series 2017

### S\_\_\_\_\* Serial Bonds

Due (July 1)*	Amount*	Interest Rate	Yield	CUSIP Number (40065F) <sup>†</sup>
2020	\$	%	%	
2021				
2022				
2023				
2024				
2025				
2026				
2027				
2028				
2029				
2030				
2031				

### \$\_\_\_\_\* Term Bonds

\$ 	,, Priced to Yield _	%,* CUSIP No	Ť
\$ % 2017 Term Bonds due	_,, Priced to Yield _	%,* CUSIP No.	†

<sup>\*</sup> Preliminary, subject to change.

<sup>&</sup>lt;sup>†</sup> Copyright 2017, American Bankers Association. CUSIP® is a registered trademark of the American Bankers Association. The CUSIP data herein are provided by CUSIP Global Services, managed on behalf of the American Bankers Association by S&P Capital IQ. The CUSIP numbers are not intended to create a database and do not serve in any way as a substitute for CUSIP service. CUSIP numbers have been assigned by an independent company not affiliated with either the Authority or GEDA and are provided solely for convenience and reference. The CUSIP numbers for a specific maturity or maturities are subject to change after the issuance of the 2017 Bonds. None of the Authority, GEDA or the Underwriters takes responsibility for the accuracy of the CUSIP numbers, and no representation is made as to their correctness on the applicable 2017 Bond certificates or in this Official Statement.

### CONSOLIDATED COMMISSION ON UTILITIES

Joseph T. Duenas Chairman Francis Santos Vice Chairman

George Bamba Secretary Pedro S.N. Guerrero Treasurer

Simon A. Sanchez II

### **GUAM WATERWORKS AUTHORITY**

Miguel Bordallo, P.E. General Manager of the Authority

Greg P. Cruz Chief Financial Officer Thomas F. Cruz, P.E. Chief Engineer

Paul J. Kemp Assistant General Manager, Compliance and Safety

### **GOVERNMENT OF GUAM**

Edward J. B. Calvo Governor Raymond S. Tenorio Lieutenant Governor

### GUAM ECONOMIC DEVELOPMENT AUTHORITY

Jay Rojas Administrator Mana Silva Taijeron Deputy Administrator Christina Garcia Manager, Public Finance Division

### SPECIAL SERVICES

Bond Counsel and Disclosure Counsel Orrick, Herrington & Sutcliffe LLP San Francisco, California Trustee and Depositary Bank of Guam Hagåtña, Guam

Independent Auditors
Deloitte & Touche LLP

Co-Trustee and Paying Agent
U.S. Bank National Association
Los Angeles, California

Dissemination Agent
Digital Assurance Certification, L.L.C.
Winter Park, Florida

Verification Agent

The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their respective responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

No dealer, broker, salesperson or other person has been authorized by the Authority or the Underwriters to give any information or to make any representations other than those contained herein and, if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the 2017 Bonds by any person in any jurisdiction in which it is unlawful for such person to make such an offer, solicitation or sale.

This Official Statement is not to be construed as a contract with the purchasers of the 2017 Bonds. Statements contained in this Official Statement that involve estimates, forecasts or matters of opinion, whether or not expressly so described herein, are intended solely as such and are not to be construed as representations of fact.

CERTAIN STATEMENTS CONTAINED IN THIS OFFICIAL STATEMENT ARE NOT INTENDED TO REFLECT HISTORICAL FACTS BUT ARE ESTIMATES AND "FORWARD-LOOKING STATEMENTS." NO ASSURANCE CAN BE GIVEN THAT THE FUTURE RESULTS DISCUSSED HEREIN WILL BE ACHIEVED, AND ACTUAL RESULTS MAY DIFFER MATERIALLY FROM THE EXPECTATIONS OR FORECASTS DESCRIBED HEREIN. IN THIS RESPECT, THE WORDS "ESTIMATE," "PROJECT," "FORECAST," "ANTICIPATE," "EXPECT," "ASSUME," "INTEND," "BELIEVE" AND SIMILAR EXPRESSIONS ARE INTENDED TO IDENTIFY FORWARD-LOOKING STATEMENTS. ALL PROJECTIONS, FORECASTS, ASSUMPTIONS, EXPRESSIONS OF OPINION, ESTIMATES AND OTHER FORWARD-LOOKING STATEMENTS ARE EXPRESSLY QUALIFIED IN THEIR ENTIRETY BY THE CAUTIONARY STATEMENTS SET FORTH IN THIS OFFICIAL STATEMENT. THE AUTHORITY DOES NOT PLAN TO ISSUE ANY UPDATES OR REVISIONS TO SUCH FORWARD-LOOKING STATEMENTS OR WHEN ITS EXPECTATIONS OR EVENTS, CONDITIONS OR CIRCUMSTANCES ON WHICH SUCH STATEMENTS ARE BASED DO OR DO NOT OCCUR.

The information set forth in this Official Statement has been furnished by the Authority and other sources which are believed to be reliable, but it is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation by, the Underwriters. The information and expressions of opinion stated herein are subject to change without notice and neither delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the information or opinions stated herein or in the affairs of the Authority since the date hereof.

THE 2017 BONDS HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, IN RELIANCE UPON AN EXEMPTION CONTAINED IN SUCH ACT. THE 2017 BONDS HAVE NOT BEEN REGISTERED OR QUALIFIED UNDER THE SECURITIES LAWS OF ANY STATE.

IN CONNECTION WITH THIS OFFERING THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE 2017 BONDS OFFERED HEREBY AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

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### **GUAM WATERWORKS AUTHORITY**

\$\_\_\_\_\_ \*
Water and Wastewater System Revenue Refunding Bonds
Series 2017

### INTRODUCTION

The purpose of this Official Statement, which includes the cover page, the inside cover page, the table of contents and appendices hereto (collectively, the "Official Statement"), is to provide information in connection with the offering by the Guam Waterworks Authority (the "Authority") of the \$\_\_\_\_\_\* Guam Waterworks Authority Water and Wastewater System Revenue Refunding Bonds, Series 2017 (the "2017 Bonds").

This Introduction is not a summary of this Official Statement, but is only a brief description of, and is qualified by, more complete and detailed information contained in this Official Statement. The Introduction should not be relied upon to provide all of the information necessary to make an informed decision about purchasing the 2017 Bonds. A full review should be made of the entire Official Statement. The offering of 2017 Bonds to potential investors is made only by means of the entire Official Statement.

Capitalized terms used herein that are not otherwise defined shall have the meanings set forth in APPENDIX C —"SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE."

### The 2017 Bonds

The Authority is issuing the 2017 Bonds (i) to refund all or a portion of the Authority's outstanding Guam Waterworks Authority Water and Wastewater Revenue Bonds, Series 2010 (the "2010 Bonds") and (ii) to pay costs of issuing the 2017 Bonds. The issuance of the 2017 Bonds is subject to market conditions. If in the opinion of Authority management, sufficient debt service savings may not be achieved, some or all of the 2017 Bonds may not be offered or sold. See "PLAN OF FINANCE."

The 2017 Bonds are authorized to be issued pursuant to the Act and pursuant to an indenture, dated as of
December 1, 2005 (the "General Indenture"), as supplemented, including as supplemented by a sixth supplemental
indenture, to be dated as of, 2017 (the "Sixth Supplemental Indenture" and together with the General
Indenture and the prior supplemental indentures, the "Indenture"), each by and among the Authority, Bank of Guam,
as trustee (the "Trustee") and Depositary for the Revenue Fund, and U.S. Bank National Association, as co-trustee
(the "Co-Trustee"). The bonds previously issued by the Authority pursuant to the Indenture are referred to
collectively herein as the "Prior Bonds," which as of January 1, 2017 are outstanding in the aggregate principal
amount of \$ The Prior Bonds and the 2017 Bonds, together with any additional bonds that may be
issued pursuant to, and outstanding at any given time under, the Indenture, are herein referred to as "Bonds." After
giving effect to the issuance of the 2017 Bonds and the defeasance of the refunded 2010 Bonds, the Bonds will be
outstanding in the aggregate principal amount of \$*

**[Confirm]**The Consolidated Commission on Utilities (the "CCU") has approved the issuance, sale and delivery of the 2017 Bonds. The Board of Directors of the Guam Economic Development Authority ("GEDA") has approved the issuance and sale of the 2017 Bonds. The Legislature of Guam has approved the issuance, terms and conditions of the 2017 Bonds. The terms of the Indenture and the aggregate principal amount and terms of the 2017 Bonds have been approved by the Guam Public Utilities Commission (the "PUC").

See "PLAN OF FINANCE—Authorization" and "—Purposes of the 2017 Bonds."

\_\_\_

<sup>\*</sup> Preliminary, subject to change.

### Security and Sources of Payment for the 2017 Bonds

The Bonds, including the 2017 Bonds, are limited obligations of the Authority payable solely from and secured solely by a pledge of Revenues (as defined in the Indenture and described herein) consisting primarily of all gross income and revenue received by the Authority from the ownership or operation of the Authority's water and wastewater systems (collectively, the "System"), subject to the provisions of the Indenture permitting the application of Revenues for or to the purposes (including payment of Operation and Maintenance Expenses) and on the terms and conditions set forth in the Indenture. The Bonds are not a legal or equitable pledge, charge, lien or encumbrance upon any property of the Authority or upon any of its income, receipts or revenues except the Revenues pledged to the payment thereof as in the Indenture.

The Indenture prohibits the issuance of any bonds or obligations payable from Revenues or secured by a pledge, lien or charge upon Revenues superior to the Bonds, and permits issuance of obligations on a parity with the Bonds only in accordance with the Indenture. The Indenture does not prohibit the incurrence of indebtedness secured by subordinate liens on Revenues.

Neither the Government of Guam (the "Government") nor any political subdivision thereof is obligated to pay the principal of, redemption price, if applicable, or interest on the Bonds, except from such Revenues, and neither the Authority, the Government nor any political subdivision thereof has pledged its faith or credit to the payment of the principal of, redemption price, if applicable, or interest on the Bonds.

See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Pledge of Revenues" and "– Allocation of Revenues" and "REGULATORY ENVIRONMENT – Regulation of Ratemaking."

### The Authority and the System

### [TO BE UPDATED]

In 2002 pursuant to Public Law 26-76, the Authority was converted from a government agency to a Guam public corporation organized and existing under Chapter 14 of Title 12 of the Guam Annotated Code, as amended (the "Act"). The Authority is authorized to operate and maintain the System for the island of Guam. During Fiscal Year 2016, the Authority served an average of [\_\_\_\_] water customers and an average of [\_\_\_\_] wastewater customers.

The Authority is governed by the CCU, which acts as the governing board of the Authority and the Guam Power Authority ("GPA"). The CCU was created in 2002 and consists of five elected members. The CCU makes decisions regarding policies, management, budgeting and financing of the Authority's operations. Certain actions, however, such as issuing bonds for financing utility capital projects, still require the approval of the Legislature of Guam and the PUC. In addition, ratemaking by the CCU is subject to the approval of the PUC, as the regulatory ratemaking body. The Authority may not enter into any contractual agreements or obligations which could increase rates and charges without the prior written approval of the PUC.

The Authority's goals are directed towards providing more efficient and reliable service to its customers and operating as a self-supporting utility while meeting regulatory requirements. The Authority is subject to federal and Guam regulations governing water supply and wastewater treatment. The drinking water standards promulgated in the federal Safe Drinking Water Act, as amended (the "SDWA"), are the primary requirements for water supply. Wastewater treatment and disposal must comply with the water quality standards in the federal Clean Water Act, as amended (the "CWA"). Historically, the Authority had experienced difficulty in complying with SDWA and CWA regulations. The Authority's previous failure to meet all of the SDWA and CWA standards resulted in the United States Environmental Protection Agency (the "USEPA") bringing suit against the Authority in the United States District Court of Guam (the "District Court"). On June 5, 2003, the Authority and the USEPA entered into a Stipulated Order for Preliminary Relief, which was subsequently amended in 2004 and in 2006 (collectively, the "2003 Stipulated Order"). The 2003 Stipulated Order required the Authority to make specified improvements to the System and to undertake certain planning measures by specific dates. The Authority did not meet all of the deadlines in the 2003 Stipulated Order, resulting in the Authority paying fines totaling \$389,750.

In 2010, the USEPA requested that the District Court order the Authority to address the then-remaining items in the 2003 Stipulated Order, as well as certain additional actions or improvements. On November 10, 2011, the District Court issued an Order for Preliminary Relief (the "2011 Court Order") establishing new deadlines for the unfinished projects. The 2011 Court Order superseded the 2003 Stipulated Order and all prior orders. The Authority has made compliance with the 2011 Court Order a top priority and has, by and large, complied with the timelines set forth in the 2011 Court Order. [As of January 6, 2016], for the [88] projects required under the 2011 Court Order, [61] projects were completed on time, [3] were completed after the required deadlines and [24] projects remain on-going or are pending, including 7 projects for which the required deadlines were missed. The Authority has not been fined for any missed deadlines since March 2010.

In November 2012, the USEPA issued to the Authority a notice of Findings of Significant Deficiencies mentioned below under the SDWA identifying several deficiencies in the Authority's water system, and in May 2013, the USEPA issued to the Authority under the CWA the Request for Information mentioned below identifying several findings in respect of the Authority's wastewater system. Ten of the 40 items identified in the Findings of Significant Deficiencies and 24 of the 88 items identified in the Request for Information are already being addressed under the 2011 Court Order. Of the remaining items, the Authority has addressed 26 of the 40 items identified in the Findings of Significant Deficiencies and 37 of the 88 findings referenced in the Request for Information and is continuing to work to address other items.

To help meet its goals of providing more efficient and reliable service to its customers and operating as a self-supporting utility while meeting regulatory requirements, including those specified in the 2011 Court Order and in the Findings of Significant Deficiencies and the Request for Information, the Authority has developed a six-year capital improvement program (the "Capital Improvement Program" or the "CIP") focused on rehabilitation and upgrade of the System. The total estimated capital improvement need for Fiscal Years [2015-2020] is approximately [\$404.1] million.

See "THE AUTHORITY," "REGULATORY ENVIRONMENT," "THE SYSTEM" and "FUTURE SYSTEM CAPITAL REQUIREMENTS – Capital Improvement Program."

### **Investment Considerations**

There are important investment considerations and risks associated with the purchase of the 2017 Bonds. See "CERTAIN INVESTMENT CONSIDERATIONS" for a discussion of some of these considerations and risks. Any one or more of the considerations and risks discussed, and others, could lead to a decrease in the market value and/or the liquidity of the 2017 Bonds. Potential purchasers of the 2017 Bonds are advised to review this Official Statement carefully.

### **Continuing Disclosure**

The Authority will covenant for the benefit of the holders and beneficial owners of the 2017 Bonds to provide annually certain financial information and operating data and to provide notice of certain enumerated events to assist the Underwriters in complying with the Securities and Exchange Commission's Rule 15c2-12 under the Securities Exchange Act of 1934, as amended ("Rule 15c2-12"). See "CONTINUING DISCLOSURE" below and the proposed form of Continuing Disclosure Agreement included herein as APPENDIX E.

### Forward-Looking Statements

Certain statements included or incorporated by reference in this Official Statement constitute "forward-looking statements." Such statements are generally identifiable by the terminology used such as "plan," "expect," "estimate," "budget," "forecast," "project" or other similar words. Such forward-looking statements include, but are not limited to, certain statements contained in the information in the forepart of this Official Statement under the headings "CERTAIN INVESTMENT CONSIDERATIONS," "THE AUTHORITY," "THE SYSTEM," "FUTURE SYSTEM CAPITAL REQUIREMENTS" and "HISTORICAL AND PROJECTED OPERATING RESULTS."

The achievement of certain results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. The Authority does not plan to issue any updates or revisions to those forward-looking statements if or when its expectations, or events, conditions or circumstances on which such statements are based, change.

### Miscellaneous

Brief descriptions of the 2017 Bonds, the Authority and Guam are provided below. Such descriptions do not purport to be comprehensive or definitive. All references to the 2017 Bonds and the Indenture are qualified in their entirety by reference to the forms thereof.

The information herein is subject to change without notice, and neither the delivery of this Official Statement nor any sale made with respect hereto shall, under any circumstances, create any implication that there has been no change in the affairs of the Authority or the System since the date hereof.

This Official Statement is not to be construed as a contract or agreement between the Authority and the purchasers or owners of any of the 2017 Bonds.

### PLAN OF FINANCE

### Authorization

The 2017 Bonds are authorized to be issued pursuant to the Act and are being issued pursuant to the
Indenture. The CCU has approved the issuance, sale and delivery of the 2017 Bonds pursuant to Resolution No.
The Board of Directors of GEDA has approved the issuance and sale of the 2017 Bonds in Resolution
No Pursuant to Public Law No. 28-71, as amended by Public Law Nos. 31-1458, 32-069 and
[], the Legislature of Guam has approved the issuance, terms and conditions of the 2017 Bonds. The terms
of the Indenture and the aggregate principal amount and terms of the 2017 Bonds have been approved by the PUC
pursuant to Docket No. [].

### Refunding Plan\*

The 2017 Bonds are being issued by the Authority (i) to refund all or a portion of the Authority's outstanding 2010 Bonds, as shown in the table below and (ii) to pay costs of issuing the 2017 Bonds. The issuance of the 2017 Bonds is subject to market conditions. If in the opinion of Authority management, sufficient debt service savings may not be achieved, some or all of the 2017 Bonds may not be offered or sold. [may also refund other Prior Bonds?]

<sup>\*</sup> Preliminary, subject to change.

Table 1 2010 Bond Refunding Candidates

Refunded			Retirement or Redemption	
Maturity (July 1)	Principal Amount	Retirement or Redemption Date	Price (% of Principal)	CUSIP Number
2018	\$1,725,000	July 1, 2018	100%	40065FAN4
2019	1,800,000	July 1, 2019	100	40065FAP9
2020	1,895,000	July 1, 2020	100	40065FAQ7
2025	11,030,000	July 1, 2020	100	40065FAR5
2030	14,325,000	July 1, 2020	100	40065FAS3
2040	83,750,000	July 1, 2020	100	40065FAT1

[To be updated] A portion of the proceeds of the 2017 Bonds, together with other available funds of the Authority, are to be deposited in an escrow fund (the "Escrow Fund") to be created and established by the Co-Trustee, in its capacity as Paying Agent for the refunded 2010 Bonds and as escrow agent (the "Escrow Agent"), pursuant to an escrow agreement (the "Escrow Agreement"). The amounts so deposited in the Escrow Fund will either be held as cash, uninvested, in an amount sufficient, or be used to purchase certain securities (the "Escrow Securities") in accordance with the requirements of the indenture for the 2010 Bonds (the "2010 Indenture"), the principal of and interest on which (together with any initial cash deposit), will be sufficient, to pay when due the scheduled principal and redemption price of the refunded 2010 Bonds and interest thereon to become due on or prior to \_\_\_\_\_\_\_, 20\_\_\_ (the "Redemption Date"), including retirement in part by mandatory sinking fund installment. Upon such deposit in the Escrow Fund in accordance with the provisions of the Escrow Agreement and satisfaction of certain other conditions, all liability of the Authority in respect of the refunded 2010 Bonds will cease, terminate and be completely discharged and the owners thereof shall thereafter be entitled only to payment out of the Escrow Fund.

The mathematical accuracy of certain computations relating to the adequacy of the cash and/or Escrow Securities and the interest thereon together with other available moneys to pay the scheduled principal, redemption price and interest on the refunded 2010 Bonds on and prior to the Redemption Date thereof will be verified at the time of delivery of the 2017 Bonds by [VERIFICATION AGENT]. See "VERIFICATION OF ESCROW."

### ESTIMATED SOURCES AND USES OF FUNDS

The proceeds of the 2017 Bonds are expected to be applied as shown below:

	Series 2017 Bonds
Sources:	
Principal Amount of 2017 Bonds	\$
[Net] Original Issue Premium/(Discount)	
[Funds Released from Bond Reserve Fund]	
Total Sources	\$
Uses:	
Deposit to Escrow Fund	\$
Costs of Issuance <sup>(1)</sup>	
Total Uses	\$

Includes Underwriters' discount, Trustee and Co-Trustee fees, Escrow Agent fees, verification fees, legal fees and expenses, rating agency fees, printing costs and other miscellaneous costs of issuance.

### THE 2017 BONDS

### General

When issued, the 2017 Bonds will be dated their date of delivery and will bear interest at the rates per annum and mature, subject to prior redemption, on the dates and in the principal amounts set forth on the inside cover page of this Official Statement. Interest on the 2017 Bonds will be payable on January 1 and July 1 of each year, commencing [January 1, 2018] (each an "Interest Payment Date"). Interest will accrue on the 2017 Bonds on the basis of a 360-day year of twelve 30-day months. Each 2017 Bond will bear interest from the Interest Payment Date next preceding the date of authentication thereof, except that: (1) 2017 Bonds authenticated during the period from the Record Date immediately preceding an Interest Payment Date to such Interest Payment Date, inclusive, will bear interest from such Interest Payment Date; and (2) 2017 Bonds authenticated on or prior to the Record Date for the first Interest Payment Date for the 2017 Bonds will bear interest from their date of delivery; provided, however, that if interest on the 2017 Bonds then Outstanding shall be in default at the time of authentication of any 2017 Bond, such 2017 Bond will bear interest from the Interest Payment Date to which interest has previously been paid or made available for payment on the 2017 Bonds then Outstanding. The 2017 Bonds of each series will be issued in denominations of \$5,000 and integral multiples thereof.

The 2017 Bonds when issued will be registered in the name of Cede & Co., as registered owner and nominee of The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository for the 2017 Bonds. Individual purchases may be made only in book-entry form, and purchasers will not receive certificates representing their interest in the 2017 Bonds purchased. Except as described below under "TAX MATTERS," so long as Cede & Co. is the registered owner of the 2017 Bonds, as nominee of DTC, references herein to "Bondholders" or to "registered owners" of the 2017 Bonds mean Cede & Co. and not the Beneficial Owners of the 2017 Bonds. In this Official Statement, the term "Beneficial Owner" means the person for whom a DTC participant acquires an interest in the 2017 Bonds.

So long as DTC, or its nominee Cede & Co. (or such other nominee as an authorized officer of DTC may request), is the registered owner of all 2017 Bonds, all payments of principal of, Redemption Price, if applicable, and interest on the 2017 Bonds are to be made directly to DTC, which, in turn, is to remit such amounts to the Direct and Indirect Participants for subsequent distribution to the Beneficial Owners of the 2017 Bonds. See APPENDIX F — "DTC AND ITS BOOK-ENTRY ONLY SYSTEM."

### Redemption of the 2017 Bonds\*

Optional Redemption. The Series 2017 Bonds maturing on or after July 1, 2027 are subject to redemption prior to their respective stated maturities, at the option of the Authority, from any source of available moneys, on any date on or after July 1, 2026, as a whole, or in part by such maturities or portions of maturities as shall be determined by the Authority (or by lot within a maturity in the absence of such a determination), at a redemption price equal to the principal amount of each Series 2017 Bond called for redemption plus interest accrued to the date fixed for redemption, without premium. Mandatory Sinking Account Redemption. The Series 2017 Bonds maturing on \_ subject to redemption prior to their stated maturity in part, by lot, on July 1 of each year from Mandatory Sinking Account Payments, commencing \_\_\_\_\_, at a redemption price equal to their principal amount, plus accrued interest thereon to the date fixed for redemption, without premium, on the dates and in the amounts, as set forth Term Bond Date Amount † Maturity \_\_\_, \_\_\_ are subject to redemption prior to their stated maturity The Series 2017 Bonds maturing on in part, by lot, on July 1 of each year from Mandatory Sinking Account Payments, commencing \_\_\_\_\_\_\_, \_\_\_ through \_\_\_\_\_, and on \_\_\_ \_\_\_\_\_, at a redemption price equal to their principal amount, plus accrued interest thereon to the date fixed for redemption, without premium, on the dates and in the amounts, as set forth below: Series 2017 Term Bond Date **Amount** 

**Extraordinary Optional Redemption of the 2017 Bonds.** The 2017 Bonds are subject to redemption on any date prior to their respective stated maturities, as a whole, or in part so that the reduction in Annual Debt Service for the 2017 Bonds for each Bond Year after such redemption shall be as nearly proportional as practicable, from and to the extent of proceeds received by the Authority due to a governmental taking of the System or portions thereof by eminent domain proceedings, if such amounts are not used for additions, improvements or extensions to the System, under the circumstances and upon the conditions and terms set forth in the Indenture, at the greater of par or Amortized Value (in the case of 2017 Bonds, if any, issued at an original issue premium), plus accrued interest to the date fixed for redemption, without premium. "Amortized Value" means on any Interest Payment Date,

† Maturity

<sup>•</sup> Preliminary, subject to change.

the then current value of the 2017 Bond, amortizing the original issue premium over the period ending on the first call date using the constant yield method.

**Selection of 2017 Bonds for Redemption.** If less than all of the 2017 Bonds of any maturity are to be redeemed at any one time, the 2017 Bonds or portions thereof to be redeemed shall be selected by the Authority or, in the absence of such a selection by the Authority, by the Registrar by lot in such manner that the Registrar may determine.

Notice of Redemption. Notice of redemption (except as otherwise provided in the Indenture) is required to be given, not less than 30 nor more than 60 days before the date fixed for redemption, by first class mail to each of the registered owners of 2017 Bonds designated for redemption at their addresses appearing on the Bond registration books of the Registrar on the date the 2017 Bonds to be redeemed are selected. Each notice of redemption is required to state the redemption date, the place or places of redemption, the Series and maturities to be redeemed, and, if less than all of any such maturity, the numbers of the 2017 Bonds of such maturity to be redeemed and, in the case of 2017 Bonds to be redeemed in part only, the respective portions of the principal amount thereof to be redeemed, and is required also to state that on said date there will become due and payable on each of said 2017 Bonds the Redemption Price thereof or of said specified portion of the principal thereof in the case of a 2017 Bond to be redeemed in part only, together with interest accrued thereon to the redemption date, and that from and after such redemption date interest thereon shall cease to accrue, and is also to require that such 2017 Bonds be then surrendered, with a written instrument of transfer duly executed by the registered owner thereof or by such registered owner's attorney duly authorized in writing. No defect in or failure to give such mailed notice of redemption shall affect the validity of proceedings for the redemption of such 2017 Bonds. Each notice of redemption shall also state the CUSIP number, date of issue and interest rate on each 2017 Bond, or portion thereof. to be redeemed, and shall include the redemption agent name and address; provided, however, that failure to include any of such information in any redemption notice, or any inaccuracy in any such information, shall not affect the sufficiency of the proceedings for redemption of any 2017 Bonds.

The Authority may, at its option, prior to the date fixed for redemption in any notice of redemption, rescind and cancel such notice of redemption.

### Trustee, Co-Trustee, Registrar and Paying Agent

The Bank of Guam has been appointed to act as the Trustee for the Bonds, including the 2017 Bonds, and U.S. Bank National Association has been appointed to act as Co-Trustee, registrar (the "Registrar") and paying agent (the "Paying Agent") for the 2017 Bonds.

### **Book-Entry System**

The 2017 Bonds will be delivered in fully registered form only, and when delivered will be registered in the name of Cede & Co., as nominee of DTC. DTC acts as securities depository for the 2017 Bonds. Ownership interests in the 2017 Bonds may be purchased in book-entry only form, in the denominations set forth above. The Indenture provides that, so long as DTC acts as securities depository for the 2017 Bonds, the Authority, the Trustee, the Co-Trustee, the Registrar and the Paying Agent may treat DTC as the absolute owner of such 2017 Bonds for all purposes and that none of the Authority, the Trustee, the Co-Trustee, the Registrar and the Paying Agent shall have any liability with respect to (i) the accuracy of the records of DTC or any Participant with respect to any beneficial ownership interest in the 2017 Bonds, (ii) the delivery to any Participant, any Beneficial Owner or any other person, other than DTC, of any notice with respect to the 2017 Bonds, (iii) the payment to any Participant, any Beneficial Owner or any other person, other than DTC, of any amount with respect to principal or redemption price of or interest on the 2017 Bonds, (iv) the selection by DTC or any Participant of any person to receive payment in the event of a partial redemption of the 2017 Bonds or (v) any consent given or other action taken by DTC as Holder of the 2017 Bonds. See APPENDIX F — "DTC AND ITS BOOK-ENTRY ONLY SYSTEM."

### DEBT SERVICE SCHEDULE

Table 2 sets forth the debt service schedule for all Bonds to be Outstanding after giving effect to the issuance of the 2017 Bonds.

### Table 2 Debt Service Schedule

Series 2017 Bonds Fiscal Year Total **Ending** September 30,  $Prior\ Bonds^{(1)}$ **Debt Service Principal** Interest 

Total(2)

### SECURITY AND SOURCES OF PAYMENT FOR THE BONDS

### Pledge of Revenues

The Bonds are limited obligations of the Authority and are payable solely from, and secured solely by a lien on and pledge of, the Revenues. Pursuant to the Indenture, the Authority has pledged all of the Revenues, subject only to the provisions of the Indenture permitting the application thereof for or to the purposes and on the terms and conditions set forth in the Indenture, to secure the payment of the principal of, premium, if any, and interest on the Bonds in accordance with their terms and the provisions of the Indenture and the payment of Credit

<sup>[</sup>Includes/excludes] the 2010 Bonds to be refunded in whole or in part with proceeds of the 2017 Bonds.

<sup>(2)</sup> Totals reflect rounding.

Agreement Payments and Parity Payment Agreement Payments in accordance with their terms. The Indenture provides that such pledge constitutes a lien on and security interest in the Revenues and will attach, be perfected and be valid and binding from and after delivery of the first Series of Bonds issued under the General Indenture, without any physical delivery of such Revenues or further act.

As defined in the Indenture, "Revenues" include all gross income and other amounts received or receivable by the Authority as revenues of any kind from the ownership or operation of any part of the System, including all rates, fees and charges (including ground water, surface water and treated water charges and all wastewater service charges), received by the Authority for providing water and wastewater services (but excluding development charges and assessments and hook-up fees and other special charges such as penalties and fines), all Payment Agreement Receipts, and all proceeds of insurance or grants covering business interruption loss (and related losses and expenses) relating to the System, and all other income and revenue howsoever derived by the Authority from the ownership or operation of, or arising from, the System, together with all interest, profits or other income derived from the investment of amounts in the Revenue Fund, but not including: (1) amounts received as insurance proceeds (except as described above) or from the sale, transfer or other disposition of, or upon the taking by or under the threat of eminent domain of, all or any part of the System (which moneys shall be received and disposed of pursuant to the provisions of the Indenture); (2) proceeds from any securities issued by the Authority or proceeds from loans obtained by the Authority; (3) the proceeds of any court or arbitration award or settlement in lieu thereof received by the Authority; (4) amounts received by the Authority as gifts or as grants (except as described above), whether restricted or unrestricted; and (5) other amounts (except as described above), the use of which is restricted by the donor or grantor.

The Authority has covenanted in the Indenture that, so long as any Bonds are Outstanding, the Authority will not issue any bonds or obligations payable from Revenues or secured by a pledge, lien or charge upon Revenues prior to or on a parity with the Bonds, any Parity Agreement Payments and any Credit Agreement Payments (other than Additional Bonds, Parity Agreement Payments and Credit Agreement Payments).

The ability of the Authority to pay principal of and interest on the Bonds will depend upon the receipt by the Authority of sufficient Revenues. If Revenues and amounts available in the funds and accounts under the Indenture are insufficient to pay the principal of and interest on the Bonds, no other source of repayment exists. The Authority has no taxing power.

### **Allocation of Revenues**

The Indenture requires the Authority to deposit all Revenues upon receipt in the Revenue Fund held by the Depositary. The Indenture provides that on or before the fifth day of each calendar month, the Depositary is required to transfer from the Revenue Fund (to the Trustee as necessary) for deposit into one or more of the following respective separate funds, the following amounts in the following order of priority, the requirements of each such fund or account (including the making up of any deficiencies in any such fund or account resulting from lack of Revenues sufficient to make any earlier required deposit) at the time of deposit to be satisfied, and the results of such satisfaction being taken into account, before any transfer is made to any fund subordinate in priority:

- (A) into the Operation and Maintenance Fund, an amount equal to the amount of Operation and Maintenance Expenses budgeted by the Authority, pursuant to the budget, as revised, filed in accordance with the Indenture, to be paid from Revenues during the next succeeding calendar month (including any amount to be held as a reserve for transfer to the Rebate Fund) plus the amount of any Other Credit Agreement Payments then due and payable or to become due and payable during such month not otherwise included in such amount;
- (B) into the Debt Service Fund held by the Co-Trustee, an amount equal to the amount necessary to increase the amount in the Debt Service Fund to the aggregate amount for all Outstanding Bonds of all unpaid interest, principal and Mandatory Sinking Account Payments and for all Outstanding Parity Payment Agreements of all Parity Payment Agreement Payments with respect thereto and for all Outstanding Credit Agreements of all Credit Agreement Reimbursement Payments due and payable to the extent not otherwise included in such amount which shall be required to have been transferred to the Debt Service Fund on the basis of the following transfer requirement rules (after taking into account amounts transferred and to be transferred from any Construction Account to pay Capitalized Interest):

- (1) an amount equal to the amount of interest payable on each Bond on a current uncompounded basis on any Interest Payment Date shall be transferred in equal monthly amounts over the Interest Accrual Period for such Bond ending on such Interest Payment Date (or in the case of Variable Rate Bonds 110 percent of the amount of interest accrued during the next preceding calendar month less any excess deposited for the next preceding calendar month); provided that to the extent that a Qualified Counterparty is obligated to make payments to the Authority on or prior to such Interest Payment Date pursuant to an Outstanding Payment Agreement Related to any Bonds, an amount equal to the amount of any such payment obligation shall be transferred from the Revenue Fund to the Debt Service Fund on the date such payment is due and the amount of each monthly transfer with respect to such Bonds as described in this subparagraph (1) during the Interest Accrual Period (or portion thereof) over which such payment obligation accrues shall be reduced by an amount equal to the amount of such Qualified Counterparty's payment obligation accruing during the next preceding calendar month;
- (2) the amount of interest payable on each Bond on a deferred compounded basis on any Interest Payment Date shall be transferred in substantially equal monthly amounts over the period during which such interest accrues on such basis;
- (3) the amount of the principal of each Bond shall be transferred in equal monthly amounts over the Principal Payment Period for such Bond ending on the maturity date for such Bond;
- (4) the amount of each Mandatory Sinking Account Payment for Bonds shall be transferred in equal monthly amounts over the Principal Payment Period for such Bonds ending on the date such Mandatory Sinking Account Payment is due;
- (5) the amount of any Parity Payment Agreement Payment payable on any Payment Agreement Payment Date shall be transferred (a) in the case of such payments calculated based on a fixed rate, in equal monthly installments over the Payment Agreement Payment Accrual Period for such Payment Agreement Payment ending on such Payment Agreement Payment Date and (b) in the case of such payments calculated based on a variable rate, in monthly installments equal to 110 percent of the amount of such obligation accrued during the next preceding calendar month less any excess deposited for the next preceding calendar month; and
- (6) to the extent not otherwise included in amounts described in subparagraphs (1) through (5) above, the amount of any Credit Agreement Reimbursement Payment due and payable is to be transferred;
- (C) into the Bond Reserve Fund held by the Co-Trustee, the amount, if any, needed to increase the amount in the Bond Reserve Fund to the Bond Reserve Fund Requirement (equal to the Maximum Annual Debt Service for the then current or any future Fiscal Year on all Outstanding Bonds) as of the date of such transfer;
- (D) into the Subordinate Securities Fund (and any accounts therein), the amount, if any, needed to increase the amount in such Fund and each such account to its requirement (including any requirements for reasonable debt service reserves and requirements related to Payment Agreements that constitute Subordinate Securities (including Termination Payments)) established by each resolution, indenture or other instrument pursuant to which Subordinate Securities are issued and outstanding;
- (E) into the Operation, Maintenance, Renewal and Replacement Reserve Fund, the amount, if any, needed to increase the amount in the Operation, Maintenance, Renewal and Replacement Reserve Fund to an amount equal to one-fourth (1/4) of the sum of the amounts of Operation and Maintenance Expenses and Renewal and Replacement Costs budgeted by the Authority, pursuant to the budget, as revised, filed in accordance with the Indenture, for the then current Fiscal Year;
- (F) into the Rate Stabilization Fund, the amount specified for such month in a Certificate of the Authority which also certifies that such amount is consistent with the annual budget established by the Authority pursuant to the Indenture; and

(G) into the Capital Improvement Fund, the balance remaining in the Revenue Fund after the deposits described above.

The Indenture provides that, in the event that the amount in any Fund or Account is insufficient for the purposes for which such Fund or Account was established, the Trustee, the Co-Trustee or the Depositary upon the direction of the Trustee, is required to transfer to such Fund or Account the amount of such deficiency by withdrawing said amount from subordinate Funds and Accounts in reverse order of the priority described above and prior to any other claims upon such Funds and Accounts, subject only to the limitation that amounts in the Bond Reserve Fund shall only be used as provided in the Indenture.

See APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE" for definitions of the capitalized terms used above and descriptions of certain of the Funds and Accounts referenced above.

#### Rate Covenant

The Authority has covenanted in the Indenture to at all times fix, prescribe and collect rates, fees and charges in connection with the services furnished by the System which will be sufficient to yield the sum of Net Revenues during each Fiscal Year equal to at least 1.25 times the Aggregate Annual Debt Service for such Fiscal Year and to yield Revenues during each Fiscal Year equal to at least the aggregate amount of all transfers required to be made pursuant to the provisions of the Indenture described above in (A) through (E) under "—Allocation of Revenues" (collectively, the "Rate Covenant").

"Net Revenues" is defined in the Indenture to mean, for any particular period, (a) the sum of (i) all of the Revenues (other than Payment Agreement Receipts) received during such period plus (ii) the aggregate amount of all transfers from the Rate Stabilization Fund to the Revenue Fund during such period, less (b) the sum of (x) all Operation and Maintenance Expenses incurred during such period plus (y) the amount of all transfers from the Revenue Fund to the Rate Stabilization Fund during such period.

The Indenture provides that if at the end of a Fiscal Year, (i) the sum of Net Revenues for such Fiscal Year were less than 1.25 times Aggregate Annual Debt Service for such Fiscal Year, or (ii) Revenues were less than the aggregate amount of all required transfers described above in (A) through (E) under "—Allocation of Revenues" for such Fiscal Year, the Authority is required to promptly employ a Consulting Engineer to make recommendations as to a revision of rates, fees and charges or the methods of operation of the System, and promptly upon its receipt of such recommendations, to revise such rates, fees and charges or methods of operation and to take such other actions as will be in conformity with such recommendations, subject to applicable requirements or restrictions imposed by law, including approval of any rate increases by the PUC, and subject to a good faith determination of the CCU that such recommendations, in whole or in part, are in the best interests of the Authority, the Owners and each Credit Provider, if any. The Indenture provides that if the Authority complies in all material respects with the reasonable recommendations of the Consulting Engineer with respect to said rates, fees, charges and methods of operation or collection, or makes a good faith determination that such recommendations are not in the best interests of the Authority, the Authority will be deemed to have complied with the Rate Covenant for such Fiscal Year; provided, that Net Revenues are in no event less than Aggregate Annual Debt Service for such Fiscal Year.

See APPENDIX C — "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE—DEFINITIONS" for definitions of the capitalized terms used above and "—CERTAIN COVENANTS—Rate Covenant."

For discussions of additional requirements relating to rate-setting, see "REGULATORY ENVIRONMENT—Regulation of Ratemaking" below.

# **Bond Reserve Fund**

The Indenture establishes the Bond Reserve Fund to be used and withdrawn by the Co-Trustee solely for the purpose of paying debt service on the Bonds (including Payment Agreement Payments to the extent provided in any Supplemental Indenture) in the event of a deficiency in the Debt Service Fund, in the manner and to the extent set forth in the Indenture. So long as the Authority is not in default under the Indenture, any amount in the Bond Reserve Fund in excess of its Bond Reserve Fund Requirement is to be transferred to the Revenue Fund.

"Bond Reserve Fund Requirement" is defined in the Indenture to mean, as of any particular date of calculation, an amount equal to the Maximum Annual Debt Service for the then current or any future Fiscal Year on all Outstanding Bonds; provided, however, that if upon issuance of a Series of Bonds, such amount would require moneys to be credited to the Bond Reserve Fund from such Bond proceeds in an amount in excess of the maximum amount permitted from tax-exempt bond proceeds under the Code, the Bond Reserve Fund Requirement shall mean an amount equal to the sum of the Bond Reserve Fund Requirement immediately preceding issuance of such Bonds plus the maximum amount permitted under the Code to be deposited therein from the proceeds of such Bonds, as specified by Certificate of the Authority.

At the time of delivery of the 2017 Bonds, the Bond Reserve Fund Requirement is \$\_\_\_\_\_\_. [Upon the issuance of the 2017 Bonds, \$\_\_\_\_\_\_ will be released from the Bond Reserve Fund and deposited to the Escrow Fund.] See "PLAN OF FINANCE—Purposes of the 2017 Bonds" and "ESTIMATED SOURCES AND USES OF FUNDS"

If and to the extent provided by a Supplemental Indenture, the Bond Reserve Fund Requirement may be wholly or partially satisfied by a Credit Facility. Notwithstanding anything to the contrary contained in the Indenture, such Supplemental Indenture may provide that a draw on such Credit Facility is to be made only after all cash in the Bond Reserve Fund been withdrawn and that if a drawing or other claim on such Credit Facility is honored, amounts available for deposit pursuant to the provisions of the Indenture relating to allocation of Revenues to the Bond Reserve Fund will be applied by the Co-Trustee to reimburse, as soon as practicable, the amount of each payment honoring such drawing or other claim.

See APPENDIX C — "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE—REVENUES AND FUNDS—Application of Bond Reserve Fund."

# **Additional Bonds**

The General Indenture permits the Authority to issue Additional Bonds secured on a parity with the Outstanding Bonds, including the 2017 Bonds, upon the satisfaction of the requirements set forth in the Indenture, including, among other things, the filing of the documents described below, as applicable, with the Trustee.

If and to the extent that a Series of Additional Bonds is being issued to provide moneys for deposit in a Construction Account, the following certificates and reports are to be filed:

- (A) a certificate of a Consulting Engineer setting forth (I) the projected Date of Completion for the Project or Projects for which such Series of Additional Bonds is being issued and for any other uncompleted Projects, and (II) an estimate of the cost of construction of such Projects;
- (B) a written report of a Consulting Engineer setting forth for each Fiscal Year from the then current Fiscal Year through the later of (I) the first Fiscal Year commencing at least five years after the date of original issuance of such additional Series, or (II) the first Fiscal Year commencing at least three years after the Date of Completion projected by the Consulting Engineer in the certificate described in (A) above, estimates of Revenues, Operation and Maintenance Expenses and Net Revenues; and
- (C) a certificate of the Authority (I) setting forth (a) the estimates of Revenues, Operation and Maintenance Expenses, and Net Revenues, as set forth in the written report of a Consulting Engineer described in subparagraph (B) above, for each of the Fiscal Years covered by such report, and (b) the Aggregate Annual Debt Service and Capitalized Interest for each of such Fiscal Years, including Annual Debt Service and Capitalized Interest on all future Series of Bonds, if any, which such Certificate of the Authority shall estimate (based on the estimate of the Consulting Engineer of the cost of construction of such Projects) are required to complete payment of the cost of construction of such Projects, and (II) demonstrating that for each of such Fiscal Years (a) Revenues are projected to be at least equal to the aggregate amount of all transfers required to be made pursuant to the

provisions of the Indenture described above in (A) through (E) under "—Allocation of Revenues," and, to the extent applicable, otherwise required to provide for the payment of all obligations of the Authority to be paid from Revenues, and (b) Net Revenues are projected to be at least equal to 1.25 times Aggregate Annual Debt Service.

(D) In lieu of the certificates and reports required by the provisions of the Indenture summarized in subparagraphs (A), (B) and (C) above, the Authority may deliver to the Trustee a Certificate of the Authority to the effect that for the last complete Fiscal Year or any period of 12 consecutive calendar months out of the 18 calendar months next preceding the original issuance of such Additional Bonds, Net Revenues for such Fiscal Year or 12-month period equaled at least 1.25 times the Maximum Annual Debt Service on all Bonds then Outstanding plus the Series of Additional Bonds being issued.

In addition, a Series of Bonds may be issued for the sole purpose of depositing in a Construction Account the amounts necessary to complete any one or more Projects without filing with the Trustee the certificates and reports required by the provisions of the Indenture summarized in subparagraphs (B) and (C), if such certificates and reports demonstrating compliance with such provisions of the Indenture were filed in connection with the issuance of the prior Series of Bonds for each of such Projects and if the principal amount of such Additional Bonds to be issued for completion purposes does not exceed ten percent (10%) of the principal amount of Bonds previously issued for and allocable to such Projects.

The General Indenture also provides that if and to the extent that a Series of Additional Bonds is being issued for the purpose of refunding Bonds, the Authority is required to file with the Trustee either (i) a certificate of an Independent Certified Public Accountant that Aggregate Annual Debt Service for each Fiscal Year thereafter will be less than or equal to Aggregate Annual Debt Service for each such Fiscal Year in the absence of such refunding, or (ii) the certificates and reports described in subparagraphs (A) (if any one or more of the Projects for which the Bonds being refunded is not then completed), (B) and (C) above; provided that in lieu of the certificates and reports described in subparagraphs (A), (B) and (C), the Authority may deliver to the Trustee the certificate described in subparagraph (D) above.

See APPENDIX C — "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE—ISSUANCE OF BONDS; ISSUANCE OF A SERIES OF BONDS; PARITY PAYMENT AGREEMENTS—Issuance of Additional Series of Bonds" and "—Proceedings for the Issuance of a Series of Bonds; Parity Payment Agreements."

# **Parity Payment Agreements**

The Authority is permitted under the General Indenture to enter into one or more Parity Payment Agreements, the Authority payments of which are secured by a lien upon and pledge of Revenues equal to and on a parity with the lien and pledge securing the Bonds, provided the Authority complies with certain provisions of the Indenture. The Authority is not a party to any Parity Payment Agreements, nor does the Authority have any current plans to enter into any Parity Payment Agreements.

See APPENDIX C — "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE—ISSUANCE OF BONDS; ISSUANCE OF A SERIES OF BONDS; PARITY PAYMENT AGREEMENTS—Additional Parity Payment Agreements" and "—Proceedings for the Issuance of a Series of Bonds; Parity Payment Agreements."

# **Subordinate Obligations**

The Indenture does not prevent the Authority from issuing or incurring any indebtedness secured by a lien or charge on Revenues that is junior and subordinate to the lien and charge of the Bonds.

In 2010, the Authority entered into a loan agreement, dated June 15, 2010 (as subsequently amended, the "Loan Agreement"), with the Bank of Guam (the "Bank") pursuant to which the Bank made two loans to the Authority in the aggregate principal amount of \$30,000,000 to pay a portion of the costs of certain projects, to fund deficiencies in the Authority's Operation, Maintenance, Renewal and Replacement Reserve Fund and Operations and Maintenance Fund and to pay up to \$5,000,000 of accounts payable and to pay other expenses of the Authority.

In connection with the execution of the Loan Agreement, the Authority and the Bank entered into a pledge and assignment, dated June 15, 2010 (as subsequently amended, the "Pledge"), pursuant to which the Authority pledged to the Bank the Revenues on a basis subordinate to the pledge of the Bonds. The Authority repaid one of the loans in full on June 15, 2015. On June 11, 2015, the Authority and the Bank entered into a revision agreement (the "Revision Agreement") with respect to the remaining loan, then outstanding in the principal amount of \$15 million (the "Subordinate Loan"), pursuant to which the terms of the Loan Agreement and the promissory note evidencing the Subordinate Loan were amended. Pursuant to the Revision Agreement, the rate of interest on the Subordinate Loan was reduced to 5.25% per annum, and the maturity date was extended to June 15, 2020, with the first payment coming due on July 15, 2015 (payments are due on the Subordinate Loan on a monthly basis). [UPDATE] As of [January \_\_\_\_, 2017, the Subordinate Loan is outstanding in the principal amount of approximately [\$13.3] million. The Authority expects to repay the Subordinate Loan in full on or before June 15, 2020.

[CONFIRM]The Loan Agreement and the Pledge require that the Authority obtain the written consent of the Bank prior to issuing any Additional Bonds. [The Bank has consented to the issuance of the 2017 Bonds.]

The remedies available to the Bank in the event of a default under the Loan Agreement or the Pledge include, among other things, the ability to declare the outstanding balance of the Subordinate Loan to be immediately due and payable. Upon such acceleration, the Subordinate Loan would continue to be payable solely from amounts transferred to the Subordinate Securities Fund as described above under "—Allocation of Revenues."

Previously, the Subordinate Loan was also guaranteed by the Government of Guam and was entitled to the full faith and credit of the Government of Guam. In connection with the amendment of the Loan Agreement, however, the guarantee was released.

# [ANY OTHER SUBORDINATE INDEBTEDNESS TO DISCUSS?]

#### **Events of Default and Remedies; No Acceleration**

The Indenture specifies a number of Events of Default and related remedies. The remedies granted to the Trustee and the Bondowners under the Indenture do not include any right to accelerate the payment of the Bondo, including the 2017 Bonds. The Trustee is authorized to take certain actions upon the occurrence of an Event of Default, including proceedings to enforce the rights of the Bondowners. See APPENDIX C — "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE—EVENTS OF DEFAULT AND REMEDIES OF BONDOWNERS" for descriptions of the Events of Default and remedies under the Indenture.

# **Depositaries for Funds and Accounts**

The Co-Trustee has been appointed to act as Depositary for the Debt Service Fund and the Bond Reserve Fund. The Trustee has been appointed as Depositary for the Revenue Fund, the Operation and Maintenance Fund, the Subordinate Securities Fund, the Operation, Maintenance, Renewal and Replacement Reserve Fund, the Capital Improvement Fund, the Rate Stabilization Fund and the Rebate Fund, as well as for the 2017 Costs of Issuance Account within the Construction Fund. The Authority may enter into a Supplemental Indenture from time to provide for a different or additional Depositary for any fund or account established under the Indenture.

#### THE AUTHORITY

#### General

In 1950, the Legislature of Guam passed Public Law 1-12 assigning responsibility for the public water supply to the Guam Department of Public Works. In 1952, the Legislature of Guam passed Public Law 1-88 creating the Public Utility Agency of Guam (the "PUAG"), which consisted of telephone, power, water and wastewater utilities. The PUAG remained responsible for the island's water and wastewater systems for the next 44 years. In 1996, the Authority was established as a new semiautonomous, self-supporting agency responsible for the island's water and wastewater utilities, and began operations on February 1, 1997. In 2002, by virtue of the passage of Public Law 26-76, the Authority converted to a public corporation and is organized and exists as a Guam public

corporation under Chapter 14 of Title 12 of the Guam Code Annotated and is authorized to operate and maintain the System for the island of Guam.

The Authority's System provides water to all of the civilian population of Guam and also provides sewer service to a large percentage of the civilian population, Andersen Air Force Base and several smaller United States Navy (the "Navy") facilities. There is, however, a significant civilian population that does not have sewer service, particularly in the northern area of the island. In addition, there are currently two major military installations, Andersen Air Force Base and the Guam Naval Station, which occupy large areas on the island. Both of these military installations have their own water and wastewater systems. The Authority purchases some of its water supply from the Navy, and until 2010, the Authority purchased a very small portion of its water supply from the Air Force. The wastewater collected from Andersen Air Force Base is discharged into the Authority's System and treated at its Northern District Treatment Plant. This service is a revenue source for the Authority. During Fiscal Year 2016, the Authority served an average of [\_\_\_\_] wastewater customers.

The Authority's goals are directed towards providing more efficient and reliable service to its customers, and operating as a self-sufficient utility while meeting all USEPA and Guam Environmental Protection Agency ("GEPA") requirements.

The Authority currently has two Operations and Maintenance divisions – Water Operation and Maintenance and Wastewater Operation and Maintenance. See "THE SYSTEM—The Water System" and "—The Wastewater System."

#### **Consolidated Commission on Utilities**

The Authority is governed by the CCU, a five-member board elected in a general election to four-year terms that is also charged with oversight of the GPA. The CCU makes decisions regarding policies, management, budgeting and financing of the Authority's operations. Certain actions, however, such as issuing bonds for financing utility capital projects, still require the approval of the Legislature of Guam and the PUC. In addition, ratemaking by the CCU is subject to the approval of the PUC, as the regulatory ratemaking body. The Authority may not enter into any contractual agreements or obligations which could increase rates and charges without the prior written approval of the PUC. See "REGULATORY ENVIRONMENT—Regulation of Ratemaking" below.

Upon taking office in January 2003, the original members of the CCU were faced with more than \$25 million in debt and pending federal lawsuits for violations of water quality and environmental standards that had accumulated over the past several decades. Since 2003, a number of changes have been made to move the Authority's operations towards a self-supporting economic model and environmental compliance. Currently, both the CCU and Authority staff are focused on meeting the requirements of the 2011 Court Order by refurbishing facilities to meet regulatory standards, to improve reliability, and to implement operational systems and procedures consistent with current utility practices in the continental United States. See "REGULATORY ENVIRONMENT" below.

The current members of the CCU are: [BIOS TO BE REVIEWED/UPDATED AS NECESSARY]

Joseph (Joey) T. Duenas, Chairman. Mr. Duenas was elected as Chairman of the CCU in January 2015. Elected to the CCU and member since January 2009, Mr. Duenas's government and community service includes serving as Finance Officer for the Archdiocese of Hagåtña, Director of the Guam Department of Revenue & Taxation, President of the Guam Housing Corporation, Vice Chairman of the Guam Election Commission, PUC Chairman, Board of Directors Chairman for the American Red Cross, Vice Chairman of the Board of Trustees for Guam Community College, and former President of the Rotary Club of Guam. Mr. Duenas has a BA in Business Management from the Chaminade University of Honolulu.

**Francis Santos, Vice Chairman**. Mr. Santos is the newest of the recently elected commissioners. Mr. Santos has over 25 years of experience in the private and public sectors, specializing in health insurance and business management. He recently joined Guam Regional Medical City, Guam's newest private

hospital, as Chief Financial Officer. He recently served as Plan Administrator for StayWell Health Plan and President/Chief Executive Officer of Island Home Insurance Company. Mr. Santos also served three terms as a Senator in the Guam Legislature. Mr. Santos also recently served as chairman of the Guam Education Policy Board. Mr. Santos is currently serving as chairman of the board of iLearn Academy Charter School, Guam's second public charter school, and as member/director of Global Health Systems, which specializes in wound care and hyperbaric medicine. Mr. Santos holds a Master of Business Administration in Health Care Administration from Loma Linda University. He has a Bachelor of Science Degree in Business Management from Seattle University.

George Bamba, Secretary. Mr. Bamba was elected to the CCU in November 2014 General Election and was elected as Secretary in January 2015 and is Chairman of the CCU IT/Cybersecurity Committee. Mr. Bamba has served as Chief of Staff to two former Governors of Guam (Paul M. Calvo and Felix P. Camacho). Mr. Bamba also served as Senator in the Guam Legislature for 10 years and has also served as chairman of numerous boards and commissions while serving in the Executive Branch of the Government of Guam. He also served on the Council of State Governments Committee on Economic Development and International Affairs.

Pedro S.N. Guerrero, Treasurer. Elected to the CCU and member since January 2013 and elected Treasurer in January 2015, Mr. Guerrero has over 39 years of industry experience in utilities engineering and management, theoretical applications and instruction, and resources consultation and operations within the federal, local, and private sectors in Guam. Mr. Guerrero's experience includes, among other things, serving as Residential Energy Manager, Andersen Air Force Base, Electrical Superintendent, 36th Civil Engineering Squadron, Andersen Air Force Base (retired 2006), as well as serving as an adjunct professor at Guam Community College. Mr. Guerrero completed an apprenticeship with the United States Navy Public Works Center in 1973 and completed training as a High Voltage/Power Plant Electrician at the United States Navy Public Works Center in 1978.

**Simon A. Sanchez II, Member**. Originally elected to the CCU in 2003, Mr. Sanchez served as chairman from January 2003 until January 2015. He is a Former Senator and Former Vice Chairman, Public Utilities Commission (PUC) 1988-94. Mr. Sanchez has served as Vice President/General Manager of Guam Dry Cleaners since 1988. He has served on numerous government and civic organization boards including the Guam Chamber of Commerce, the Guam Visitors Bureau, the Guam Hotel and Restaurant Association and the Guam Memorial Hospital. Mr. Sanchez graduated from Harvard University (1980 – MA, City and Regional Planning), and Stanford University (1978-BA, History).

#### **Key Management Personnel**

Following are brief résumés of key management personnel of the Authority. [BIOS TO BE REVIEWED/UPDATED AS NECESSARY]

General Manager of the Authority – Miguel Bordallo, P.E. – Mr. Bordallo was selected by the CCU as the General Manager for the Authority, effective January 4, 2016. Mr. Bordallo has over 25 years of experience in environmental/mechanical engineering, and construction in California, Guam and Micronesia. Prior to joining the Authority, Mr. Bordallo, was a consulting engineer providing design and design-build services for water and wastewater infrastructure projects and was also vice president of a large construction company on Guam, where he oversaw the construction of the new John F. Kennedy High School. Mr. Bordallo was previously a partner at the local engineering firm Duenas, Bordallo and Associates. Mr. Bordallo graduated with a B.S. in Mechanical Engineering with honors from Marquette University in Milwaukee, Wisconsin, and is a licensed professional engineer in Guam.

<u>Chief Financial Officer</u> – Greg P. Cruz – Mr. Cruz serves as Chief Financial Officer for the Authority. Mr. Cruz has over 25 years of experience in the accounting profession. This includes over 15 years in a management capacity. Prior to joining the Authority, Mr. Cruz had held positions in the telecommunications industry, public accounting and various Government of Guam agencies. Mr. Cruz's background includes operating his own business serving clients primarily in the non-profit industry. Mr.

Cruz earned a B.A. in Accounting from Western Washington University in Bellingham, Washington, and is a Certified Public Accountant and licensed to practice in Guam. Mr. Cruz served as Interim General Manager from November 1, 2015 until January 4, 2016.

Assistant General Manager, Compliance and Safety - Paul J. Kemp - Mr. Kemp has 56 years of experience in managing and teaching water quality chemistry for natural (ground and surface) waters, drinking water, water for industrial applications (e.g. manufacturing, food and dairy processing), ultra high purity water, wastewater treatment, water recovery for reuse, and environmental and safety compliance and training. Mr. Kemp has been Assistant General Manager of Compliance at the Authority since 2003. Prior to joining the Authority, he held engineering and management positions in private laboratory, research and manufacturing companies as well as teaching and research positions in higher education. Mr. Kemp is currently a member of the Joint Editorial Board of "Standard Methods for the Examination of Water and Wastewater" ("AWWA"), the Hawaii Water Environment Association, Technical Director of the Sunset Terrace Homeowners Association (upgrading its wastewater treatment system) and Hawaii Section of the American Waterworks Association Member of Past Chairs Advisory Committee and Fuller Award Committee, the American Chemical Society (ACS), the Society of the Sigma Xi (Chemists Honorary Society), and the International Union of Pure and Applied Chemists ("IUPAC"). Mr. Kemp is educated as an analytical chemist specializing in spectroscopic methods and water analysis, and he received a BS degree in Chemistry from Iowa State University and an MS in Analytical Chemistry from Oregon State University. He also undertook postgraduate studies at the University of Hawaii and has published a number of technical articles in various journals.

<u>Chief Engineer</u> – Thomas F. Cruz, P.E. – Mr. Cruz started with the Authority in 2006 as a senior engineer supervisor and has moved up the ranks to become the Chief Engineer in August 2011. Mr. Cruz is a licensed Civil Engineer on Guam and has 19 years of engineering experience in projects ranging from roadway design and construction, water distribution and wastewater collection design as well as Construction Management. Mr. Cruz holds a Bachelor of Science (Civil Engineering) from Kansas State University and a Master in Business Administration from the University of Phoenix. As the Chief Engineer, Mr. Cruz's current task objectives are to deliver necessary capital improvements projects for the Authority. Mr. Cruz served as Interim General Manager for eight months from August 2014 until March 2015.

General Counsel – Kelly O. Clark – Came on board with the Authority in July 2016, returning to Guam after a 20 year "intermission" in Colorado and Texas. Mr. Clark has 11 years of experience as a litigator in Colorado and Guam with 5 of those years as a partner in one of the larger firms on the island. Mr. Clark also has 20 years of experience as General Counsel for firms in the communication and utility/energy sectors. He holds a BSBA in Marketing from the University of Denver and a JD from St. Mary's University School of Law where he earned the American Jurisprudence Award in International Business Transactions. Mr. Clark is admitted to practice before all courts of Guam and Colorado including the U.S. District Courts for both jurisdictions.

#### THE SYSTEM

The Authority has undergone significant transformation; however, it continues to face challenges from the USEPA and other regulatory agencies, as well as from customers, to make needed improvements to the System on a timely basis. Considerable capital needs remain in addition to those under the 2011 Court Order, including improvements needed to accommodate growth in the island's population centers and normal renewals and replacements. See "REGULATORY ENVIRONMENT—Environmental Regulation." Over the last several years, the Authority has worked to improve the management and operation of the System, including, among other things, decreasing expenditures, significantly decreasing leak repair times and implementing a meter replacement system. As a result, the Authority's operating improved significantly, beginning after Fiscal Year 2011. Table 3 below presents selected statistics regarding Authority operations for Fiscal Year 2016. See "HISTORICAL AND PROJECTED OPERATING RESULTS."

# Table 3 Selected Statistics Fiscal Year Ended September 30, 2016

#### [UPDATE WITH AUDITED NUMBERS]

	Unaudited
	Fiscal Year 2016
Average Number of Water Customers	41,754
Average Number of Wastewater Customers	28,766
Annual Water Sales (million gallons)	6,013
Annual Wastewater Collection (million gallons)	4,356
Operating Revenues	105,328,276
Gross Investment in Utility Plant	575,871,775
Net Utility Plant Investment	290,028,066
Total Equity	194,027,887
Net Current Assets	27,033,189

Source: [The Authority; extracted from audited financial statements.]

#### The Water System

# [GWA TO REVIEWUPDATED//CONFIRM DESCRIPTION OF THE WATER SYSTEM]

The Authority's water supply system consists of 120 wells (94 of which are currently operating), one active production spring, the Ugum WTP mentioned below, 28 booster pump stations (24 of which are actively used), 26 reservoirs/tanks in service having a total active volume of 31.2 million gallons ("MG"), approximately 386 miles of water distribution pipelines and approximately 3,814 fire hydrants.

#### Water Supply

Water sources on Guam are groundwater, surface water and springs, all of which are replenished by rainfall on Guam. Trade winds blow over Guam throughout the year and are responsible for significant rainfall and a relatively constant temperature near 80 degrees throughout all seasons. Annual rainfall averages 80 inches in the western coastal area to 110 inches in the highest mountain locations in the south. Three quarters of the total annual rainfall occurs between the months of June and December. Rain is the only source of fresh water for the island.

Topographic features divide Guam into northern and southern areas. Because of the island's topography, potable water comes from groundwater in the northern portion of the island and primarily surface water in the southern portion of the island.

In the north a limestone plateau, bordered by steep cliffs, slopes southwesterly from an elevation of 600 feet to less than 100 feet at the midsection of the island. The plateau surface is generally flat and is interrupted by three hills: Barrigada Hill (El 665 ft.), composed of a limestone dome, Mount Santa Rosa (El 858 ft.) and Mataguac Hill (El 630 ft.) both composed of volcanic rock. There are no perennial streams within the northern area due to the permeability of the limestone. The main groundwater source is located under the plateau. The rainfall percolates through the limestone and forms a freshwater "lens" that floats at approximately sea level above deeper, higher density brackish and salt water. Previous studies of the Guam aquifers have concluded that the freshwater lens under the northern part of the island can provide a sustainable water supply of up to 80 million gallons per day ("MGD"). From May 2014 through April 2015, the Authority pumped approximately 28.3 MGD of groundwater, or about 35.4 percent of the sustainable yield, and the U.S. Air Force and other users pumped approximately 6.0 MGD of groundwater, indicating total groundwater extraction of approximately 34.3 MGD, or 43.0 percent of the sustainable yield. In December 2013, the U.S. Geological Survey (the "USGS") completed a study of the effect of withdrawals and droughts on groundwater availability in the northern lens aquifer to determine the effects of water withdrawals on Guam's sole source aquifer during normal and drought conditions. The study also served as the basis for determining the impact resulting from the proposed U.S. military build-up. As currently contemplated, the

proposed U.S. military build-up is expected to increase the demand for potable water by 1.7 MGD, and in the Record of Decision issued in August 2015, the DoD acknowledged that this would result in a localized significant indirect impact on the lens. This demand is expected to be addressed through the development of up to 11 new wells to be constructed by the Department of Defense (the "DoD") at Anderson Air Force Base, the costs of which are expected to be funded by the federal government. The DoD is also considering providing support and funding to update and expand lens well monitoring efforts. See "FUTURE CAPITAL REQUIREMENTS—Proposed U.S. Military Relocation and Installations."

The Authority's groundwater wells provide approximately 89.5 percent of the Authority's water supply. The Authority owns 120 wells, of which 94 are currently operating, six of which are in standby mode and 20 of which are inactive. The inactive wells are not considered necessary to meet the Authority's daily water needs, as they constitute only approximately 14.7 percent of the Authority's 40.1 MGD of permitted well capacity. Most of the Authority's wells are drilled to below sea level to "tap" the basal aquifer; the basal aquifer is a fresh water lens that extends below sea level. The capacity of individual basal aquifer wells averages approximately 230 gallons per minute ("gpm") to avoid localized over-pumping of the aquifer. In 2013, the Authority completed an assessment of all 120 wells and identified several recommended improvements, including well and pump upgrades, safety equipment upgrades, pump pedestal upgrades, replacement discharge piping, new chlorination equipment, electrical improvements and site work. The Authority also determined that many of the production flow meters measuring output at the wells were not functioning properly and decided to replace all 120 production flow meters. The CIP includes these upgrades (including the replacement of the production flow meters), as well the rehabilitation of 10 wells and the construction of three new wells.

The Authority has five springs located in the southern and central areas of the island, one of which is in active production. The Authority currently obtains water from one operating spring in Santa Rita, which generates approximately 0.23 MGD, or less than one percent of the Authority's total water supply. The Authority's CIP includes the rehabilitation of the currently inactive Asan spring. The Authority issued a notice to proceed for the development of a facilities plan, which was completed in April 2013. The facility plan will be used as the basis to develop 100% design plan and specifications. The Authority has issued a request for proposals, responses to which were due December 14, 2015. The Authority is currently reviewing the responses and expects to issue a notice to proceed for the design in February 2016, with construction currently expected to begin in December 2016.

The southern portion of Guam is of volcanic origin and mountainous. A nearly continuous mountain ridge parallels the coastline from Piti (mid-island on the west side) to Guam's southern tip. Several peaks in the ridge top 1,000 feet, with Mount Lamlam being the highest at 1,332 feet. Generally, surface water resources are available in the southern portion of Guam. The southern portion has more than 40 streams draining into the sea. The only large surface impoundment on the island for potable water, known as the Fena Valley Lake Reservoir, is located approximately 2.5 miles southeast of Santa Rita.

The Authority currently operates the Ugum Water Treatment Plant (the "Ugum WTP"), which treats surface water collected from the Ugum River in southern Guam and supplies approximately five percent of the Authority's total water supply. The rated capacity of the Ugum WTP is four MGD; however, the Ugum WTP cannot always operate at full capacity when flows in the Ugum River are low or there is high turbidity in the Ugum River due to heavy rainfall. Although the Authority has upgraded some of the systems at the Ugum WTP, additional upgrades are needed. The CIP includes some of the contemplated upgrades, including upgrades to the Ugum WTP river intake structure and construction of an additional finished water storage tank.

To help supply its customers on the southern part of Guam, the Authority also purchases water from the Navy pursuant to the terms of a Memorandum of Agreement under which the Authority is permitted to purchase up to 4.39 MGD of water. After 2009, however, the Navy requested that the Authority work to reduce the total purchases to a maximum of 3.5 MGD. Although the Memorandum of Agreement has expired, the Authority and the Navy continue to operate in accordance with its provisions. The Navy collects surface water in the Fena Valley Lake Reservoir and obtains spring water from the Almagosa and Bona Springs. The surface water and spring water is then treated at the Fena Water Treatment Plant (the "Fena WTP") owned and operated by the Navy. The Authority has been able reduce the amount of water purchased from the Navy over the past five Fiscal Years. In Fiscal Year 2014, the Authority purchased approximately 911 MGD of water from the Navy, or approximately 14.0 percent of the Authority's total demand, as compared to approximately 653 MGD, or approximately 5.0 percent of

the Authority's total demand, in Fiscal Year 2015. **[UPDATE FOR 2016]** Although the Authority intends to continue reducing the use of Navy water by repairing leaks and addressing flow and pressure issues within the System, for planning purposes, the Authority is conservatively projecting to purchase annually the same amount from the Navy in Fiscal Years [2016] through Fiscal Year [2021]. **[confirm years]** See Table 4 below.

The rates paid by the Authority to purchase water from the Navy are subject to periodic adjustment. In Fiscal Year 2014, the Navy increased its rate for purchased water by approximately 18 percent, while the amount of water the Authority purchased from the Navy decreased by approximately 14 percent, and in Fiscal Year 2015, the Navy increased its rate for purchased water by approximately 11 percent, while the amount of water the Authority purchased from the Navy decreased by approximately 28 percent. Although the amount of water purchased from the Navy has decreased, the rates for purchased water have increased such that the total annual cost of Navy water has remained relatively flat. If the Navy were to significantly increase rates, the Authority would expect to reflect those increased rates in its annual rate review by the PUC; however, no assurance can be given that the PUC would increase rates sufficient to address all increased purchased water costs. See "REGULATORY ENVIRONMENT—Regulation of Ratemaking."

The actual average supply requirement for the Authority's System during Fiscal Years 2010 through 2015 was approximately 14,983 MGD; however, actual water consumed in the System during the same period, based on the Authority's average water sales, was approximately 6,074 MGD, meaning unaccounted for (or non-revenue) water in the System during this time period was approximately 57.0 percent of the water delivered to the System. The difference between supply and consumption is due to leakage, malfunctioning meters, and water used for line flushing, fighting fires, and similar activities. Since 2012, the Authority has implemented an initiative to reduce its response time to identified leaks in the water supply system. In addition, in August 2012, the Authority implemented a program to replace defective meters, which has resulted in more accurate metering of water. See "—Leak Detection Program and Leak Repair Program" and "—Meter Replacement Program."

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Table 4 below shows by sources and uses the Authority's historical water requirements for Fiscal Years [2012] through [2016] and projected water requirements for Fiscal Years [2017] through [2021].

Table 4
Historical and Projected Water Requirements
Fiscal Years Ended September 30, 2012 through 2021
(gallons in millions)

	Historical			Projected						
Sources	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Authority Production <sup>(1)</sup> Purchases	14,207	13,192	13,477	13,727	13,668	13,741	13,741	13,741	13,741	13,741
Navy <sup>(2)</sup>	1,124	964	911	653	712	779	779	779	779	779
Air Force										
Total Purchases	1,124	964	911	653	712	779	779	779	779	779
<b>Total Sources</b>	15,331	14,156	14,388	14,380	14,380	14,520	14,520	14,520	14,520	14,520
Uses										
Billed Water(3)	5,796	6,266	6,032	6,037	6,013	6,153	6,153	6,153	6,153	6,153
Non-Revenue Water	9,535	7,890	8,356	8,343	8,367	8,367	8,367	8,367	8,367	8,367
Total Uses	15,331	14,156	14,388	14,380	14,380	14,520	14,520	14,520	14,520	14,520

<sup>(1)</sup> Production per the Authority.

<sup>&</sup>lt;sup>(2)</sup> [Historical Navy water purchases per Authority; projections through Fiscal Year 2020 are based on Fiscal Year 2015 data per the Authority.]

<sup>(3) [</sup>Historical billed water per the Authority; projections assume no growth in water sales from Fiscal Year 2016 through Fiscal Year 2020.] Source: Guam Waterworks Authority.

#### Water Distribution System

The Authority's water distribution system includes an extensive network of approximately 386 miles of transmission and distribution pipeline (excluding some 2-inch distribution lines), comprised of ductile iron, polyvinyl chloride ("PVC"), cast iron, asbestos cement and galvanized steel pipe, 28 booster pump stations, 24 of which are currently active, and 26 reservoirs/tanks in active use and having a total capacity of 31.2 MG, and approximately 3,814 fire hydrants.

Of the 26 reservoirs currently in service, four require significant repair or replacement. The Authority has an additional 9 reservoirs for which the Authority is required by the 2011 Court Order to take further action. The Authority expects to repair, replace or permanently abandon all but two of these reservoirs by the end of 2016. The remaining two reservoirs are expected to be repaired during the period covered by the current CIP.

In 2013, the Authority completed an assessment of all water booster pump stations and developed plans for upgrading all systems, including pump and mechanical upgrades, site improvements and structural and electrical upgrades. The CIP includes projects to improve the booster pump stations to increase efficiencies and to decrease operating and maintenance costs, as well as to repair, replace or relocate components of the water distribution system, as required by the 2011 Court Order.

#### The Wastewater System

# [GWA TO REVIEWUPDATED//CONFIRM DESCRIPTION OF THE WASTEWATER SYSTEM]

Unlike the Authority's water system, which serves essentially all of the civilian population of Guam, there is a significant percentage of the population that is not served by the Authority's wastewater system. This is particularly true in the northern area of Guam, where many homes rely on individual septic tanks or other on-site disposal systems. Comparing the number of water customers with wastewater customers (based on the average numbers of customers for Fiscal Year 2015 indicates that there are approximately 12,841 customers, or approximately 30.8 percent of water system customers, that do not have sewer service.

The Authority provides wastewater services for Guam's general population, as well as for Anderson Air Force Base. The main U.S. Naval base is served by its own wastewater collection and treatment system. For planning purposes, Guam is divided into seven wastewater districts based on population distribution and the topography of the island: Northern District, Hagåtña, Agat-Santa Rita, Umatac-Merizo, Inarajan, Baza Gardens and Pago Socio. The Authority's wastewater system includes wastewater treatment plants and extensive collection systems in each of these districts.

# Wastewater Collection Systems

The Authority's wastewater collection systems consist of approximately 314 miles of gravity sewers and force mains (pressure sewers) that collect sewage from the communities and transport it to the seven wastewater treatment plants. There are 78 wastewater pump stations in the collection systems.

The sewer pipe construction includes PVC, concrete, cast iron, epoxy coated ductile iron and high density polyethylene plastic. Most of the recent gravity sewer construction is PVC pipe. Some of the older sewer lines, such as those in Agat, are vitrified clay and are reportedly in poor condition. The pressure sewers (force mains) discharging from the pumping stations are epoxy coated ductile iron. The Air Force installed techite pipe to deliver wastewater from Andersen Air Force Base to the Northern District WWTP mentioned below.

The Authority is continuing to conduct Infiltration and Inflow ("I/I") Analyses and Sewer System Evaluation Surveys ("SSES") for the majority of the Authority's wastewater collection network to provide a current assessment of the wastewater collection system and to identify any areas of concern regarding capacity, condition and necessary improvements. The Authority has completed I/I analyses and SSES in the Southern sewer basins. Results from these analyses and sewer surveys have identified several areas subject to high I/I. The Authority has

nearly completed the I/I analyses and SSES in the Northern District sewer basin and is conducting the I/I analyses and SSES in the Central District sewer basin.

The CIP includes projects to rehabilitate or replace parts of the collection system to reduce high flow impacts to the wastewater treatment plants and the risk of system overflows, as well as improvements to the wastewater pump stations and continuation of an ongoing SCADA master plan project to provide centralized monitoring and reporting of the pump stations.

The Authority has met all of the 2011 Court Order requirements for sewer cleaning and closed circuit television system, meeting or exceeding the required 55 miles per year. The Authority has also established a "hot spot" program to prevent spills.

#### Wastewater Treatment Plants

The Northern District and Hagåtña wastewater treatment plants (the "Northern District WWTP" and the "Hagåtña WWTP," respectively) are the Authority's largest wastewater treatment plants and serve the northern and the central areas of Guam, respectively, and currently provide primary treatment.

The Northern District WWTP is designed for an average flow of 12 MGD, representing approximately 46 percent of Guam's wastewater flow, but is currently permitted by the USEPA to discharge only 6 MGD. Upon the satisfaction of certain conditions under the 2011 Court Order, the Authority may request flow up to 9 MGD. In December 2012, the Authority completed upgrades to provide interim treatment improvements at the Northern District WWTP. The Hagåtña WWTP is also designed for an average flow of 12 MGD, or approximately 46 percent of Guam's wastewater flow. In June 2013 and February 2014, the Authority completed certain interim treatment improvements required under the 2011 Court Order at the Hagåtña WWTP. As of January 6, 2016, the Northern District WWTP and the Hagåtña WWTP continue to be in compliance with the 2011 Court Order. See "REGULATORY ENVIRONMENT—Environmental Regulations—The 2003 Stipulated Order and the 2011 Court Order."

The Northern District WWTP has an ocean outfall, constructed in 2009, consisting of large diameter pipe extending approximately 1,958 feet away from shore to discharge the treated effluent into the Philippine Sea at a depth of approximately 140 feet. The Hagåtña WWTP also has an ocean outfall, constructed in 2008, consisting of large diameter pipe extending approximately 2,120 feet away from shore to discharge the treated effluent into the Philippine Sea at a depth of approximately 275 feet. As discussed above, until recently, the Authority operated the Northern District WWTP and the Hagåtña WWTP under secondary treatment variances issued by the USEPA, which permitted the Authority to discharge primary effluent into the Philippine Sea. Effective as of June 1, 2013, however, the National Pollutant Discharge Elimination System ("NPDES") permits for both plants include secondary treatment requirements. Neither plant is equipped to provide secondary treatment, and the Authority estimates that the design and construction necessary to satisfy the secondary treatment requirements will take approximately five years for each plant and estimates the cost of upgrading both treatment plants to satisfy the secondary treatment requirements to be approximately \$277 million. The Authority and the USEPA are currently negotiating secondary treatment compliance schedules for the Northern District WWTP and the Hagåtña WWTP. The CIP does not currently include the secondary treatment upgrade projects as the Authority expects to obtain compliance schedules that will permit the Authority to delay implementation of the secondary treatment requirements until after the provisions and capital requirements of the 2011 Court Order have been satisfied. See "REGULATORY ENVIRONMENT—Environmental Regulations—Compliance with the CWA—Wastewater System."

In connection with the proposed U.S. military build-up in Guam, it is expected that a new wastewater collection system will be constructed on property owned by the DoD, which will tie into the Authority's wastewater collection system. The wastewater will then be conveyed to the Northern District WWTP for treatment and disposal. In the Record of Decision, issued in August 2015, the DoD acknowledged that the proposed military build-up is expected to increase wastewater flows by 1.2 MGD, which would have a significant indirect impact on the Northern District wastewater system. As discussed above, the Northern District WWTP requires secondary treatment upgrades to comply with the NPDES Permit. If the military build-up progresses, the Authority expects to receive federal funding for certain improvements to the Wastewater System, including for providing secondary treatment at

the Northern District WWTP. The estimated costs of these improvements for the Northern District wastewater system and the aquifer lens well monitoring program described above is approximately \$173.9 million. The DoD has offered to provide funding to initiate these projects and to meet the proposed schedule for the build-up. The receipt of such federal funding, however, is subject to a number of conditions. The CIP does not include such improvements or expected funding. See "REGULATORY ENVIRONMENT—Environmental Regulations—Compliance with the CWA—Wastewater System" and "FUTURE SYSTEM CAPITAL REQUIREMENTS—Proposed U.S. Military Relocation and Installations."

The remaining wastewater treatment plants are smaller plants that serve villages or platted subdivisions on other areas of Guam. The Agat-Santa Rita wastewater treatment plant, the Baza Gardens wastewater treatment plant and the Umatac-Merizo wastewater treatment plant (the "Agat-Santa Rita WWTP," the "Baza Gardens WWTP" and the "Umatac-Merizo WWTP," respectively) have been unable to consistently meet the requirements of their respective NPDES permits. Both the 2011 Court Order and the CIP include projects to address these issues. Construction of a new Agat-Santa Rita WWTP facility is expected to begin in early 2016 and to be complete in mid-2017. Upon completion of the new Agat-Santa Rita facility, the Authority expects to convert the existing Agat-Santa Rita WWTP facilities into a flow stabilization basin. The new Agat-Santa Rita facility is designed to handle the flows from both the existing Agat-Santa Rita WWTP and Baza Gardens WWTP facilities, as well as to accommodate additional capacity in the future. Consistent with an evaluation completed by the Authority in April 2014, the Authority is planning to convert the existing Baza Gardens WWTP to a flow stabilization facility and to convey flow by pumps to the new Agat-Santa Rita facility. The Authority expects to start design work for the conversion by February 2016 and expects to complete the construction of the project in 2018. In the interim, the Authority is making repairs and improvements to the Agat-Santa Rita WWTP and the Baza Gardens WWTP to address more immediate concerns.

See "REGULATORY ENVIRONMENT—Environmental Regulation—Compliance with the CWA—Wastewater System" and "FUTURE SYSTEM CAPITAL REQUIREMENTS."

# Leak Detection Program and Leak Management System

#### [GWA TO REVIEWUPDATED//CONFIRM]

Historically, one of the Authority's most challenging problems has been the amount of water that is unaccounted for by the Authority and for which the Authority is not compensated. One of the main sources of non-revenue water is water leaks in the System, which result in higher operating costs to the Authority.

As part of its efforts to reduce non-revenue water within the System, the Authority initiated a Leak Detection Program in May 2004. As part of the Leak Detection Program, a team of Authority employees searched Guam for significant System leaks. In January 2009, the Authority hired another engineering firm to conduct a three-year leak detection study of the Authority's entire water system with definitive targeted goals, including discovering and reporting incidents of water theft, training Authority employees in modern leak detection techniques using state-of-the art equipment, conducting a system audit and transferring the equipment at the conclusion of the contract. The Authority's leak repair crews were tasked with repairing the leaks once discovered and significant resources, both in personnel and equipment, were dedicated to the task. The average leak repair time in Fiscal Year 2011 was 38 days.

In December 2011, the Authority implemented a proactive leak management system ("Leak Management System") substantially reducing the time to repair leaks. Since the implementation of the Leak Management System, the average leak repair time decreased from 38 days to 3.7 days in 2013. After repairing the leaks that were easiest to address, the average leak repair time has increased to 9 days in Fiscal Year 2015, which still represents a significant improvement from Fiscal Year 2011.

In 2012, the Authority also developed a pipeline prioritization and replacement model for costs of addressing leaks and rehabilitate or replace pipelines, which projects are included in the CIP.

Based in part on decreases in non-revenue water resulting from the Authority's Leak Detection Program and Leak Management System, purchases by the Authority of water from the Navy decreased during Fiscal Year 2015 to 653 MGD. For additional information regarding historical and projected water supply requirements and non-revenue water, see Table 4 above under "—The Water System—Water Supply."

# The Authority's Largest Customers

Tables 5 and 6 below show the Authority's ten largest water customers and wastewater customers, respectively, for the Fiscal Year ended September 30, 2016.

Table 5 Guam Waterworks Authority Ten Largest Water Customers for Fiscal Year 2016

		ANNUAL	PERCENT OF ANNUAL
<b>CUSTOMER NAME</b>		<b>REVENUE</b>	<b>GROSS REVENUE</b>
1. MDI Guam Corporation/Leopalace		\$1,222,035	1.84%
2. Pacific Islands Club		1,084,985	1.63
3. Hotels of the Marianas Inc.		1,026,983	1.54
4. Pacific Star Resort & Spa		850,076	1.28
5. Sheraton Laguna Guam Resort		794,407	1.19
6. Hyatt		789,528	1.19
7. Hotel Nikko Guam		778,380	1.17
8. Outrigger Guam Resort		644,931	0.97
9. MDI Guam Corporation/Westin		637,657	0.96
10. Guam Reef Hotel Inc.		583,729	0.88
	Total	\$8,412,712	12.65%

Source: Guam Waterworks Authority

Table 6 Guam Waterworks Authority Ten Largest Wastewater Customers for Fiscal Year 2016

	ANNUAI	PERCENT OF ANNUAL	
CUSTOMER NAME	REVENU:	E GROSS REVENU	<u>E</u>
1. Air Force DOD	\$4,043,80	06 10.57%	
2. Navy DOD	2,261,09	5.91	
3. Hotels of the Marianas Inc.	1,098,53	38 2.87	
4. Pacific Star Resort & Spa	908,54	15 2.37	
5. Sheraton Laguna Guam Resort	850,15	52 2.22	
6. Hyatt	844,91	2 2.21	
7. Hotel Nikko Guam	831,54	16 2.17	
8. Outrigger Guam Resort	691,01	3 1.81	
9. MDI Guam Corporation/Westin	681,80	1.78	
10. Guam Reef Hotel Inc.	623,89	00 1.63	
To	stal \$12,835,30	33.55%	

Source: Guam Waterworks Authority

#### New Water and Sewer Installations; System Development Charge

Tables 7 and 8 below summarize the new water installations and new sewer installations, respectively, for the Fiscal Years ended September 30, 2012 through 2016.

Table 7 Guam Waterworks Authority New Water Installations Fiscal Years 2012-2016

<b>Customer Type</b>	2012	2013	2014	2015	2016
Residential	587	289	279	320	440
Irrigation	0	2	0	0	0
Hotel	0	0	3	0	0
Government	2	1	0	2	4
Federal	0	0	0	0	1
Commercial	45	51	38	46	51
Golf Course	0	0	0	0	0
Agricultural	18	21	11	1	12
Total	652	364	331	369	508

Source: Guam Waterworks Authority

Table 8
Guam Waterworks Authority
New Sewer Installations
Fiscal Years 2012-2016

<b>Customer Type</b>	2012	2013	2014	2015	2016
Residential	159	74	87	84	133
Irrigation	0	0	0	0	0
Hotel	0	0	0	0	0
Government	0	1	0	3	1
Federal	0	0	0	0	0
Commercial	24	13	11	5	14
Golf Course	0	0	0	0	0
Agricultural	0	0	0	0	0
Total	183	88	98	92	148

Source: Guam Waterworks Authority

Guam law required the Authority to develop and implement a Water and Sewer System Development Charges (the "SDCs"). After approval by the CCU and the PUC, the SDCs were implemented in March 2010. The SDCs are one-time fees assessed on each user connecting property to the Authority's water or wastewater systems, as applicable, for the first time or on each builder if the density of development on an existing connection is increased. The SDCs are payable at the time of construction permitting, however, certain qualified residential customers are allowed to amortize the SDCs over a specified time period. Although the SDCs may vary depending on water meter size, a typical combined water and wastewater SDC for a new residential connection is \$5,600. The revenues generated by the SDCs are not included in the Revenues pledged under the Indenture, but are to be applied to the costs associated with the construction, expansion, upgrading and repair of water and wastewater facilities resulting from such connections or to pay the principal of, interest on and other financing costs related to, debt obligations incurred by or on behalf of the Authority to pay such costs. Table 9 below sets forth the SDC revenues received by the Authority for the Fiscal Years ended September 30, 2012 through 2016.

# Table 9 Guam Waterworks Authority Water and Sewer System Development Charges Fiscal Years 2012-2016

2012	2013	2014	2015	2016
\$1,142,025	\$1,369,778	\$1,632,755	\$1,181,254	\$1,428,332

Source: Guam Waterworks Authority

[Update to reflect most recent info]]Although the numbers of new water system installations and new wastewater system installations decreased significantly in Fiscal Year 2013, as indicated in Tables 7 and 8, the revenues generated from the SDCs increased in Fiscal Year 2013 and continued to increase in Fiscal Year 2014 because a large number of the new water and/or wastewater customers in such Fiscal Years were large, commercial customers. The Authority expects to finance a portion of the CIP with revenues generated from the SDC.]

See "FUTURE SYSTEM CAPITAL REQUIREMENTS," and APPENDIX B - "FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS' REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015," Note 15.

#### **Meter Replacement Programs**

#### **Customer Meters**

To address historic problems with identifying and reading meters, irregular meter locations and aging meter stock, the Authority initiated the automated meter reading program. The Authority purchased radio read meters that can be read remotely based on a signal sent out from a transmitter attached to the meters and began meter installation in 2005. However, the Authority began to experience problems with these meters as early as 2007. The Authority began replacing meters in late 2007, and then in 2008 became aware that the reliability of the new meters of all sizes was substantially less than expected. In September of 2009, the Authority established a meter task force to fix the problem. In late 2011, the Authority's General Manager determined that the solution was to replace the meters

**[TO BE UPDATED BY GWA]** In August 2012, the Authority began replacing the defective meters with new Badger meters. As of January 2016, the Authority had replaced all but 44 (representing the most difficult to replace) of the approximately 41,300 defective meters. The meter replacement program has contributed to increases in the Authority's operating revenues since Fiscal Year 2011. With over 34,000 Badger meters installed since August 2012, the successful electronic read percentage has consistently been maintained above 95 percent, resulting in more accurate and timely meter reads for monthly billing. The data logging features provided by the new Badger meters also allow for improved and more timely customer service.

#### Master Flow Meters and Production Meters

[TO BE UPDATED BY GWA] The Authority has initiated a program to replace its master flow meters in the distribution system to assist in identifying water use and water loss. Because of the difficulty in reaching the water flow meters, many of which are underground, only approximately 10% of the master flow meters have been replaced. The Authority has also initiated a program to replace production meters on wells to more accurately measure production pumping of groundwater.

#### Billing, Collections and Enforcements

**TO BE FURTHER UPDATED BY GWA** Table 10 shows a comparison of the Authority's typical combined monthly water and wastewater bills for selected residential, commercial and large commercial usage levels to bills charged by other water and wastewater utilities.

# Table 10 Typical Combined Monthly Water and Wastewater Bills Based on Fiscal Year 2017 Tariff

	Customer Class	•
		Large
Residential	Commercial	Commercial
\$91.88	\$711.72	\$287,054.05

Cuctomor Close

The Authority<sup>(1)</sup>
American Samoa
City and County of Honolulu
Commonwealth Utilities Commission -- Saipan
County of Hawaii
County of Kauai
County of Maui

The Authority historically had a large number of delinquent accounts (accounts that are more than 90 days old) due to the past absence of a consistent and rigorous enforcement of a disconnection policy. Bringing the delinquent accounts under control was a tremendous challenge during the early years of CCU governance, both because of the sheer number of delinquent accounts and difficulties in locating the meters. The Authority has made considerable progress in the last several years; however, there is still work to be done to bring the receivable accounts into compliance with industry best practices.

The Authority implemented an online and telephone payment system on October 1, 2010, which provides its customers with the option of paying their bills using a credit card. By [September 30, 2016], there had been over [57,890] transactions totaling over [\$5.3] million in online payments. The Authority has also implemented a late payment collection program. Under the program, all bills are due 15 days after the billing date. The Authority may discontinue service for non-payment upon providing advance written notice at least ten (10) days prior to the termination date. The program requires the Authority to make all reasonable efforts to collect all past due bills, including employing a collection agency.

As of September 30, 2016, Accounts Receivable were approximately \$[\_\_\_\_] million, approximately \$[\_\_\_\_] million or about [\_\_\_\_] percent of which are doubtful for collection. Table 11 below sets forth the collection data for the Authority for Fiscal Years 2012 through 2016. See APPENDIX B – "FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS' REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015," Notes 2 and 4.

<sup>(1)</sup> Authority rates based on monthly rates effective from October 2015. Source: Guam Waterworks Authority

# Table 11 Guam Waterworks Authority Collection Data Fiscal Years 2012 through 2016<sup>(1)</sup>

	2012	2013	2014	2015	2016
Cash Received from	\$67,011,385	\$70,625,478	\$79,246,281	\$89,961,908	\$103,737,840
Customers					
Total Revenues	\$68,370,500	\$73,791,724	\$81,088,329	\$92,930,050	\$105,328,275
Collection Ratio	98%	96%	98%	97%	98%

<sup>(1)</sup> Based on the Authority's audited financial statements. Does not include SDCs and bad debt recovery. Source: Guam Waterworks Authority

# **Non-Discrimination Policy**

In February 2003, the CCU mandated that a disconnection practice be established on a regular and ongoing basis and that all customers, including Government of Guam accounts, be subject to the same disconnection policy. The Authority's disconnection target is to schedule disconnection when a customer becomes 30 days delinquent and to ensure all such customers are disconnected before they become 45 days delinquent.

#### **Debt Service Coverage**

#### [TO BE UPDATED]

As discussed above, the Authority has covenanted in the Indenture to at all times fix, prescribe and collect rates, fees and charges in connection with the services furnished by the System which will be sufficient to yield the sum of Net Revenues during each Fiscal Year equal to at least 1.25 times the Aggregate Annual Debt Service for such Fiscal Year (the "Debt Service Coverage Ratio"). Although the Authority did not satisfy the Debt Service Coverage Ratio in some prior Fiscal Years, since Fiscal Year 2010, the Authority has generated Net Revenues sufficient to satisfy the Debt Service Coverage Ratio required under the Indenture. See "SECURITY AND SOURCE OF PAYMENT FOR THE BONDS—Rate Covenant" and "HISTORICAL AND PROJECTED OPERATING RESULTS."

In October 2004, the PUC adopted a policy of providing rates sufficient to ensure that the Authority's debt service coverage ratio would not drop below 1.75x of aggregate annual debt service (the "PUC DSCR"). The PUC established the policy to help ensure that the Authority would generate Net Revenues sufficient to meet the Rate Covenant and to provide sufficient ongoing equity in the System. In Fiscal Years 2010 and 2011, the Authority did not generate Net Revenues sufficient to satisfy the PUC DSCR set forth in the PUC rate policy; however, the Authority did meet the PUC DSCR in Fiscal Years 2012 through 2015. For purposes of determining compliance with the PUC DSCR, the Authority is permitted to take into account not only Net Revenues, but also other available funds of the Authority, including amounts on the deposit in the Working Capital Debt Service Reserve Account established in May 2014. See "THE SYSTEM – Debt Service Coverage" and "—Additional Reserves," "REGULATORY ENVIRONMENT—Regulation of Ratemaking" and "HISTORICAL AND PROJECTED OPERATING RESULTS."

#### **Funding of Required Reserves**

# [TO BE UPDATED]

The Authority covenants under the Indenture to maintain two funds: the Operation and Maintenance Fund, available for working capital purposes, and the Operation, Maintenance, Renewal and Replacement Reserve Fund, available for emergency renewals, replacements and other contingency items. At various times during Fiscal Years 2008 and 2009, the balances of those funds were lower than as required under the Indenture, and the Authority did

not have sufficient Revenues to replenish them at the rate required under the Indenture. To address this issue, the Authority applied a portion of the proceeds received from the Subordinate Loan incurred in June 2010 to fill these two funds to the required levels. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS—Subordinate Obligations." Since June 2010, the Authority has maintained both of these funds at the required levels. The required balance for the Operation and Maintenance for Fiscal Year 2017 is [\$3.0] million, and as of January \_\_\_, 2017, the balance of such fund is [\$3.0] million. The required balance for the Operation, Maintenance, Renewal and Replacement Reserve Fund for Fiscal Year 2017 is [\$17.4] million, and as of January \_\_\_, 2017 such amount is on deposit in the fund.

#### **Additional Reserves**

In May 2014, the CCU adopted policies providing for establishing within the Capital Improvement Fund a Working Capital Reserve for O&M account (the "Working Capital O&M Reserve Account") and a Working Capital Reserve Debt Service Account (the "Working Capital Debt Service Reserve Account").

#### [TO BE UPDATED]

The Authority established the Working Capital O&M Reserve Account to provide additional liquidity to assist the Authority in addressing unforeseen obligations and unexpected, short-term cash flow demands. Amounts on deposit in the Working Capital O&M Reserve Account are available to pay Operation and Maintenance Expenses if the Authority's then-current cash flow is insufficient to pay such expenses. The Chief Financial Officer is authorized to draw up to \$250,000, subject to the prior approval of the General Manager; prior CCU approval is required for any draw greater than \$250,000. The Working Capital O&M Reserve Account is to be funded in monthly installments over a five year period such that at the end of the fifth year, the amount on deposit in the Working Capital O&M Reserve Account requirement is subject to annual review and adjustment during the regular budgeting and rate-setting process. As of January \_\_\_\_, 2017, approximately [\$2.5] million is on deposit in the Working Capital O&M Reserve Account.

The Authority established the Working Capital Debt Service Reserve Account to assist the Authority in complying with the additional debt service coverage requirement required under the PUC DSCR policy. Amounts on deposit in the Working Capital Debt Service Reserve Account are to be used solely to supplement Net Revenues for purposes of determining compliance with the PUC DSCR and may not be taken into account for purposes of determining compliance with the Debt Service Coverage Ratio required under the Indenture. The amounts in the Working Capital Debt Service Reserve Account may not be withdrawn for any purpose unless the CCU approves the withdrawal. The Working Capital Debt Service Reserve Account is to be funded in monthly installments over a five year period such that at the end of the fifth year, the amount on deposit in the Working Capital Debt Service Reserve Account will be equal to the amount necessary, when combined with the Net Revenues for the then-current Fiscal Year, to satisfy or exceed the PUC DSCR. The Working Capital Debt Service Reserve Account requirement is subject to annual review and adjustment during the regular budgeting and rate-setting process. As of January \_\_\_\_, 2017, approximately [\$4.6] million is on deposit in the Working Capital Reserve Account for Debt Service. See "REGULATORY ENVIRONMENT—Regulation of Ratemaking."

# **Security Measures**

[ANY UPDATES?] As required by the 2011 Court Order, the Authority timely completed and filed with the USEPA a vulnerability assessment on all of its public water systems and completed an emergency response plan ("ERP"), which is incorporated into the Guam Emergency Response Plan.

#### **Labor and Employee Relations**

[TO BE UPDATED]

As of September 30, 2016, The Authority has approximately [308] employees. A majority of the Authority's employees are classified as employees of the Government and have the full protection of the Guam Civil Service System. Certain management positions and key skilled supervisory personnel hold unclassified positions.

The Guam Federation of Teachers ("GFT") has been recruiting non-management employees of the Authority. As of September 30, 2016, [51] employees, or approximately [16.6] percent of the Authority's employees, have joined the union. [STATUS?] In 2015, the GFT and the Authority negotiated a collective bargaining agreement, which is expected to be ratified in the first half of 2016. The GFT does not have the ability under Guam law to negotiate for wage and benefit adjustments and may engage in a strike only under very limited circumstances. The Authority's management believes that relations with its employees are positive.

## **Employees' Retirement Plan**

#### [TO BE UPDATED]

The Government of Guam Retirement Fund (the "Retirement Fund") provides retirement annuities and other payments to retired Government employees, including employees of the Authority, and their dependents. Employees hired before September 30, 1995 are members of the Government of Guam Employees Retirement System, a defined benefit pension plan (the "DB Plan"), and employees hired after September 30, 1995 are members of the new Defined Contribution Retirement System (the "DC Plan"). The DB Plan and the DC Plan are administered by the Government of Guam Retirement Fund (the "GGRF"). The GGRF issues a publicly available financial report that includes financial statements and required supplementary information for the DB Plan. As of September 30, 2014 (the most recent date for which such information is publicly available), there were a total of 14,859 members (active, inactive and retirees) in the DB Plan, and 8,181 active employees and 3,969 inactive members with account balances under the DC Plan. As of September 30, 2015, 51 Authority employees were members of the DB Plan and 251 Authority employees were members of the DC Plan.

The DB Plan is a single-employer (Government of Guam) plan to which the Authority contributes based upon a fixed percentage of the payroll for those employees who are members of the DB Plan. A single actuarial valuation is performed annually covering all DB Plan members, and the same contribution rate applies to each employer, including the Authority. Members of the DB Plan are required to contribute a certain percentage of their annual covered salary. The DB Plan member and employer contribution requirements are established, and may be amended, by the GGRF.

Based on the Government of Guam Retirement Fund Actuarial Valuation as of September 30, 2014, a revised version of which was issued on January 21, 2016 (as revised, the "2014 Valuation"), at September 30, 2014 the DB Plan had an actuarial accrued liability of approximately \$2.932 billion, with an unfunded actuarial accrued liability of approximately \$1.369 billion, or a funded ratio of 53.3%.

Under Title 4, Chapter 8, Section 8137 of the Guam Code Annotated, as amended, the Government of Guam is required to completely fund the unfunded actuarial accrued liability by 2031. The annual actuarial valuations prepared for the DB Plan include actuarial employer contribution rates intended to satisfy this requirement. The actuarial employer contributions rates set forth in the annual valuations apply to the fiscal year beginning one year after the valuation date. Based on the information provided in the 2014 Valuation and in prior valuations, the actuarial employer contribution rates for the fiscal years ended September 30, 2015, 2014, 2013, 2012 and 2011 were 29.85%, 33.03%, 30.76%, 30.09% and 28.06%, respectively, of covered payroll.

Although the actuarial contributions rates are provided to the Legislature of Guam by the GGRF in advance of each Fiscal Year and used for budget preparation, the Legislature of Guam is not required to adopt such rates. For the Fiscal Years ended September 30, 2013, 2012 and 2011, employers, including the Authority, funded lower statutory contribution rates of 30.09%, 28.30% and 27.46%, respectively, of covered payroll, based in part on Section 3 of Public Law No. 28-150, which provides that the employer contribution rate to the Retirement Fund are to increase over a five-year period, beginning with Fiscal Year 2007, until it reaches the actuarial recommended contribution rate. The contribution rate for Fiscal Year 2011 was further reduced to 21.44% for the period from June 4, 2011 to September 30, 2011 for most Government agencies. Statutory employee contribution rates for the DB Plan were 9.50% in each such Fiscal Year.

During the Fiscal Years ended September 30, 2015, 2014 and 2013, the Authority made contributions to the DB Plan in the amounts of \$1,096,069, \$1,191,600 and \$1,274,361, respectively, which amounts were equal to the required contributions for those years.

For the Fiscal Year ending September 30, 2016, the Legislature of Guam has adopted statutory employer and employee contribution rates of 28.16% and 9.5%, respectively. Based on the information provided in the 2014 Valuation, the actuarial employer contribution rate for the DB Plan the Fiscal Year ending September 30, 2016 is 28.16%.

Contributions to the DC Plan by members are based on an automatic deduction of 5% of the member's regular base pay. The contribution is periodically deposited into an individual annuity account within the DC Plan. The statutory employer contribution rate for the DC Plan for the years ended September 30, 2015, 2014 and 2013 were determined using the same employer statutory contribution rates as the DB Plan. Of such amounts contributed by the employers under the DC Plan, only an amount equal to 5% of the DC Plan member's regular base pay is deposited into the member's individual annuity account; the remaining amount is contributed towards the unfunded liability of the DB Plan. DC Plan members are fully vested upon the completion of five years of government service.

For the years ended September 30, 2015, 2014 and 2013, the Authority made contributions to the DC Plan toward the unfunded liability in the amounts of \$2,667,022, \$2,495,968, and \$2,374,906, respectively.

In June 2012, the Governmental Accounting Standards Board ("GASB") issued GASB Statement 68, Accounting and Financial Reporting for Pensions ("GASB 68"), requiring changes in how state and local governments calculate and report the costs and obligations associated with providing pension benefits. In October 2015, the GGRF published the Government of Guam Retirement Fund GASB 67 and 68 Disclosures as of September 30, 2014 (the "GASB 68 Report"), prepared by Milliman, Inc., the Government's Actuary. The GASB 68 Report included schedules for the allocation of net pension liability by component unit, to be used by employers required to implement GASB 68, including the Authority. Based on the information included in the schedules to the GASB 68 Report, the Authority's share of the Net Pension Liability (the present value of the unfunded portion of future benefits which have accrued) as of September 30, 2014 was approximately \$39 million. The implementation of GASB 68 had a material effect on the Authority's financial statements, resulting in the restatement of the Authority's financial statements for Fiscal Year 2014 to reflect the reporting of deferred outflows of resources relating to its pension plan of \$3,687,568, deferred inflows of resources related to its pension plan of \$2,303,348 and a Net Pension Liability of \$38,536,384, which also resulted in the restatement of the Authority's net position for Fiscal Year 2014. For Fiscal Year 2015, the Authority reported deferred outflows of resources relating to its pension plan of \$4,015,691, deferred inflows of resources related to its pension plan of \$3,568,590 and a Net Pension Liability of \$34,047,740.

See APPENDIX B - "FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS' REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015," Notes 2 and 8.

# **Other Post-Employment Benefits**

# [TO BE UPDATED]

The Government makes certain annual expenditures for certain postretirement healthcare benefits ("OPEBs") to retirees who are members of the GGRF. The Government provides medical, dental, and life insurance coverage. The retiree medical and dental plans are fully-insured products provided through insurance companies. The Government shares in the cost of these plans with its contribution amount set each year at renewal. Current statutes prohibit active and retired employees from contributing different amounts for the same coverage. As such, the Government contributes substantially more to the cost of retiree healthcare than to active healthcare. For the life insurance plan, the Government provides retirees with \$10,000 of life insurance coverage through an insurance company. Retirees do not share in the cost of this coverage. As of Fiscal Year ended September 30, 2014 (the latest Fiscal Year for which such information is available), the OPEB unfunded actuarial accrued liability for the Government was approximately \$1.369 billion.

The Governor's Executive Budget transmitted to the Legislature of Guam typically includes provisions to appropriate sums from the General Fund to accommodate the cost of living allowances, supplemental annuities and the medical and dental benefits (generally, the Government's share of the premiums for the retirees' insurance) for Government of Guam retirees, which the Government is currently paying on a "pay-as-you-go" basis. The Authority is then required to reimburse the General Fund for the OPEB costs of the Authority's retirees. The Authority applies revenues generated by the Legislative Surcharge to pay these costs. See "REGULATORY ENVIRONMENT—Regulation of Ratemaking."

For the years ended September 30, 2015, 2014 and 2013, the Authority made contributions in the amounts of \$3,491,101, \$2,518,851 and \$2,418,349, respectively, to reimburse the Government for the OPEB costs of the Authority's retirees.

See APPENDIX B – "FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS' REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015," Note 8.

# REGULATORY ENVIRONMENT

#### **Environmental Regulations**

# [TO BE REVIEWED/UPDATED BY GWA]

#### General

The Authority is subject to federal and Guam regulations governing water supply and wastewater treatment. The drinking water standards promulgated in the SDWA are the primary requirements for water supply. Wastewater treatment and disposal must comply with the water quality standards in the CWA. GEPA is the local agency responsible for monitoring Authority operations for compliance. Generally, GEPA regulations are the same as the federal standards, although the agency can implement more stringent requirements if GEPA determines it is necessary. GEPA and the USEPA jointly enforce environmental regulations on Guam, except that GEPA has primacy for establishing and enforcing water quality standards under the SDWA, while the USEPA has retained NPDES permit authority under the CWA.

In the past, the Authority has experienced difficulty in complying with SDWA and CWA regulations. In 2002, the USEPA filed a complaint against the Authority in the District Court seeking to appoint a receiver to address the Authority's inability to comply with the CWA and the SDWA. In part in response to concerns over continued non-compliance by the Authority, the Legislature of Guam created the elected CCU as the governing body of both the Authority and GPA, thereby removing the Authority, as well as GPA, from the direct control of the Government of Guam. Upon taking office in January 2003, the original members of the CCU were faced with more than \$25 million in debt and pending federal lawsuits for violations of water quality and environmental standards that had accumulated over the past several decades.

# The 2003 Stipulated Order and the 2011 Court Order

In November 2002, the newly elected members of the CCU met with the U.S. Attorney General and representatives from the USEPA to discuss whether or not the CCU could play a role in the rehabilitation of the Authority. As a result of these discussions, the USEPA and the Authority agreed to enter into the 2003 Stipulated Order, pursuant to which the Authority was afforded the opportunity to comply with federal water and wastewater regulations under the governance of the CCU. The 2003 Stipulated Order required the Authority to make specified improvements to the System and to undertake certain planning measures by specific dates. The Authority began implementing the specified projects, including, among other things, the completion in 2007 of the WRMP to serve as the basis for the Authority's long-term planning. The WRMP evaluated the condition of the Authority's facilities and outlined improvements over the subsequent 20 years necessary for regulatory compliance and System growth. The Authority did not meet all of the deadlines in the 2003 Stipulated Order, however, and the USEPA required it to pay fines in the aggregate amount of \$389,750 from 2004 through 2010.

In 2010, the USEPA requested that the District Court order the Authority to address the then-remaining incomplete items in the 2003 Stipulated Order, as well as certain additional actions or improvements, some of which were identified by the Authority in the WRMP. On November 10, 2011, the District Court issued the 2011 Court Order, which established deadlines for such projects and superseded the 2003 Stipulated Order and all prior orders. The 2011 Court Order contains a comprehensive list of management, operations, financial administration, facilities construction and rehabilitation and training requirements to be implemented in accordance with strict schedules. Many of those objectives have been established in the WRMP that was approved by the CCU and the USEPA. The 2011 Court Order is being administered directly by the USEPA through its Region 9 office in San Francisco. The Authority must submit all of the 2011 Court Order deliverables to the USEPA for review, and where noted, comment and approval. The Authority is required to provide quarterly progress reports to the USEPA and to the District Court covering all of the items stipulated in the 2011 Court Order. The Authority has made compliance with the 2011 Court Order a top priority and has, by and large, complied with the timelines set forth in the 2011 Court Order. As of January 6, 2016, for the 88 projects required under the 2011 Court Order, 61 projects were completed on time, 3 were completed after the required deadlines and 24 projects remain on-going or are pending, including 7 projects for which the required deadlines were missed. Since the issuance of the 2011 Court Order, the USEPA has not fined the Authority for missed compliance dates. The Authority also has not been required to conduct an updated status hearing with the District Court. The CIP includes projects required under the 2011 Court Order. The Authority currently expects to be in compliance with the scheduled requirements of the 2011 Court Order by 2021.

#### Compliance with the SDWA - Water System

**General.** As of January 6, 2016, treatment of the groundwater obtained by the Authority from its wells and from the Santa Rita spring and surface water from the Ugum Surface WTP complies with all SDWA requirements. In 2014, the Navy completed a study at the Fena WTP owned and operated by the Navy, which included a pilot project for an improved treatment process at the Fena WTP. During the course of the study, the Fena WTP was able to produce water in compliance with the Disinfection Byproducts Rule of the SDWA. The Authority is continuing to monitor the quality of the water from the Fena WTP in compliance with the SDWA.

Findings of Significant Deficiencies. On November 1, 2012, the USEPA issued a notice to the Authority pursuant to the SDWA that significant deficiencies (the "Findings of Significant Deficiencies") were found in the Authority's water system based on inspections and sanitary surveys conducted by the USEPA National Enforcement Investigations Center (the "NEIC"), including, among others, deficiencies in water sources, treatment systems, water quality monitoring, reporting and verification, compliance with the SDWA and water system management, operations and administration. The Authority submitted a formal response to the USEPA in April 2013, which formed the basis of a corrective action plan adopted by the Authority and the USEPA in 2014. Of the 40 items identified in the Findings of Significant Deficiencies, 26 have been addressed and no further action is required, ten are already being addressed under the 2011 Court Order and four are part of long-term, continuous planning processes, including operator certification, training, asset management and preventative maintenance. The CIP includes projects to address items identified in the Findings of Significant Deficiencies. See "THE SYSTEM – Water System" and "FUTURE CAPITAL REQUIREMENTS."

# Compliance with the CWA - Wastewater System

National Pollutant Discharge Elimination System Permits. Until June 2013, the Authority's two largest wastewater treatment plants, the Northern District WWTP and the Hagåtña WWTP, operated under secondary treatment variances issued by the USEPA under the CWA, which permitted the Authority to discharge primary effluent into the Philippine Sea. Effective as of June 1, 2013, the NPDES permits for the Northern District WWTP and the Hagåtña WWTP include secondary treatment requirements; however, neither wastewater treatment plant is equipped to provide secondary treatment. The Authority and the USEPA are currently negotiating secondary treatment compliance schedules for the Northern District WWTP and the Hagåtña WWTP. The Authority estimates that the design and construction necessary to satisfy the secondary treatment requirements will take approximately five years for each plant and estimates the cost of upgrading both treatment plants to satisfy the secondary treatment requirements to be approximately \$277 million. The CIP does not currently include the secondary treatment upgrade projects as the Authority expects to obtain compliance schedules that will permit the

Authority to delay implementation of the secondary treatment requirements until after the provisions and capital requirements of the 2011 Court Order have been satisfied.

In connection with the proposed U.S. military build-up in Guam, the Authority expects to receive federal funding for certain improvements to the Wastewater System, including for providing secondary treatment at the Northern District WWTP. These projects are not included in the CIP. The receipt of federal funding for these projects is subject to a number of conditions. See "THE SYSTEM—Wastewater System—Wastewater Treatment Plants" and "FUTURE SYSTEM CAPITAL REQUIREMENTS—Proposed U.S. Military Relocation and Installations."

In addition, the Agat-Santa Rita WWTP, the Baza Gardens WWTP and the Umatac-Merizo WWTP have been unable to consistently meet the requirements of their respective NPDES permits. Both the 2011 Court Order and the CIP include projects that will help the Authority address these issues. The Authority submitted evaluations for capacity, performance and treatment alternatives for the Umatac-Merizo WWTP and the Baza Gardens WWTP to the USEPA in December 2013 and April 2014, respectively, for review and comment. The NPDES permit for the Umatac-Merizo WWTP was renewed effective September 2015. The Authority has prepared engineering studies and I/I analyses and SSES to address issues with lagoon overflow and collection systems, and improvements and repairs are included in the CIP. The Authority expects that projects currently underway at the facility and that additional operational and monitoring improvements expected to be completed by March 2017 will help it maintain more consistent compliance at the Umatac-Merizo WWTP under more extreme conditions.

As mentioned above, construction of a new Agat-Santa Rita WWTP facility is expected to begin in early 2016 and is expected to be complete in mid-2017. The new Agat-Santa Rita WWTP facility has been designed to handle the flows from both the existing Agat-Santa Rita WWTP and Baza Gardens WWTP facilities, as well as to accommodate additional capacity in the future. The Authority has prepared engineering studies and I/I analyses and SSES to address issues with collection systems for both facilities and plans to begin repairs to address these concerns.

The USEPA is in the process of issuing a new NPDES permit for the Agat-Santa Rita WWTP and is allowing the plant to continue operating while the new NPDES permit is developed; however, the new Agat-Santa Rita WWTP will require updates to the NPDES permit. The USEPA is also in the process of renewing the NPDES permit for Baza Gardens WWTP and has authorized continued operation of the plant while the new permit is being written. Although the Authority currently plans to remove the Baza Gardens WWTP from service by 2018, the Authority plans to retain the permit.

Request for Information. On May 30, 2013, the USEPA issued to the Authority a request for information under the CWA (the "Request for Information"), based on the inspection conducted by the NEIC in April and May 2012 of the Authority's NPDES-permitted wastewater treatment plants, pumping stations and collection systems. In August 2013, the Authority issued a response to the USEPA indicating that of the 72 findings and 16 sub-findings referenced in the Request for Information, 37 have been addressed and completed and another 28 are already being addressed under the 2011 Court Order (four of which have been completed). The remaining 23 are either part of long-term, continuous planning processes or are being monitored by the Authority. The Authority continues to meet regularly with the USEPA to discuss the remaining 23 items and to develop a corrective action plan, if necessary. The CIP includes projects to address items identified in the Request for Information. See "THE SYSTEM – Wastewater System" and "FUTURE CAPITAL REQUIREMENTS."

# Other Environmental Regulations

In addition to the water and wastewater regulations discussed above, the Authority must also comply with other applicable environmental requirements, including, but not limited to, air emission standards for standby diesel generators, regulations related to above-ground and underground petroleum storage tanks, regulations under the Clean Air Act and various health and safety regulations regarding work performed by the Authority's employees (including voluntary compliance with the Occupational Health and Safety Act).

#### **Regulation of Ratemaking**

The Authority's ratemaking is regulated by the PUC, which is comprised of a seven member board appointed by the Governor and confirmed by the Legislature of Guam. The Authority and the CCU establish water and wastewater rates and charges and present them to the PUC for review and approval. The laws of Guam require that the PUC set rates that are just and fair and are adequate to provide revenues sufficient to pay for all prudent acts of owning, properly maintaining and operating the System, and may require the Authority's rates to be adjusted upwards or downwards at any time to meet these conditions.

[TO BE UPDATED] In October 2004, the PUC adopted a policy of providing rates sufficient to ensure that the Authority's debt service coverage ratio would not drop below 1.75x PUC DSCR. The PUC established the policy to ensure that the Authority would generate Net Revenues sufficient to meet the Rate Covenant and to provide sufficient ongoing equity in the System. In Fiscal Years 2010 and 2011, the Authority did not generate Net Revenues sufficient to satisfy the PUC DSCR set forth in the PUC rate policy; however, the Authority did meet the PUC DSCR in Fiscal Years 2012 through 2015. For purposes of determining compliance with the PUC DSCR, the Authority is permitted to take into account not only Net Revenues, but also other available funds of the Authority, including amounts on the deposit in the Working Capital Debt Service Reserve Account established in May 2014. See "THE SYSTEM – Debt Service Coverage" and "—Additional Reserves" and "HISTORICAL AND PROJECTED OPERATING RESULTS."

# **Historical Rate Adjustments**

#### [TO BE UPDATED]

Since April 1, 2004, the Authority has adjusted its basic and non-lifeline water and wastewater rates 12 times for various reasons. During this time period, the PUC has granted all of the Authority's rate adjustment requests, although in some cases, not in the full amount requested. These rate adjustments, their effective dates and principal reasons for such adjustments are set forth in Table 12 on the following page.

Table 12 Historical Basic and Non-Lifeline Rate Adjustments

	Rate A	djustment	
<b>Effective Date</b>	Water	Wastewater	Principal Reason for Adjustment
April 1, 2004	7.50%	7.50%	Base rate increase to fund projects required under the 2003 Stipulated Order.
October 14, 2004	6.50%	6.50%	PUC increased rates to fund projects required under the 2003 Stipulated Order.
February 1, 2006	3.00%	3.00%	Future financial and legal obligations.
September 1, 2007	14.24%	14.24%	Debt service for the 2005 Bonds.
April 1, 2009	6.60%	6.60%	Base rate increase due to increases in power and water purchases costs.
August 1, 2009	14.00%	14.00%	Base rate increases to provide sufficient Net Revenues to satisfy PUC DSCR.
October 1, 2010	8.00%	8.00%	Base rate increases to cover employee health insurance, cost of living allowance and property insurance.
October 1, 2011	12.77%	12.77%	Base rate increases to provide sufficient Net Revenues to satisfy PUC DSCR.
February 1, 2013	6.10%	6.10%	Base rate increases to provide sufficient Net Revenues to satisfy PUC DSCR.
November 1, 2013	15.00%	15.00%	Base rate increase to finance projects required under the 2011 Court Order, to address items identified in the Findings of Significant Deficiencies and the Request for Information and to provide sufficient Net Revenues to comply with the Rate Covenant and the PUC DSCR.

December 1, 2014	14.50%	14.50%	Base rate increase to provide sufficient Net Revenues to
	14.50%	14.50%	comply with the Rate Covenant and the PUC DSCR.
October 1, 2015	16.50%	16.50%	Base rate increase to provide sufficient Net Revenues to
10.30% 10.		10.30%	comply with the Rate Covenant and the PUC DSCR.

Source: Guam Waterworks Authority.

In January 2004, the Authority filed its first rate petition with the PUC, which resulted in a 7.5 percent increase in basic and non-lifeline rates, effective in April 2004. The PUC agreed to continue to review information as it became available relative to the Authority's financing plans and the related costs. The continued review resulted in an additional rate increase of 6.5 percent that took effect in October 2004 and the creation of a rate plan that allows the Authority to incrementally increase rates in anticipation of the debt service associated with System rehabilitation. The PUC also granted an additional surcharge to fund health insurance benefits for the Authority's retirees ("Legislative Surcharge" or, as it is sometimes referred to, the "Retirement Benefits Surcharge"), effective April 1, 2004. See "THE SYSTEM—Other Post-Employment Benefits."

In July 2009, the PUC approved a five-year rate plan (the "2009-13 Rate Plan"), which included scheduled rate increases through Fiscal Year 2013, subject to annual review and approval by the PUC.

In February 2013, the CCU adopted the new five-year rate plan, which includes proposed scheduled rate adjustments for basic and non-lifeline and lifeline water and wastewater rates for Fiscal Years 2014 through 2018 (the "2014-18 Rate Plan"), representing a compounded rate increase through Fiscal Year 2018 of approximately 71 percent. The 2014-18 Rate Plan also includes rate adjustments for the Legislative Surcharge. On October 29, 2013, the PUC approved the scheduled rate adjustments set forth in the 2014-18 Rate Plan. The actual implementation of the annual rate adjustments is subject to the PUC's annual review and prior approval, based on the Authority's actual financial performance and needs. Fiscal Years 2014, 2015 and 2016 proposed rate increases were approved and implemented. The adopted basic and non-lifeline rate adjustments for Fiscal Years 2014, 2015 and 2016 are set forth in Table 12 above. The current Legislative Surcharge rate is 3.25 percent. The future proposed rate adjustments in the 2014-18 Rate Plan are set forth in Table 13 below.

Table 13 2014-18 Rate Plan Proposed Future Rate Adjustments

	FY 2017	FY 2018
Basic & Non-Lifeline Increase <sup>(1)</sup>	7.00%	4.00%
Lifeline Increase <sup>(1)</sup>	7.00%	0.00%
Legislative Surcharge	2.79%	2.66%

<sup>(1)</sup> The Authority designs lifeline rates to assist residential customers using 5,000 gallons or less per month, and the Authority charges all residential customers a lifeline rate for the first 5,000 gallons of usage per month.

Source: Guam Waterworks Authority

The Authority expects that the revenues generated by the rate adjustments set forth in the 2014-18 Rate Plan will provide additional funds for the Authority to undertake revenue funded capital improvement projects, including projects required under the 2011 Court Order and to address items identified in the Findings of Significant Deficiencies and the Request for Information, to ensure compliance with the Rate Covenant and the PUC DSCR and to allow for more gradual increases in Authority rates in the future, thereby minimizing to the extent possible sudden rate increases for the Authority's ratepayers. See "HISTORICAL AND PROJECTED OPERATING RESULTS."

The PUC had previously granted a surcharge rate increase to the Authority (referred to as the "Navy/GPA Surcharge") to enable the payment of a large debt owed to the GPA, amounts owed to the PUC and Guam Telephone Authority, to pay for ongoing regulatory fees to the PUC and, eventually, to pay the debt to the United States Treasury for amounts owed to the Navy. As of July 2012, the Navy/GPA Surcharge was discontinued, as the Authority's obligations to the Navy and GPA had been paid in full.

#### FUTURE SYSTEM CAPITAL REQUIREMENTS

# **Capital Improvement Program**

# [TO BE UPDATED]

The Authority's Capital Improvement Program for Fiscal Years 2015 through 2020, in compliance with the 2011 Court Order, is described below. The capital cost of implementing the entire CIP for Fiscal Years 2015-2020 has been estimated at approximately \$404.1 million. Because the size of the Capital Improvement Program for Fiscal Years 2015 through 2020 is substantially larger than in past years, the Authority intends to enter into contracts with qualified construction management firms to manage most of the CIP projects being funded with the 2017 Bonds.

The Authority expects to finance the six-year CIP with a combination of proceeds of previously issued bonds, the 2017 Bonds and of Additional Bonds expected to be issued in Fiscal Year 2018, Authority operating revenues, System Development Charge revenues, USEPA State Revolving Fund grants and other grants. Over the last few Fiscal Years, the Authority has received a significant amount of USEPA State Revolving Fund grants to help finance a portion of its Capital Improvement Program, as shown in the Table 14 below.

Table 14 USEPA State Revolving Fund Grants

Grant No.	Description	Date	Amount
96902611	Original Award	September 13, 2010	\$2,000,000
	Amendment #1	October 14, 2011	11,151,302
	Amendment #2	March 2, 2012	6,767,588
	Amendment #3	October 2, 2012	8,876,341
	Amendment #4	September 26, 2013	8,279,959
	Amendment #5	September 8, 2014	1,185,927
96902615	Original Award	September 8, 2014	8,138,073
	Total		\$46,399,190

See "CERTAIN INVESTMENT CONSIDERATIONS – Implementation of the Capital Improvement Program."

Table 15 sets forth the allocation of projected CIP project costs among (i) water production, treatment, distribution and storage, (ii) wastewater collection and treatment, (iii) electrical, and (iv) general plant and miscellaneous, as well as the projected sources of funding for such projects.

Table 15 Capital Improvement Program and Sources of Funds Fiscal Years Ended September 30, 2015 through 2020 (\$000)

	2015	2016	2017	2018	2019	2020	Total
Capital Improvement							
Program							
Water Production, Treatment,							
Distribution and Storage	\$36,679	\$60,354	\$50,944	\$32,678	\$34,250	\$10,000	\$224,905
Wastewater Collection and							
Treatment	5,174	78,333	32,374	39,700	1,000	-	156,581
Electrical, Including							
Monitoring and Control	692	3,952	2,750	2,650	-	-	10,044
General Plant and							
Miscellaneous	1,311	5,725	3,100	1,200	1,200	-	12,536
Totals	\$43,857	\$148,364	\$89,168	\$76,228	\$36,450	\$10,000	\$404,067
Sources of Funds							
Proceeds of the 2010 Bonds	\$ 6,600	-	-	-	_		\$ 6,600
Proceeds of the 2013 Bonds	24,489	\$67,607	\$11,433	-	_	_	103,529
Proceeds of the 2017 Bonds	-	40,878	49,844	\$37,728	_	_	128,450
Proceeds of the 2018 Bonds	-	-	-	27,000	\$32,250	\$10,000	72,250
USEPA State Revolving Fund							
Grants	8,330	27,879	7,891	-	-	-	44,100
SDCs	2,800	2,000	500	\$ 500	-	-	5,800
Other Grants	1,638	-	-	-	-	-	1,638
Internally Funded CIP	-	10,000	19,500	11,000	1,200	-	41,700
Totals	\$43,857	\$148,364	\$89,168	\$76,228	\$36,450	\$10,000	\$404,067
	-						

Source: Guam Waterworks Authority

Major water production, treatment and distribution projects in the CIP include construction of additional reservoirs to increase water storage capacity, completion of the meter replacement program, replacement of failing, leaking and aging pipelines, possible adjustment of pressure zones, and development of new water production wells. Major wastewater collection and treatment projects in the CIP include construction of new wastewater treatment facilities that will incorporate provisions for redundancy to improve reliability, meet existing and future flow capacity and/or reliably achieve regulatory compliance. The CIP also includes electrical control and monitoring upgrades to the System and other miscellaneous improvements.

The CIP does not include (i) upgrade projects to address the secondary treatment requirements under the NPDES permits for Northern District WWTP and the Hagåtña WWTP or (ii) any projects related to the proposed U.S. military build-up described below under "—Proposed U.S. Military Relocation and Installations."

# Proposed U.S. Military Relocation and Installations

# [TO BE UPDATED]

In late July 2010, the Joint Guam Program Office of the Department of the Navy released its Final Environmental Impact Statement (the "EIS") pertaining to the proposed U.S. military build-up on Guam, and in September 2010 the Department of Defense ("DoD") issued its Record of Decision pertaining to the EIS. At the time the EIS was released, it was anticipated that the military build-up would have three major parts: relocation of part of the Third Marine Expeditionary Force from Okinawa, Japan, creation of the infrastructure for an aircraft

carrier berthing, and installation of an Army Air and Missile Defense Task Force. Together, these were anticipated to add approximately 32,000 permanent residents to the island, and to create a peak population increase of approximately 79,000 people in 2014.

The proposed U.S. military build-up subsequently has been delayed and now is not expected to occur until after 2018. In addition, the expected size of the build-up has decreased. In particular, the relocation of part of the Third Marine Expeditionary Force from Okinawa, Japan, is now expected to result in the relocation of approximately 5,000 marines with approximately 1,300 dependents over a 13-year period, rather than the approximately 8,600 marines and 9,000 dependents originally expected. In April 2014, the DoD released a draft Supplemental Environmental Impact Statement (2012 Roadmap Adjustments) (the "Draft SEIS"), which identified potential impacts associated with several alternatives for the cantonment/family housing component of this relocation, as well as for the live firing training range complex. The final Supplemental Environmental Impact Statement was completed in July 2015, and the final Record of Decision was issued in August 2015. Even with the decreased numbers of marines and dependents, the DoD estimates that the relocation will result in increased wastewater generation of approximately 1.2 MGD and increased demand for potable water of approximately 1.7 MGD. As discussed above, the Record of Decision acknowledges that these increases would result, respectively, in a localized significant indirect impact on the aquifer lens and in a significant indirect impact on the Northern District wastewater system. To help address these concerns, the DoD is considering providing support and funding to update and expand aquifer lens monitoring efforts and provide secondary treatment and related improvements at the Northern District WWTP.

The Authority does not currently expect the proposed U.S. military build up to materially affect the Authority's future capital requirements and has not included any capital improvements relating to the proposed U.S. military build-up in the CIP. Based on the Memorandum of Understanding (the "MOU") entered into in 2010 by the Authority and the DoD, the Authority expects that the DoD will be responsible for all direct and indirect impacts resulting from any build-up in order to avoid rate pressure on the Authority's civilian customers. Although the MOU does not bind either party to any financial commitments, the MOU does reflect that, among other things, the agreed-upon costs associated with meeting DoD requirements will be allocated to and paid for by the DoD through a utility agreement with the Authority. The estimated cost of the projects described above is approximately \$173.9 million. The DoD has offered to provide funding to initiate these projects and to meet the proposed schedule for the build-up. The receipt of such federal funding, however, is subject to a number of conditions, including appropriation. As of January 2016, Congress has released approximately \$106.4 million, and an additional \$20 million is expected to be released later in Fiscal Year 2016. The balance will be pursued in the future, based on more detailed plans and cost estimates. The National Defense Authorization Act for federal Fiscal Year 2016 amends restrictions on the development of public infrastructure on Guam to support the military build-up and authorized the use of funds for a public infrastructure project to improve water and wastewater systems on Guam if (i) the project is identified in a specified DoD report and (ii) funds have been appropriated or made available by the DoD for the project.

See APPENDIX A -- "CERTAIN DEMOGRAPHIC AND ECONOMIC INFORMATION REGARDING THE TERRITORY OF GUAM—Military Activity."

# HISTORICAL AND PROJECTED OPERATING RESULTS

## **Historical Operating Results**

# [TO BE UPDATED; TO DISCUSS PROJECTED OPERATING RESULTS]

The historical operating results for Fiscal Years [2012] through [2016] and projected operating results for Fiscal Years [2017] through [2021] are addressed in this section to allow a projection of debt service coverage in future years.

Table 16 below sets forth the Authority's historical operating results and debt service coverage for Fiscal Years [2012] through [2016]. The information in Table 16 has been extracted from the Authority's audited financial statements. [The Authority has elected to restate its financial statements for Fiscal Year 2014 to reflect the implementation of GASB 68. As presented in Table 16, the retiree and healthcare operating expenses for Fiscal

Years 2010 through 2012 reflect adjustments for certain costs related to retiree COLA payments that were not made previously in debt service coverage calculations for such Fiscal Years. See Note 6 to Table 16.]

See APPENDIX B - "FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS' REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015," Note 2.

Table 16 Historical Operating Results and Debt Service Coverage Fiscal Years Ended September 30, 2012 through 2016 <sup>(1)</sup> (\$000)

Audited				Unaudited
2012	2013	2014	2015	2016
\$39,807	\$45,349	49,899	56,746	64,552
23,935	25,828	27,904	32,679	37,370
3,115	2,153	2,712	2,798	2,887
701	462	574	707	520
\$67,558	\$73,792	\$81,089	\$92,930	\$105,328
\$5,263	\$4,571	5,179	5,099	6,374
17,016	17,508	16,426	14,026	11,226
18,891	20,059	19,176	19,720	16,452
3,069	3,734	2,681	2,793	4,154
1,958	2,098	1,995	2,907	3,348
5,423	6,960	7,729	8,827	9,411
\$51,620	\$54,930	\$53,186	\$53,372	\$50,965
\$15,938	\$18,862	\$27,903	\$39,558	\$54,364
10	11	6	11	25
\$15,948	\$18,873	\$27,909	\$39,569	\$54,389
\$15,948	\$18,873	\$27,909	\$39,569	\$54,389
\$7,708	\$7,704	12,592	13,970	22,225
2.07	2.45	2.22	2.83	2.45
\$15,948	\$18,873	\$27,909	\$39,569	\$54,389
		710	4.585	4,536
		, 10	.,000	-,,,,,,,
\$15,948	\$18,873	\$28,619	\$44,154	\$58,925
\$7,708	\$7,704	\$12,592	\$13,970	\$22,225
2.07	2.45	2.27	3.16	2.65
	\$39,807 23,935 3,115 701 \$67,558  \$5,263 17,016 18,891 3,069 1,958 5,423 \$51,620  \$15,938 10 \$15,948 \$7,708 2.07	2012         2013           \$39,807         \$45,349           23,935         25,828           3,115         2,153           701         462           \$67,558         \$73,792           \$5,263         \$4,571           17,016         17,508           18,891         20,059           3,069         3,734           1,958         2,098           5,423         6,960           \$51,620         \$54,930           \$15,938         \$18,862           10         11           \$15,948         \$18,873           \$7,708         \$7,704           2.07         2.45           \$15,948         \$18,873           \$15,948         \$18,873           \$7,708         \$7,704           \$15,948         \$18,873           \$7,708         \$7,704           \$15,948         \$18,873           \$7,708         \$7,704	2012         2013         2014           \$39,807         \$45,349         49,899           23,935         25,828         27,904           3,115         2,153         2,712           701         462         574           \$67,558         \$73,792         \$81,089           \$5,263         \$4,571         5,179           17,016         17,508         16,426           18,891         20,059         19,176           3,069         3,734         2,681           1,958         2,098         1,995           5,423         6,960         7,729           \$51,620         \$54,930         \$53,186           \$15,938         \$18,862         \$27,903           10         11         6           \$15,948         \$18,873         \$27,909           \$7,708         \$7,704         12,592           2.07         2.45         2.22           \$15,948         \$18,873         \$27,909           710         \$15,948         \$18,873         \$27,909           \$710         \$15,948         \$18,873         \$27,909	2012         2013         2014         2015           \$39,807         \$45,349         49,899         56,746           23,935         25,828         27,904         32,679           3,115         2,153         2,712         2,798           701         462         574         707           \$67,558         \$73,792         \$81,089         \$92,930           \$5,263         \$4,571         5,179         5,099           17,016         17,508         16,426         14,026           18,891         20,059         19,176         19,720           3,069         3,734         2,681         2,793           1,958         2,098         1,995         2,907           5,423         6,960         7,729         8,827           \$51,620         \$54,930         \$53,186         \$53,372           \$15,948         \$18,873         \$27,909         \$39,569           \$7,708         \$7,704         12,592         13,970           2.07         2.45         2.22         2.83           \$15,948         \$18,873         \$27,909         \$39,569           \$710         4,585           \$15,948         \$18,873

<sup>(1)</sup> Derived from information provided by the Authority extracted from the Authority's audited financial statements.

<sup>(2)</sup> For Fiscal Years 2012 through 2013, based on the 2009-13 Rate Plan. For Fiscal Years 2014 and 2015, based on the 2014-2018 Rate Plan.

<sup>(3)</sup> Includes Legislative Surcharge revenues.

<sup>(4)</sup> Includes, among other things, revenues from illegal connection fees, installation fees, reconnection fees, insufficient fund check fees, meter tampering charges, direct service fees, miscellaneous fees, trouble report water, rent (GTA lease), miscellaneous administrative fees, special readings, inspection fees, verification time tests, bench tests, meter relocation, planning and specifications and miscellaneous sewer revenues.

<sup>(5)</sup> Includes, among other things, audit, meter reading and computer maintenance, engineering, legal services, testing and miscellaneous other fees and expenses.

<sup>(6)</sup> Includes supplemental retiree payments and cost of living adjustments. For Fiscal Years 2010, 2011 and 2012 excludes cost of living adjustments in the approximate amounts of \$295,000, \$305,000 and \$305,000, respectively, previously included for purposes of determining debt service coverage.

<sup>(7)</sup> Includes sludge removal, chemicals, materials and supplies, building and equipment rentals, transportation expenses, telephone and communications expenses, claims, insurance, training, insurance, regulatory and bad debt expenses.

<sup>(8)</sup> Includes interest on Bond Reserve Fund.

<sup>(9)</sup> Amounts shown are net of capitalized interest.

<sup>(10)</sup> Calculated based on Current Revenues Available for Debt Service divided by Debt Service on Outstanding Bonds.

<sup>(11)</sup> Calculated based on Current Revenues Available for Debt Service divided by Debt Service on Outstanding Bonds. For purposes of determining compliance with the PUC DSCR, the Authority may take into account amounts on deposit in the Working Capital Debt Service Reserve Account.

Source: The Authority.

# **Projected Operating Results**

[TO DISCUSS YEARS COVERED, ASSUMPTIONS] Table 17 below sets forth projected operating results and debt service coverage for Fiscal Years [2016] through [2021]. The Authority does not as a matter of course make public projections as to future sales, earnings, or other results. However, the Authority has prepared the prospective financial information as set forth in Table 17 to provide projected water sales and wastewater revenues, cost of services, and operating results and debt service coverage. The accompanying prospective financial information was not prepared with a view toward complying with the guidelines established by the American Institute of Certified Public Accountants with respect to prospective financial information, but, in the view of the Authority's management, was prepared on a reasonable basis, reflects the best currently available estimates and judgments, and presents, to the best of management's knowledge and belief, the expected course of action and the expected future financial performance of the Authority. However, this information is not fact and should not be relied upon as being necessarily indicative of future results, and readers of this Official Statement are cautioned not to place undue reliance on the prospective financial information. Neither the Authority's independent auditors nor any other independent accountants have compiled, examined, or performed any procedures with respect to the prospective financial information contained herein, nor have they expressed any opinion or any other form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, the prospective financial information. The assumptions and estimates underlying the prospective financial information are inherently uncertain and, though considered reasonable by the management of the Authority as of the date of its preparation, are subject to a wide variety of significant business, economic, and risks and uncertainties that could cause actual results to differ materially from those contained in the prospective financial information, including, among others, risks and uncertainties as set forth in the Report. Accordingly, there can be no assurance that the prospective results are indicative of the future performance of the Authority or that actual results will not differ materially from those presented in the prospective financial information. Inclusion of the prospective financial information in this Official Statement should not be regarded as a representation by any person that the results contained in the prospective financial information will be achieved.

[TO BE UPDATED] Projected operating results for Fiscal Years 2017 through 2018 are based on the 2014-18 Rate Plan approved by the PUC in October 2013. Although the rate adjustments included in the 2014-18 Rate Plan have been approved by the PUC, the adjustments for Fiscal Years 2017 and 2018 remain subject to annual PUC review prior to implementation and there is no guarantee that the PUC will approve future rates at the times and in the amounts set forth in the 2014-18 Rate Plan.

[TABLE AND FOOTNOTES TO BE UPDATED]

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Table 17
Projected Operating Results and Debt Service Coverage
Fiscal Years Ending September 30, 2016 through 2021
(\$000)

	Unaudited	,		Projected		
	2016	2017	2018	2019	2020	2021
Operating Revenues:						
Water Revenues <sup>(1)</sup>	\$64,552	\$68,143	\$70,656	\$74,577	\$78,733	\$84,606
Wastewater Revenues <sup>(1)</sup> Additional Revenues <sup>(2)</sup>	37,370 2,887	39,414 3,461	40,641 3,599	42,557 3,815	44,588 4,044	47,457 4,367
Other Revenues (3)	520	525	525	525	525	525
Total Operating Revenues	\$105,328	\$111,542	\$115,421	\$121,474	\$127,889	\$136,956
Operating Expenses:						
Water Purchases <sup>(4)</sup>	\$6,374	\$8,117	\$8,238	\$8,362	\$8,487	\$8,615
Power Purchases <sup>(5)</sup>	11,226	12,742	12,933	13,127	13,324	13,524
Salaries and Wages <sup>(6)</sup> Contractual <sup>(7)</sup>	16,452	22,698	23,038	23,384	23,735	24,091
Retiree and Healthcare <sup>(8)</sup>	4,154 3,348	3,553 3,451	3,606 3,558	3,660 3,668	3,715 3,782	3,771 3,873
Administrative and General (9)	9,411	12,237	12,420	12,607	12,796	12,988
Total Operating Expenses	\$50,965	\$62,797	\$63,794	\$64,808	\$65,839	\$66,860
Amounts Available for Debt Service:						
Net Operating Revenues	\$54,364	\$48,745	\$51,627	\$56,665	\$62,050	\$70,096
Other Income (Expense) <sup>(10)</sup>	25	8	18	18	18	18
Current Revenues Available for Debt Service	\$54,389	\$48,753	\$51,645	\$56,683	\$62,068	\$70,114
Senior Lien Debt Service:(11)						
2014 Bond Refunding (2005 Bonds)	\$7,162	\$7,165	\$7,170	\$7,208	\$7,205	\$3,787
2010 Series Revenue Bonds	8,064	8,066	8,065	8,063	8,068	8,063
2013 Series Revenue Bond 2016 Series Revenue Bond	6,999	9,332	9,332 5,394	9,332 7,166	12,027	12,030 11,005
2016 Series Revenue Bond 2018 Series Revenue Bond	_	_	3,394	7,100	7,586	6,386
Total Senior Lien Debt Service	\$22,225	\$24,562	\$29,961	\$31,768	\$34,885	\$41,270
Indenture Debt Service Coverage: Current Revenues Available For Debt Service	\$54,389	\$48,753	\$51,645	\$56.683	\$62,068	\$70.114
Indenture Debt Service Coverage (1.25x) <sup>(12)</sup>	2.45	1.98	1.72	1.78	1.78	1.70
PUC Debt Service Coverage:						
Current Revenues Available for Debt Service	\$54,389	\$48,753	\$51,645	\$56,683	\$62,068	\$70,114
Working Capital Reserve Available for Debt Service <sup>(13)</sup>	7,536	7,585	11,235	11,235	11,235	14,235
Transfer to Working Capital Debt Service Reserve	(3,000)	(3,650)			(3,000)	
Adjusted Current Revenues Available for Debt Service	\$58,925	\$52,688	\$62,880	\$67,918	\$70,303	\$84,349
PUC Debt Service Coverage (1.75x) <sup>(14)</sup>	2.65	2.15	2.10	2.14	2.02	2.04
Subordinate Debt Service:						
Bank of Guam \$15M Refinance	\$3,417	\$3,417	\$3,417	\$3,417	\$2,848	
Total Subordinate Lien Debt Service	\$3,417	\$3,417	\$3,417	\$3,417	\$2,848	-
Amount Available Prior to Transfers		\$19,413	\$16,718	\$16,361	\$23,103	
Transfers:(15)						
Transfers to Working Capital Debt Service Reserve		<u>-</u>	<u>-</u>	-	_	
Transfers to Working Capital O&M Reserve		(\$8,000)	(7,000)	(\$7,000)	(\$7,000)	
Changes to Working Capital		(3,000)	(3,000)	(\$10,000)	(3,000) (\$10,000	
Total Transfers		(\$11,000)	(\$10,000)	(\$10,000)	( <del>10,000</del> )	
Interest Income		<del>\$4</del>	\$4	<mark>\$4</mark>	<del>\$</del> 4	
Amount Available for Capital Improvement		\$8,413	\$6,718	\$6,361	\$13,103	
Internally Funded CIP		\$6,100	\$6,000	\$11,000	\$11,000	
FOOTNOTES ON FOLLOWING PAGE		φθ,100	<del>ψ0,000</del>	Ψ11,000	Ψ11,000	

(2) Includes Legislative Surcharge revenues.

- (5) Assumed to increase at levels of inflation similar to those described in note (4) starting in Fiscal Year 2018.
- (6) Assumes FTE count reaches 354 by Fiscal Year 2018.
- (7) Includes, among other things, audit, meter reading and computer maintenance, engineering, legal services, testing and miscellaneous other fees and expenses. For Fiscal Years 2017 through 2020, based upon average contractual expenses for Fiscal Years 2014 through 2016.

(8) Includes supplemental retiree payments and cost of living adjustments.

- (9) Includes sludge removal, chemicals, materials and supplies, building and equipment rentals, transportation expenses, telephone and communications expenses, claims, insurance, training, insurance, regulatory and bad debt expenses. For Fiscal Years 2017 through 2020, based upon average administrative and general fees and expenses for Fiscal Years 2014 through 2016.
- (10) Includes interest earnings on Bond Reserve Fund. For Fiscal Years 2016 through 2020, an average of interest earnings for Fiscal Years 2010-2014 is used.
- (11) Amounts shown are net of capitalized interest.
- (12) Calculated based on Current Revenues Available for Debt Service divided by Debt Service on Outstanding Bonds.
- (13) For purposes of determining compliance with the PUC DSCR, the Authority may take into account amounts on deposit in the Working Capital Debt Service Reserve Account.
- (14) Calculated based on Adjusted Current Revenues Available for Debt Service divided by Debt Service on Outstanding Bonds.
- (15) Estimated by Brown & Caldwell and the Authority. Transfers to Working Capital Reserve for O&M are based on Authority policy to build an O&M reserve of 180 days of O&M expenses. The projections assume an accumulated level of \$31 million by Fiscal Year 2020 compared to a target of \$34 million.

Source: Guam Waterworks Authority.

#### CERTAIN INVESTMENT CONSIDERATIONS

The following discussion of considerations is not meant to be an exhaustive list of the risks associated with the purchase of the 2017 Bonds and does not necessarily reflect the relative importance of the various risks. Potential purchasers of the 2017 Bonds are advised to consider the following factors, among others, and to review all of the other information in this Official Statement in evaluating whether to purchase the 2017 Bonds. Any one or more of the risks discussed, and others, could lead to a decrease in the market value and/or in the liquidity of the 2017 Bonds. No assurance can be given that other risk factors will not become material in the future. The 2017 Bonds may not be suitable investments for all persons. Prospective purchasers should be able to evaluate the risks and merits of an investment in the 2017 Bonds and should confer with their own legal and financial advisors before considering a purchase of the 2017 Bonds.

# [UNDER REVIEW]

# General

The principal of and interest on the Bonds, including the 2017 Bonds, is payable pursuant to the Indenture solely from the Revenues. The ability to pay debt service on the Bonds, including the 2017 Bonds, will depend on the receipt of sufficient Revenues, pledged as payment for the Bonds. The Authority's ability to generate Revenues is dependent on a number of factors. To the extent the Authority is unable to make up for Revenue shortfalls, the Authority's ability to pay debt service on the Bonds, including the 2017 Bonds, may be adversely affected.

# **Limitations on Remedies**

The 2017 Bonds are not subject to acceleration under any circumstances or for any reason, including without limitation on the occurrence or continuance of an Event of Default. Upon the occurrence or continuation of an Event of Default, a Bondholder would only be entitled to principal and interest payments on the 2017 Bonds as they come due. Under certain circumstances, Holders of the 2017 Bonds may not be able to pursue certain remedies or enforce covenants contained in the Indenture. The remedies available to the Holders of the 2017 Bonds upon an Event of Default under the Indenture are in many respects dependent upon judicial actions which are often subject to discretion and delay. Under existing law, the remedies specified by the Indenture and the Bonds may not be readily

<sup>(1)</sup> For Fiscal Years 2016 through 2018, based on the 2014-2018 Rate Plan. For Fiscal Years 2019 through 2020, based upon assumed base rate increases of 2.00% in Fiscal Year 2019 and 13.4% in Fiscal Year 2020. For Fiscal Years 2017 through 2020, assumes 0.9 percent annual customer growth from 2016, with no growth in water and wastewater sales.

<sup>(3)</sup> Includes, among other things, revenues from illegal connection fees, installation fees, reconnection fees, insufficient fund check fees, meter tampering charges, direct service fees, miscellaneous fees, trouble report water, rent (GTA lease), miscellaneous administrative fees, special readings, inspection fees, verification time tests, bench tests, meter relocation, planning and specifications and miscellaneous sewer revenues.

<sup>(4)</sup> For Fiscal Years 2017 through 2020, assumed to increase at the rate of inflation of 1.0 percent for the first Fiscal Year and 1.5% in the last three Fiscal Years.

available or may be limited. The various legal opinions to be delivered concurrently with the delivery of the 2017 Bonds (including Bond Counsel's approving opinion) will be qualified, as to the enforceability of the various legal instruments, by limitations imposed by insolvency or other laws affecting the rights of creditors generally.

The federal Bankruptcy Code dictates which entities are eligible to seek relief as debtors under each chapter of that federal law. Neither the Government of Guam nor the Authority are legally able to seek bankruptcy relief under current federal law. No proposed debt restructuring legislation has been introduced in the Legislature of Guam, nor to the Authority's knowledge is any such legislation being contemplated or discussed, and the Governor is opposed to enacting any such legislation. The Authority can neither predict nor provide any assurances regarding any future changes in law or legislative proposals.

# **Uncertainties of Projections and Assumptions**

This Official Statement contains certain assumptions, estimates, projections and other forward-looking statements. Demonstration of compliance by the Authority with certain of the covenants contained in the Indenture also may be based upon assumptions, estimates and projections. Actual results, however, may differ, perhaps materially, from those projected. In addition, certain assumptions with respect to future business and financing decisions, including the decision to undertake, or to postpone or cancel, future capital improvements of the System may not occur and are subject to change. No representation is made or intended, nor should any representation be inferred, with respect to the existence of any particular future set of facts or circumstances, and prospective purchasers of the 2017 Bonds are cautioned not to place undue reliance upon any forecasts, estimates, plans or projections or requirements for forecasts or projections. If actual results are less favorable than the results projected or if the assumptions used in preparing projections prove to be incorrect, the ability of the Authority to make timely payment of the principal of and interest on the Bonds, including the 2017 Bonds, may be materially and adversely affected.

### Guam Economy; Impact of Tourism and Military Presence

The Authority's ability to generate Revenues depends in large measure, on the local economy, which is heavily dependent on tourism and the U.S. military presence, both of which are dependent on world economic, social and political events.

Tourism represents a significant share of the economic activity on Guam. Historically, the tourism industry, both worldwide and on Guam, has correlated closely with the state of the world's economies and levels of real disposable income. Also, currency exchange rates, trade balances, political relationships, and conflicts within and between countries are increasingly important influences on tourism. A weak economy, war, epidemic outbreaks, or the threat of terrorist activity, among other influences that are beyond the Government's control, can adversely affect the tourism industry. Economic conditions in Japan and throughout the Pacific Rim, and the resulting effect on overseas travel from these countries, are a major determinant of tourism on Guam. The Japanese government has encouraged international travel as a means of reducing its trade surplus and Guam has benefited directly from this policy. Any change in the policy could affect tourism in Guam. Tourism, particularly from Japan, where approximately 57 percent of visitors to Guam originate, represents a significant share of the economic activity on Guam. A significant downturn in tourism, including a downturn related to Japanese economic conditions or social policies, could results in reduced revenues from hotels and other related tourist facilities. For example, following the earthquake and tsunami in Japan on March 11, 2011, the number of tourists visiting Guam from Japan in Fiscal Year 2011 dropped by approximately 7.3% compared to Fiscal Year 2010. Although visitor arrivals from Japan increased in Fiscal Year 2012, increasing 10.2% over Fiscal Year 2011, no assurance can be given that Guam will not experience a similar or greater reduction in the number of visitors from Japan or other visitor markets as a result of other natural disasters or other economic, political or societal conditions. See "DEMOGRAPHIC AND ECONOMIC INFORMATION - Tourism Industry" in APPENDIX A. In addition, lower levels of employment tend to reduce the revenue available to the Authority. To the extent the Authority is unable to make up for revenue shortfalls, the ability to pay debt service on the Bonds may be adversely affected.

The level of Revenues is also affected by the U.S. military presence on Guam. The U.S. military presence also affects economic activity on Guam in various ways, both directly, through individuals' demand for commercial, construction and other services, and expansions in the U.S. military presence, such as the expansions expected to

occur over the next several years, can have a direct, positive impact on the Guam economy by spurring new economic activity and attracting visitors to Guam. However, economic, geopolitical, and other influences that are beyond the Government's and the Authority's control might result in a decision by the U.S. government to reduce the existing presence of the U.S. military on Guam or forego some or all of the planned enhancements to its presence on Guam. For example, in late July 2010, the Joint Guam Program Office of the Department of the Navy released its Final Environmental Impact Statement (the "EIS") pertaining to the proposed U.S. military build-up on Guam. At the time the EIS was released, it was anticipated that the military build-up would have three major parts: relocation of part of the Third Marine Expeditionary Force from Okinawa, Japan, creation of the infrastructure for an aircraft carrier berthing, and installation of an Army Air and Missile Defense Task Force. Subsequent to 2010, however, Guam began to experience a decrease in military personnel as a result of the delay in the relocation of the Third Marine Expeditionary Force from Okinawa and Iwakuni, Japan to Guam. Concerns regarding the high cost of the relocation and delays in relocating U.S. military personnel and facilities currently within Japan, among other things, have extended the implementation timeframe for the relocation of the U.S. Marines from Japan. The proposed U.S. military build-up now is not expected to occur until after 2018. In addition, the expected size of the build-up has decreased. In July 2015, the Department of Defense released the Supplemental Environmental Impact Statement (the "SEIS"), which identified potential impacts associated with several alternatives for the cantonment/family housing component of this relocation. The Record of Decision, which identified the final locations for additional bases and facilities to accommodate the marines, was issued in August 2015. Economic, geopolitical, and other influences which are beyond the Government's control might result in a decision by the U.S. military to reduce its existing presence on Guam or forego some or all of the planned enhancements to its presence on Guam. In the event that the U.S. military changes its current plans with respect to staffing and other strategic improvements on Guam, expected benefits may not be realized and the economy could be adversely affected. In the event that the U.S. military elects to reduce or eliminate its presence on Guam, the economy could decline. See "DEMOGRAPHIC AND ECONOMIC INFORMATION - Military Activity" and "- Future Role of the Military on Guam" in APPENDIX A.

In addition, it is expected that the anticipated relocation of U.S. Marines from Okinawa, Japan, to Guam will generate a significant amount of additional construction activity. Although Guam's construction industry has time to develop its capacity in anticipation of this significant increase in activity, it is possible that much of the work will be awarded to outside developers and project managers. Although the relocation of U.S. Marines to Guam is expected to reap benefits for the Guam economy in the short-term, the long-term benefits are not likely to be as great if the construction activity is largely completed by non-local firms.

See APPENDIX A —"CERTAIN DEMOGRAPHIC AND ECONOMIC INFORMATION REGARDING GUAM" for more information about the tourism industry and the U.S. military presence.

# **Adverse Conditions Affecting International Economic and Political Conditions**

Historically, the tourism industry, both worldwide and on Guam, has correlated closely with the state of the world's economies and levels of real disposable income. A weak economy, war or the threat of terrorist activity, and regional pandemics, among other influences which are beyond the Authority's control, can adversely affect the tourism industry. Also, currency exchange rates, trade balances, political relationships, and conflicts within and between countries are increasingly important influences on tourism.

Economic growth in Japan and throughout the Pacific Rim, and the resulting effect on overseas travel from these countries, is a major determinant of tourism on Guam. Tourism, particularly from Japan, represents a significant share of the economic activity on Guam. The Japanese government has encouraged international travel as a means of reducing its trade surplus and Guam has benefited directly from this policy. Any change in the policy could affect Authority revenues.

Like that of many destinations, Guam's tourism industry is susceptible to the negative impacts of terrorism and other conflicts on the travel industry in general.

#### 2011 Court Order with the USEPA

The 2011 Court Order, which is being administered directly by USEPA through its regional office in San Francisco, contains a comprehensive list of requirements, including management, operations, financial administration, facilities construction and rehabilitation and training requirements to be completed in accordance with a strict schedule. Failure of the Authority to meet the scheduled requirements may result in fines being assessed against the Authority. Since the issuance of the 2011 Court Order, the Authority has not been assessed any fines for missed deadlines or received any formal notification regarding any such fines. As of January 6, 2016, for the 88 projects required under the 2011 Court Order, 61 projects were completed on time, 3 were completed after the required deadlines and 24 projects remain on-going or are pending, including 7 projects for which the required deadlines were missed. If the Authority misses any additional deadlines in the future, the USEPA may assess fines.

## **Typhoons and Earthquakes**

Because of its location on the southern end of the Marianas Islands chain, Guam is exposed to periodic typhoons, earthquakes and floods. Typhoons and floods have caused significant damage to the Authority's facilities in the past. Damage to the Authority's System from typhoons and flooding has included sewage spills at pump stations and collection piping, collapse of collection piping, and failure of treatment plant equipment. Damage from floods and typhoons have also damaged facilities of GPA, which provide electric power to the Authority's System. To mitigate weather related service outages due to power interruption, back-up generators have been installed at a majority of the Authority's water and wastewater pump stations. Typhoons and other significant storm events and other natural disasters occur periodically and can cause extensive damage to facilities and infrastructure, including to the Authority's Systems. The Authority has previously reported property losses resulting from storms damage.

Guam has established building codes in Guam that are specifically designed to ensure that structures be able to sustain strong typhoon winds and earthquakes. Existing Authority structures were designed to satisfy the building codes as then in effect; new structures, and existing structures undergoing structural rehabilitation, are designed or upgraded to comply with Guam's current building codes. The Authority's above-ground facilities are generally housed in concrete buildings designed to withstand typhoon conditions and its underground facilities are rarely affected by high winds or intense rain. Earthquakes have caused minimal damage to Authority facilities in the past, but damage to the underground pipe network may go unnoticed.

Although the United States Federal Emergency Management Agency ("FEMA") has historically provided disaster relief assistance after typhoon damage, there can be no assurance that future typhoons and/or earthquakes will not cause significant damage to the System, or that FEMA will provide disaster relief assistance if significant damage is experienced. There can also be no assurance that, even with FEMA assistance, damage that results from future typhoons or earthquakes will not adversely affect the operation of the System for an extended period of time and, as a result, Revenues.

#### Rates

The Authority has covenanted in the Indenture to at all times, fix, prescribe and collect rents, fees and charges in connection with the services and facilities funded by the System which will be sufficient to comply with the Rate Covenant. The Indenture provides that if Revenues and Net Revenues in a Fiscal Year are insufficient to satisfy the Rate Covenant for such Fiscal Year, the Authority would be obligated to is required to promptly employ a Consulting Engineer to make recommendations as to a revision of rates, fees and charges or the methods of operation of the System, and to revise such rates, fees and charges or methods of operation and to take such other actions as will be in conformity with such recommendations, subject to applicable requirements or restrictions imposed by law and subject to a good faith determination of the Board that such recommendations, in whole or in part, are in the best interests of the Authority, the Owners and each Credit Provider, if any. The ability of the Authority to increase rates is subject to limitation, including review and approval by the PUC. Rates for water and wastewater services are regulated by the PUC. The 2014-18 Rate Plan approved by the PUC includes scheduled rate increases intended to provide sufficient Revenue to operate and maintain the System efficiently, to finance capital improvements necessary to comply with regulatory requirements, to meet the Authority's financial obligations and to satisfy the Debt Service Coverage Requirement and the PUC DSCR. The scheduled rate increases for Fiscal Years 2017 and 2018 as set forth in the 2014-18 Rate Plan remain subject to annual review and approval by the PUC

prior to implementation. Although the PUC has historically approved rate adjustments requested by the Authority, no assurance can be given that the PUC will approve future rate adjustments at the times and in the amounts contemplated in the 2014-18 Rate Plan or approve any other rate adjustments requested by the Authority.

See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS—Rate Covenant," "REGULATORY ENVIRONMENT—Regulation of Ratemaking" and "THE SYSTEM—Debt Service Coverage."

### **Self-Insurance**

The Authority has historically had a policy of self-insuring potential risks relative to its property, plant and equipment, as well as for general liabilities claims. The Authority, with the assistance of a consultant, has assessed its insurance needs (for liability, property and vehicle) and has obtained insurance through a competitive bidding process.

#### **Government Regulation**

The federal and local governments significantly regulate the operations of the Authority. Regulations and conditions affecting the acquisition, development, ownership and operation of the System could increase the operating expenses of the System or could otherwise have a material adverse effect on the operations and financial condition of the Authority.

### **Implementation of Capital Improvement Program**

The Authority's CIP for the 2015-2020 Fiscal-Year period is estimated to total approximately \$404.1 million. Successful and timely implementation of the CIP will require careful planning and coordination as well as hiring additional experienced construction management and workers, and other staff and consultants, including off-island personnel and vendors. The Authority intends to enter into contracts with qualified construction management firms to manage most of the CIP projects.

The estimated costs of, and the projected schedules for, the CIP projects described under "FUTURE SYSTEM CAPITAL REQUIREMENTS" are subject to a number of uncertainties. The ability of the Authority to complete the CIP projects may be adversely affected by various factors including: (i) estimating errors, (ii) design and engineering errors, (iii) changes to the scope of the projects, (iv) delays in contract awards, (v) material and/or labor shortages, (vi) unforeseen site conditions, (vii) adverse weather conditions, earthquakes or other casualty events, (viii) contractor defaults, (ix) labor disputes, (x) unanticipated levels of inflation and (xi) environmental issues. No assurance can be made that the CIP projects will not cost more than the current budget for these projects. Any schedule delays or cost increases could result in the need to issue Additional Bonds.

Funding for the CIP is expected from various sources, including proceeds of Additional Bonds, USEPA State Revolving Fund grants, SDC revenue, Revenues and other grants. In the event one or more of these funding sources is not available to the Authority in the amount or on the schedule described above under "FUTURE SYSTEM CAPITAL REQUIREMENTS," the implementation of some of the CIP projects may be delayed.

# **Secondary Treatment Requirements Under NPDES Permits**

The recently issued NPDES permits for the Northern District WWTP and the Hagåtña WWTP include secondary treatment requirements; however, neither wastewater treatment plant is equipped to provide secondary treatment. The Authority estimates that the design and construction necessary to satisfy the secondary treatment requirements will take approximately five years for each plant and estimates the cost of upgrading both treatment plants to satisfy the secondary treatment requirements to be approximately \$279 million. The Authority and the USEPA are currently negotiating secondary treatment compliance schedules for the Northern District WWTP and the Hagåtña WWTP. The Authority has requested schedules that will delay secondary treatment implementation until after the provisions and capital requirements of the 2011 Court Order are satisfied and is currently negotiating the compliance schedules with the USEPA. Although other agencies have successfully negotiated extended compliance schedules for implementing secondary treatment, no assurance can be given that the Authority will be

able to successfully negotiate an extended schedule. In connection with the proposed military build-up in Guam, approximately \$170 million has been earmarked for civilian water and wastewater improvements in Guam, including for secondary treatment upgrades at the Northern District WWTP. Receipt of such funds, however, is contingent upon a number factors, including proceeding with the actions identified in the SEIS and Record of Decision. The Authority's CIP does not currently reflect any improvements to the Northern District WWTP related to the proposed military build-up or the proposed federal funding. See "REGULATORY ENVIRONMENT—Environmental Regulation" and "FUTURE SYSTEM CAPITAL REQUIREMENTS—Proposed U.S. Military Relocation and Installations."

### LITIGATION

## No Litigation Relating to the 2017 Bonds

[CONFIRM]There is no litigation or proceeding pending or, to the knowledge of the Authority, threatened and having merit (either in Guam, state or Federal courts) seeking to restrain or enjoin the execution, issuance, sale or delivery of the 2017 Bonds or the collection, pledge or payment of Revenues by the Authority under the Indenture, or in any way contesting or affecting the legal existence of the Authority or the titles of certain relevant officials of the Authority to their offices or the validity or enforceability of the 2017 Bonds or the Indenture.

### Other Litigation Relating to the Authority and the System

**[CONFIRM]**Other than as disclosed elsewhere in this Official Statement, there are no pending claims or actions against the Authority arising from the operation and maintenance of the System that, if determinations or settlements were made adverse to the Authority, would have, in the opinion of the Authority's counsel, a material adverse effect on the Authority's financial position.

# TAX MATTERS

### Series 2017 Bonds

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Authority ("Bond Counsel"), based upon an analysis of existing laws, regulations, rulings, and court decisions and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Series 2017 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the "Code"). Bond Counsel is of the further opinion that interest on the Series 2017 Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, nor is it included in adjusted current earnings when calculating corporate alternative minimum taxable income. Bond Counsel is also of the opinion that, under 48 U.S.C. Section 1423a, interest on the Series 2017 Bonds is exempt from taxation by the government of Guam, or by any State or Territory or any political subdivision thereof, or by the District of Columbia. A complete copy of the proposed form of Bond Counsel opinion is set forth in APPENDIX D hereto.

To the extent the issue price of any maturity of the Series 2017 Bonds is less than the amount to be paid at maturity of such Series 2017 Bonds (excluding amounts stated to be interest and payable at least annually over the term of such Series 2017 Bonds), the difference constitutes "original issue discount," the accrual of which, to the extent properly allocable to each Beneficial Owner thereof, is treated as interest on the Series 2017 Bonds which is excluded from gross income for federal income tax purposes and is exempt from income taxation by any state, territory or possession of the United States or any political subdivision of any of them. For this purpose, the issue price of a particular maturity of the Series 2017 Bonds is the first price at which a substantial amount of such maturity of the Series 2017 Bonds is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The original issue discount with respect to any maturity of the Series 2017 Bonds accrues daily over the term to maturity of such Series 2017 Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such Series 2017 Bonds to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity of such Series 2017 Bonds. Beneficial Owners of the Series 2017 Bonds should consult their own tax advisors with respect

to the tax consequences of ownership of Series 2017 Bonds with original issue discount, including the treatment of Beneficial Owners who do not purchase such Series 2017 Bonds in the original offering to the public at the first price at which a substantial amount of such Series 2017 Bonds is sold to the public.

Series 2017 Bonds purchased, whether at original issuance or otherwise, for an amount higher than their principal amount payable at maturity (or, in some cases, at their earlier call date) ("Premium Bonds") will be treated as having amortizable bond premium. No deduction is allowable for the amortizable bond premium in the case of bonds, like the Premium Bonds, the interest on which is excluded from gross income for federal income tax purposes. However, the amount of tax-exempt interest received, and a Beneficial Owner's basis in a Premium Bond, will be reduced by the amount of amortizable bond premium properly allocable to such Beneficial Owner. Beneficial Owners of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

The Code imposes various restrictions, conditions and requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the Series 2017 Bonds. The Authority has made certain representations and covenanted to comply with certain restrictions, conditions and requirements designed to ensure that interest on the Series 2017 Bonds will not be included in federal gross income. Inaccuracy of these representations or failure to comply with these covenants may result in interest on the Series 2017 Bonds being included in gross income for federal income tax purposes, possibly from the date of original issuance of the Series 2017 Bonds. The opinion of Bond Counsel assumes the accuracy of these representations and compliance with these covenants. Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken), or events occurring (or not occurring), or any other matters coming to Bond Counsel's attention after the date of issuance of the Series 2017 Bonds may adversely affect the value of, or the tax status of interest on, the Series 2017 Bonds. Accordingly, the opinion of Bond Counsel is not intended to, and may not, be relied upon in connection with any such actions, events or matters.

Although Bond Counsel is of the opinion that interest on the Series 2017 Bonds is excluded from gross income for federal income tax purposes and is exempt from income taxation by any state, territory or possession of the United States or any political subdivision of any of them, the ownership or disposition of, or the accrual or receipt of amounts treated as interest on, the Series 2017 Bonds may otherwise affect a Beneficial Owner's federal, state or local tax liability. The nature and extent of these other tax consequences depends upon the particular tax status of the Beneficial Owner or the Beneficial Owner's other items of income or deduction. Bond Counsel expresses no opinion regarding any such other tax consequences.

Current and future legislative proposals, if enacted into law, clarification of the Code or court decisions may cause interest on the Series 2017 Bonds to be subject, directly or indirectly, in whole or in part, to federal income taxation or to be subject to or exempted from state income taxation, or otherwise prevent Beneficial Owners from realizing the full current benefit of the tax status of such interest. The introduction or enactment of any such legislative proposals or clarification of the Code or court decisions may also affect, perhaps significantly, the market price for, or marketability of, the Series 2017 Bonds. Prospective purchasers of the Series 2017 Bonds should consult their own tax advisors regarding the potential impact of any pending or proposed federal or state tax legislation, regulations or litigation, as to which Bond Counsel is expected to express no opinion.

The opinion of Bond Counsel is based on current legal authority, covers certain matters not directly addressed by such authorities, and represents Bond Counsel's judgment as to the proper treatment of the Series 2017 Bonds for federal income tax purposes. It is not binding on the Internal Revenue Service ("IRS") or the courts. Furthermore, Bond Counsel cannot give and has not given any opinion or assurance about the future activities of the Authority, or about the effect of future changes in the Code, the applicable regulations, the interpretation thereof or the enforcement thereof by the IRS. The Authority has covenanted, however, to comply with the requirements of the Code.

Bond Counsel's engagement with respect to the Series 2017 Bonds ends with the issuance of the Series 2017 Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend the Authority or the Beneficial Owners regarding the tax-exempt status of the Series 2017 Bonds in the event of an audit examination by the IRS. Under current procedures, parties other than the Authority and its appointed counsel, including the Beneficial Owners, would have little, if any, right to participate in the audit examination process. Moreover, because achieving

judicial review in connection with an audit examination of tax-exempt bonds is difficult, obtaining an independent review of IRS positions with which the Authority legitimately disagrees may not be practicable. Any action of the IRS, including but not limited to selection of the Series 2017 Bonds for audit, or the course or result of such audit, or an audit of bonds presenting similar tax issues may affect the market price for, or the marketability of, the Series 2017 Bonds, and may cause the Authority or the Beneficial Owners to incur significant expense.

### UNDERWRITING

### [UNDER REVIEW]

The Underwriters reserve the right to join with dealers and other Underwriters in offering the 2017 Bonds to the public. The Underwriters intend to offer the 2017 Bonds for sale at the prices or yields set forth on the inside cover page hereof. Such initial public offering prices or yields may be changed from time to time by the Underwriters without prior notice. The Underwriters may offer and sell the 2017 Bonds to certain dealers, unit investment trusts or money market funds at prices lower than or at yields higher than the public offering prices or yields stated on the inside front cover page.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the Authority, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the Authority.

Citigroup Global Markets Inc., an underwriter of the Bonds, has entered into a retail distribution agreement with each of TMC Bonds L.L.C. ("TMC") and UBS Financial Services Inc. ("UBSFS"). Under these distribution agreements, Citigroup Global Markets Inc. may distribute municipal securities to retail investors through the financial advisor network of UBSFS and the electronic primary offering platform of TMC. As part of this arrangement, Citigroup Global Markets Inc. may compensate TMC (and TMC may compensate its electronic platform member firms) and UBSFS for their selling efforts with respect to the 2017 Bonds.

# FINANCIAL STATEMENTS

The financial statements of the Authority for the Fiscal Years ended September 30, 2016 and 2015 have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report appearing in APPENDIX B hereto, which report includes an emphasis of matter paragraph relative to a restatement pertaining to the implementation of new accounting pronouncements. Reference should be made to the audited financial statements included in APPENDIX B for a complete understanding of the information provided therein.

#### **CERTAIN LEGAL MATTERS**

The issuance of the 2017 Bonds is subject to receipt of the approving opinion of Bond Counsel. The proposed form of opinion Bond Counsel with respect to the 2017 Bonds is included in this Official Statement as APPENDIX D. Bond Counsel undertakes no responsibility for the accuracy, completeness or fairness of this Official Statement. From time to time Orrick, Herrington & Sutcliffe LLP serves as counsel to the Underwriters on matters that do not relate to the Authority or to the 2017 Bonds.

Certain legal matters will be passed upon for the Authority by Samuel J. Taylor, general counsel for the Authority. Certain legal matters will be passed upon by Orrick, Herrington & Sutcliffe LLP, as Disclosure Counsel to the Authority. Certain legal matters will be passed upon for the Underwriters by their counsel, [\_\_\_\_\_\_].

#### VERIFICATION OF ESCROW

[VERIFICATION AGENT] (the "Verification Agent") will verify from the information provided to them the mathematical accuracy as of the date of the closing on the 2017 Bonds of the computations contained in the provided schedules to determine that the anticipated receipts from the securities and/or cash deposits listed in the underwriters' schedules, to be held in escrow, will be sufficient to pay, when due, the principal or redemption price of and interest on the refunded 2010 Bonds. The Verification Agent will express no opinion on the reasonableness of the assumptions provided to them, the likelihood that the redemption price and principal of and interest on the refunded 2010 Bonds will be paid as described in the accompanying schedules, nor as to the exemption from taxation of the interest on the 2017 Bonds.

#### AVAILABLE INFORMATION

During the initial offering period for the 2017 Bonds, copies of the Authority's audited financial statements are available from the Authority at the Administration Office of the Guam Waterworks Authority, Gloria B. Nelson Public Services Building, 688 Route 15, Mangilao, Guam 96913, during normal business hours, Monday through Friday, excluding holidays, and copies of the Indenture may be obtained, upon written request, from the Underwriters.

### RATINGS

Fitch Ratings ("Fitch"), Moody's Investors Service, Inc. ("Moody's") and S&P Global Ratings ("S&P") have assigned their ratings of "\_\_\_," "\_\_," and "\_\_\_," respectively, to the 2017 Bonds. The ratings reflect only the view of the rating agencies assigning such ratings at the time such ratings are given, and the Authority makes no representations as to the appropriateness of such ratings. Any explanation of the significance of such ratings may only be obtained from the rating agency furnishing the same. Certain information and materials not included in this Official Statement were furnished to the rating agencies concerning the 2017 Bonds. Generally, rating agencies base their ratings on such information and materials and on investigation, studies and assumptions by the rating agencies. There is no assurance that the ratings mentioned above will remain for any given period of time or that any or all of them might not be lowered or withdrawn entirely by any rating agency if in the judgment of any or all rating agencies, circumstances so warrant. Any such downward change in or withdrawal of such ratings might have an adverse effect on the market price for and marketability of the 2017 Bonds.

# CONTINUING DISCLOSURE

The Authority will covenant for the benefit of the Bondholders to provide certain financial information and operating data relating to the Authority by not later than 270 days after the end of the Fiscal Year (currently September 30) to which such information pertains, commencing with the Fiscal Year ending September 30, 2017 (the "Annual Report") and to provide notices of the occurrence of certain enumerated events. The Annual Report and notices of enumerated events will be filed with the Municipal Securities Rulemaking Board, through its EMMA system. The specific nature of the information to be contained in the Annual Report or the notices of certain enumerated events is described in APPENDIX E – "PROPOSED FORM OF CONTINUING DISCLOSURE

AGREEMENT" attached hereto. These covenants will be made in order to assist the Underwriters in complying with Rule 15c2-12.

[Confirm agreement with DAC] In order to provide certain continuing disclosure with respect to the 2017 Bonds in accordance with Rule 15c2-12, the Authority has entered into a Master Continuing Disclosure Agreement, as supplemented, including as supplemented by the Supplemental Continuing Disclosure Agreement relating to the 2017 Bonds (collectively, the "2017 Continuing Disclosure Agreement"), with Digital Assurance Certification, L.L.C. ("DAC") for the benefit of the Holders of the 2017 Bonds under which the Authority has designated DAC as Disclosure Dissemination Agent. The Disclosure Dissemination Agent has only the duties specifically set forth in the 2017 Continuing Disclosure Agreement. The Disclosure Dissemination Agent's obligation to deliver the information at the times and with the contents described in the 2017 Continuing Disclosure Agreement is limited to the extent the Authority has provided such information to the Disclosure Dissemination Agent as required by the 2017 Continuing Disclosure Agreement. The Disclosure Dissemination Agent has no duty with respect to the content of any disclosures or notice made pursuant to the terms of the 2017 Continuing Disclosure Agreement. The Disclosure Dissemination Agent has no duty or obligation to review or verify any information in the annual report, audited financial statements, notice of notice event or voluntary report, or any other information, disclosures or notices provided to it by the Authority and shall not be deemed to be acting in any fiduciary capacity for the Authority, the Bondholders or any other party. The Disclosure Dissemination Agent has no responsibility for the Authority's failure to report to the Disclosure Dissemination Agent a notice event or a duty to determine the materiality thereof. The Disclosure Dissemination Agent shall have no duty to determine or liability for failing to determine whether the Authority has complied with the 2017 Continuing Disclosure Agreement. The Disclosure Dissemination Agent may conclusively rely upon certifications of the Authority at all times.

[UNDER REVIEW] The Authority has previously entered into continuing disclosure agreements in connection with the 2005 Bonds, the 2010 Bonds, the 2013 Bonds and the 2014 Bonds (the "Prior Continuing Disclosure Agreements") that require filing of a report (the "Annual Report") containing both the Authority's audited financial statements and certain financial and operating information, to the extent not contained in the audited financial statements. The Annual Report is due within 270 days of the end of the Authority's fiscal year. The Authority notes that its Annual Reports for Fiscal Years 2010 and 2011 were made within nine months after fiscal year end rather than within 270 days as required by the Prior Continuing Disclosure Agreements. Other than as described in this paragraph, the Authority has complied in all material respects with its previous continuing disclosure undertakings within the past five years.

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# **MISCELLANEOUS**

The attached Appendices are integral parts of this Official Statement and should be read in their entirety. The Authority has reviewed the information contained herein and has approved all such information for use in this Official Statement.

The execution and delivery of this Official Statement has been duly authorized by the Authority.

GUAM	I WATERWORKS AUTHORITY
Ву:	
	Miguel Bordallo, P.E.
	General Manager
	OLIDATED COMMISSION ON TILITIES
Бу	Joseph T. Duenas
	Chairman
	Chairman

# APPENDIX A

# CERTAIN ECONOMIC AND DEMOGRAPHIC INFORMATION ABOUT GUAM

# APPENDIX B

FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS' REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015

# APPENDIX C

# SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

# **DEFINITIONS**

# APPENDIX D

# PROPOSED FORM OF OPINION OF BOND COUNSEL

# APPENDIX E

# PROPOSED FORM OF CONTINUING DISCLOSURE AGREEMENT

#### FORM OF MASTER CONTINUING DISCLOSURE AGREEMENT

The Master Continuing Disclosure Agreement, dated as of December 1, 2005, is executed and delivered by the Guam Waterworks Authority (the "Authority") and Digital Assurance Certification, L.L.C., as dissemination agent (the "Dissemination Agent"), in connection with the issuance of the Guam Waterworks Authority Water and Wastewater System Revenue Bonds (the "Bonds") pursuant to an indenture (the "Indenture"), dated as of December 1, 2005, as it may be supplemented from time to time, among the Authority, Bank of Guam, as trustee, and U.S. Bank National Association, as co-trustee. The Authority and the Dissemination Agent covenant and agree as follows:

SECTION 1. <u>Purpose of the Disclosure Agreement</u>. The Disclosure Agreement is being executed and delivered by the Authority for the benefit of the Holders and Beneficial Owners of the Bonds and in order to assist the Participating Underwriters in complying with S.E.C. Rule 15c2-12(b)(5).

SECTION 2. <u>Definitions</u>. In addition to the definitions set forth in the Indenture, which apply to any capitalized term used in the Disclosure Agreement unless otherwise defined in this Section, the following capitalized terms shall have the following meanings:

"Annual Report" means any Annual Report provided by the Authority pursuant to, and as described in, Sections 3 and 4 of this Disclosure Agreement.

"Beneficial Owner" means any person which has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any Bonds (including persons holding Bonds through nominees, depositories or other intermediaries).

"Business Day" means any day other than a Saturday, Sunday or other day on which Authority offices generally are not open for business.

"Designated Bonds" means any Bonds subject to the Rule and identified as such by a Supplemental Continuing Disclosure Agreement.

"Disclosure Agreement" means the Master Continuing Disclosure Agreement as it may be supplemented from time to time by one or more Supplemental Disclosure Agreements.

"Dissemination Agent" means the Authority, or any successor Dissemination Agent designated in writing by the Authority and which has filed with the Authority a written acceptance of such designation.

"Holder" or "Bondholder" means any registered owner of Bonds as shown on the books of registration kept by the Registrar.

"Listed Events" means any of the events listed in Section 5(a) of the Disclosure Agreement.

"National Repository" means any Nationally Recognized Municipal Securities Information Repository for purposes of the Rule. A list of the National Repositories approved by the Securities and Exchange Commission is available at http://www.sec.gov/info/municipal/nrmsir.htm.

"Participating Underwriter" means any "participating underwriter" of the Bonds within the meaning of the Rule required to comply with the Rule in connection with offering of the Bonds.

"Repository" shall mean each National Repository and the State Repository.

"Rule" shall mean Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

"State Repository" shall mean any public or private repository or entity designated by the Authority as the state repository for the purpose of the Rule and recognized as such by the Securities and Exchange Commission. As of the date of the Agreement, there is no State Repository.

"Supplemental Disclosure Agreement" means any supplemental disclosure agreement entered into between the Authority and the Dissemination Agent, supplementing the Disclosure Agreement.

# SECTION 3. <u>Provision of Annual Reports.</u>

- (a) The Authority shall, or shall cause the Dissemination Agent to, not later than 270 days after the end of each fiscal year of the Authority (presently September 30), commencing with the report for the fiscal year ending September 30, 2005, provide to each Repository an Annual Report which is consistent with the requirements of Section 4 of the Disclosure Agreement; provided that the audited financial statements of the Authority may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may cross-reference other information as provided in Section 4 of the Disclosure Agreement. If the Authority's fiscal year changes, it shall give notice of such change in the same manner as for a Listed Event under Section 5(a).
- (b) Not later than fifteen (15) Business Days prior to said date, the Authority shall provide the Annual Report to the Dissemination Agent (if other than the Authority). If the Authority is unable to provide to the Repositories an Annual Report by the date required in subsection (a), the Authority shall send a notice to the Municipal Securities Rulemaking Board and the State Repository, if any, in substantially the form attached as Exhibit A.

### (c) The Dissemination Agent shall:

- (i) determine each year prior to the date for providing the Annual Report the name and address of each National Repository and the State Repository, if any; and
- (ii) if the Dissemination Agent is other than the Authority, file a report with the Authority certifying that the Annual Report has been provided pursuant to the Disclosure Agreement, stating the date it was provided and listing all the Repositories to which it was provided.
- SECTION 4. <u>Content of Annual Reports</u>. The Annual Report shall contain or include by reference the following:
- (a) the audited financial statements of the Authority for the prior fiscal year, prepared in accordance with generally accepted accounting principles as promulgated to apply to governmental entities from time to time by the Governmental Accounting Standards Board; provided that if the Authority's audited financial statements are not available by the time the Annual Report is required to be filed pursuant to Section 3(a), the Annual Report shall contain unaudited financial statements for such entity in a format similar to the financial statements contained in the official statement relating to any Designated Bonds, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available; and
- (b) operating results of the water and wastewater systems (the "System"), debt service coverage ratios, sources and uses of water, largest water and wastewater customers, data on collection of payments from customers of the System, and new water and sewer installations, to the extent that such information is historical and not projected and that similar information is included in any official statement with respect to Designated Bonds.

The Authority has not undertaken in the Disclosure Agreement to provide all information an investor may want to have in making decisions to buy, hold or sell the Bonds, but only to provide the information specified above. Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues of the Authority, which have been submitted to each of the Repositories

or the Securities and Exchange Commission. If the document included by reference is a final official statement, it must be available from the Municipal Securities Rulemaking Board. The Authority shall clearly identify each such other document so included by reference.

### SECTION 5. Reporting of Significant Events.

- (a) Pursuant to the provisions of this Section 5, the Authority shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the Designated Bonds, if material:
  - (1) principal and interest payment delinquencies;
  - (2) non-payment related defaults;
  - (3) modifications to rights of Bondholders;
  - (4) optional, contingent or unscheduled bond calls;
  - (5) defeasances;
  - (6) rating changes;
  - (7) adverse tax opinions or events affecting the tax-exempt status of any Bonds;
  - (8) unscheduled draws on the debt service reserves reflecting financial difficulties;
  - (9) unscheduled draws on the credit enhancements reflecting financial difficulties;
  - (10) substitution of the credit or liquidity providers or their failure to perform; or
  - (11) release, substitution or sale of property securing repayment of the Bonds.
- (b) Whenever the Authority obtains knowledge of the occurrence of a Listed Event, the Authority shall as soon as possible determine if such event would be material under applicable federal securities laws.
- (c) If the Authority determines that knowledge of the occurrence of a Listed Event would be material under applicable federal securities laws, the Authority shall promptly file a notice of such occurrence with the Municipal Securities Rulemaking Board and the State Repository. Notwithstanding the foregoing, notice of Listed Events described in subsections (a)(4) and (5) need not be given under this subsection any earlier than the notice (if any) of the underlying event is given to Holders of affected Bonds pursuant to the Indenture.
- SECTION 6. <u>Termination of Reporting Obligation</u>. The Authority's obligations under the Disclosure Agreement with respect to any Designated Bonds shall terminate upon the legal defeasance, prior redemption or payment in full of such Bonds. If such termination occurs with respect to any Designated Bonds prior to the final maturity thereof, the Authority shall give notice of such termination in the same manner as for a Listed Event under Section 5(c). The Authority's obligations under the Disclosure Agreement may also be temporarily suspended with respect to any Series of Designated Bonds under certain conditions as permitted by the Rule.
- SECTION 7. <u>Dissemination Agent</u>. The Authority may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under the Disclosure Agreement, and may discharge any such Agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent shall not be responsible in any manner for the content of any notice or report prepared by the Authority pursuant to the Disclosure Agreement. The initial Dissemination Agent shall be the Digital Assurance Certification, L.L.C.
- SECTION 8. <u>Amendment; Waiver; Supplemental Disclosure Agreements</u> (a) Notwithstanding any other provision of the Disclosure Agreement, the Authority and the Dissemination Agent may amend the Disclosure Agreement, and any provision of the Disclosure Agreement may be waived, provided that the following conditions are satisfied:
- (i) If the amendment or waiver relates to the provisions of Sections 3(a), 4, or 5(a), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to one or more Designated Bonds, or the type of business conducted;

- (ii) The undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of any affected Designated Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and
- (iii) The amendment or waiver either (A) is approved by the Holders of a majority in aggregate principal amount of the affected Designated Bonds, or (B) does not, in the opinion of the Authority, materially impair the interests of the Holders or Beneficial Owners of the Designated Bonds.

In the event of any amendment or waiver of a provision of the Disclosure Agreement, the Authority shall describe such amendment in the next Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or in the case of a change of accounting principles, on the presentation) of financial information or operating data being presented by the Authority. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (A) notice of such change shall be given in the same manner as for a Listed Event under Section 5(c), and (B) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

(b) A Supplemental Disclosure Agreement may be entered into by the Authority and the Dissemination Agent at any time from time to time upon the sale or issuance of a Series of Bonds, specifying the Series designation of the Bonds to be included hereunder and confirming other matters related thereto, and shall be fully effective in accordance with the terms hereof upon its execution and delivery by Authorized Officers of the Authority and the Dissemination Agent.

SECTION 9. Additional Information. Nothing in the Disclosure Agreement shall be deemed to prevent the Authority from disseminating any other information, using the means of dissemination set forth in the Disclosure Agreement or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by the Disclosure Agreement. If the Authority choose to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by the Disclosure Agreement, the Authority shall have no obligation under the Disclosure Agreement to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

SECTION 10. <u>Default</u>. In the event of a failure of the Authority to comply with any provision of the Disclosure Agreement any Holder or Beneficial Owner of the Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Authority to comply with its obligations under the Disclosure Agreement. A default under the Disclosure Agreement shall not be deemed an event of default under the Indenture, and the sole remedy under the Disclosure Agreement in the event of any failure of the Authority to comply with the Disclosure Agreement shall be an action to compel performance.

SECTION 11. <u>Duties, Immunities and Liabilities of Dissemination Agent</u>. The Dissemination Agent shall have only such duties as are specifically set forth in the Disclosure Agreement, and the Authority agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's gross negligence or willful misconduct. The obligations of the Authority under this Section shall survive resignation or removal of the Dissemination Agent and payment of the Bonds.

SECTION 12. <u>Beneficiaries.</u> The Disclosure Agreement shall inure solely to the benefit of the Authority, the Dissemination Agent, the Participating Underwriters and Holders and Beneficial Owners from time to time of the Bonds, and shall create no rights in any other person or entity.

GUAM WATERWORKS AUTHORITY					
By/s/					
Authorized Officer					
DIGITAL ASSURANCE CERTIFICATION, L.L.C.					
By /s/					
Authorized Officer					

# EXHIBIT A

# NOTICE TO REPOSITORIES OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer:	Guam Waterworks Authority				
Name of Bond Issue:	Guam Waterworks Authority Water and Wastewater System Revenue Bonds				
Date of Issuance:					
above-named Bonds as re	REBY GIVEN that the Authority has not provided an Annual Report with respect to the equired by Section of the Indenture providing for the issuance of such Bonds. [The Annual Report will be filed by]				
	GUAM WATERWORKS AUTHORITY				
	By:				

#### PROPOSED FORM OF 2017 SUPPLEMENTAL CONTINUING DISCLOSURE AGREEMENT

This Supplemental Continuing Disclosure Agreement, dated \_\_\_\_\_\_\_, 2017, supplementing and amending the Master Continuing Disclosure Agreement, dated as of December 1, 2005 (as supplemented, the "Disclosure Agreement"), between the GUAM WATERWORKS AUTHORITY (the "Authority") and DIGITAL ASSURANCE CERTIFICATION, L.L.C. (the "Dissemination Agent" or "DAC"), is being executed by the Authority and the Dissemination Agent in connection with the issuance of \$\_\_\_\_\_\_ Guam Waterworks Authority Water and Wastewater System Revenue Refunding Bonds, Series 2017 (the "2017 Bonds"). The 2017 Bonds are being issued pursuant to the Indenture, dated as of December 1, 2005, as supplemented (including as supplemented by the Supplemental Indenture, dated as of \_\_\_\_\_\_, 2017) (the "Indenture"), among the Authority, Bank of Guam, as trustee, and U.S. Bank National Association, as co-trustee.

The services provided under this Supplemental Continuing Disclosure Agreement relate solely to the execution of instructions received from the Authority through use of the DAC system and do not constitute "advice" within the meaning of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Act"). The Dissemination Agent will not provide any advice or recommendation to the Authority or anyone on the Authority's behalf regarding the "issuance of municipal securities" or any "municipal financial product" as defined in the Act and nothing in this Supplemental Continuing Disclosure Agreement shall be interpreted to the contrary.

The Authority and the Dissemination Agent covenant and agree as follows:

- SECTION 1. <u>Definitions</u>. Unless otherwise defined herein, or the context otherwise requires, capitalized terms used in this Supplemental Continuing Disclosure Agreement shall have the meanings ascribed thereto in the Disclosure Agreement or, if not defined in the Disclosure Agreement, in the Indenture.
- SECTION 2. <u>Purpose of the Supplemental Continuing Disclosure Agreement; Designation as Designated Bonds; Application of Disclosure Agreement.</u> This Supplemental Continuing Disclosure Agreement is being executed and delivered by the Authority and the Dissemination Agent for the benefit of the Holders and Beneficial Owners of the 2017 Bonds and in order to assist the Participating Underwriters in complying with the Rule. The 2017 Bonds are hereby designated as "Designated Bonds" under the Disclosure Agreement. Except as provided below, all terms and provisions of the Disclosure Agreement are hereby made applicable to the 2017 Bonds described herein.
- SECTION 3. Filings with MSRB; Format. Until otherwise designated by the MSRB or the Securities and Exchange Commission, filings with the MSRB are to be made through the Electronic Municipal Market Access (EMMA) website of the MSRB, currently located at http://emma.msrb.org. Any report or filing with the MSRB pursuant to this Supplemental Continuing Disclosure Agreement must be submitted in electronic format, accompanied by such identifying information as is prescribed by the MSRB.
- SECTION 4. <u>Provisions Applicable to 2017 Bonds</u>. The following provisions shall apply solely to the 2017 Bonds and shall supersede the provisions of the Disclosure Agreement for purposes of the 2017 Bonds.
- (a) Solely with respect to the 2017 Bonds, the following terms shall have the following meanings:

"Annual Filing Date" means the date, set forth in Section 3(a), by which the Annual Report is to be filed with the MSRB.

"Certification" means a written certification of compliance signed by the Disclosure Representative stating that the Annual Report, Listed Event notice, or Failure to File Event notice, as applicable, delivered to the Dissemination Agent is the Annual Report, Listed Event notice or Failure to File Event notice, as applicable, required to be submitted to the MSRB under this Supplemental Continuing Disclosure Agreement. A Certification shall accompany each such document submitted to the Dissemination Agent by the Authority and include the full name of the 2017 Bonds and the 9-digit CUSIP numbers for all 2017 Bonds to which the document

applies.

"Disclosure Representative" means such person as the Authority shall designate in writing to the Dissemination Agent from time to time as the person responsible for providing Information to the Dissemination Agent.

"Failure to File Event" means the Authority's failure to file an Annual Report on or before the Annual Filing Date.

"Force Majeure Event" means: (i) acts of God, war, or terrorist action; (ii) failure or shut-down of the Electronic Municipal Market Access system maintained by the MSRB; or (iii) to the extent beyond the Dissemination Agent's reasonable control, interruptions in telecommunications or utilities services, failure, malfunction or error of any telecommunications, computer or other electrical, mechanical or technological application, service or system, computer virus, interruptions in Internet service or telephone service (including due to a virus, electrical delivery problem or similar occurrence) that affect Internet users generally, or in the local area in which the Dissemination Agent or the MSRB is located, or acts of any government, regulatory or any other competent authority the effect of which is to prohibit the Dissemination Agent from performance of its obligations under this Disclosure Agreement.

"Information" means, collectively, the Annual Reports, the Listed Event notices and the Failure to File Event notices.

"Listed Events" shall mean any of the events listed in Section 5(a) or (b) of the Disclosure Agreement.

"Official Statement" shall mean the Official Statement, dated \_\_\_\_\_\_, 2017, relating to the 2017 Bonds.

"MSRB" shall mean the Municipal Securities Rulemaking Board or any other entity designated or authorized by the Securities and Exchange Commission to receive reports pursuant to the Rule.

"Repository" shall mean the MSRB.

(b) With respect to the 2017 Bonds, Section 3 of the Master Continuing Disclosure Agreement as originally executed shall not apply and shall be deemed to be replaced by the following:

# "SECTION 3. Provision of Annual Reports.

- (a) The Authority shall, or shall cause the Dissemination Agent to, not later than 270 days after the end of each fiscal year of the Authority (presently September 30) (the "Annual Filing Date"), commencing with the report for the fiscal year ending September 30, 2014, provide to each Repository an Annual Report which is consistent with the requirements of Section 4 of the Disclosure Agreement; provided that the audited financial statements of the Authority may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. If the Authority's fiscal year changes, it shall give notice of such change in the same manner as for a Listed Event under Section 5(a).
- (b) The Authority shall provide, annually, an electronic copy of the Annual Report and Certification to the Dissemination Agent, not later than the Annual Filing Date. Promptly upon receipt of an electronic copy of the Annual Report and the Certification, the Dissemination Agent shall provide an Annual Report to the MSRB not later than the Annual Filing Date. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may cross reference other information as provided in Section 4 of the Disclosure Agreement.

- (c) If on the fifteenth (15th) day prior to the Annual Filing Date, the Dissemination Agent has not received a copy of the Annual Report and Certification, the Dissemination Agent shall contact the Disclosure Representative by telephone and in writing (which may be by e-mail) to remind the Authority of its undertaking to provide the Annual Report pursuant to Section 3(a). Upon such reminder, the Disclosure Representative shall either (i) provide the Disclosure Dissemination Agent with an electronic copy of the Annual Report and the Certification no later than two (2) business days prior to the Annual Filing Date, or (ii) instruct the Dissemination Agent in writing that the Authority will not be able to file the Annual Report within the time required under this Disclosure Agreement, state the date by which the Annual Report for such year will be provided and instruct the Dissemination Agent that a Failure to File Event has occurred and to immediately send a notice to the MSRB in substantially the form attached as Exhibit A, accompanied by a cover sheet completed by the Dissemination Agent.
- (d) If the Dissemination Agent has not received an Annual Report and Certification by 6:00 p.m. Eastern time on the Annual Filing Date (or, if such Annual Filing Date falls on a Saturday, Sunday or holiday, then the first business day thereafter) for the Annual Report, a Failure to File Event shall have occurred and the Authority irrevocably directs the Dissemination Agent to immediately send a notice to the MSRB in substantially the form attached as Exhibit A without reference to the anticipated filing date for the Annual Report, accompanied by a cover sheet completed by the Dissemination Agent.
- (e) If the Authority adjusts the Annual Filing Date upon change of its fiscal year, it shall provide written notice of such change and the new Annual Filing Date to the Dissemination Agent, Trustee and the MSRB, provided, however, that the period between the existing Annual Filing Date and new Annual Filing Date shall not exceed one year.
- (f) Any Information received by the Dissemination Agent before 6:00 p.m. Eastern time on any business day that it is required to file with the MSRB pursuant to the terms of this Disclosure Agreement and that is accompanied by a Certification and all other information required by the terms of this Disclosure Agreement will be filed by the Dissemination Agent with the MSRB no later than 11:59 p.m. Eastern time on the same business day; provided, however, the Dissemination Agent shall have no liability for any delay in filing with the MSRB if such delay is caused by a Force Majeure Event provided that the Dissemination Agent uses reasonable efforts to make any such filing as soon as possible."
- (c) With respect to the 2017 Bonds, references in the Master Continuing Disclosure Agreement to Section 5(a) shall be deemed to refer to Sections 5(a) and (b) of such Section 5, as set forth in Section 4(d) of this Supplemental Continuing Disclosure Agreement.
- (d) With respect to the 2017 Bonds, Section 5 of the Master Continuing Disclosure Agreement as originally executed shall not apply and shall be deemed to be replaced by the following:

# "SECTION 5. Reporting of Significant Events.

- (a) Pursuant to the provisions of this Section 5, the Authority shall give, or cause to be given, to the MSRB notice of the occurrence of any of the following events with respect to the 2017 Bonds in a timely manner not later than ten business days after the occurrence of the event:
  - (1) Principal and interest payment delinquencies;
  - (2) Unscheduled draws on debt service reserves reflecting financial difficulties;

- (3) Unscheduled draws on credit enhancements reflecting financial difficulties;
- (4) Substitution of credit or liquidity providers, or their failure to perform;
- (5) Adverse tax opinions or issuance by the Internal Revenue Service of proposed or final determination of taxability or of a Notice of Proposed Issue (IRS Form 5701 TEB);
- (6) Tender offers;
- (7) Defeasances;
- (8) Rating changes; or
- (9) Bankruptcy, insolvency, receivership or similar event of the Authority;

Note: for the purposes of the event identified in subparagraph (9), the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the Authority in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Authority, or if such jurisdiction has been assumed by leaving the existing governmental body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Authority.

- (b) The Authority shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the 2017 Bonds, if material, to the MSRB in a timely manner not later than ten business days after the occurrence of the event:
  - (1) Unless described in paragraph 5(a)(5), other material notices or determinations by the Internal Revenue Service with respect to the tax status of the 2017 Bonds or other material events affecting the tax status of the 2017 Bonds;
  - (2) Modifications to rights of 2017 Bond holders;
  - (3) Optional, unscheduled or contingent 2017 Bond calls;
  - (4) Release, substitution, or sale of property securing repayment of the 2017 Bonds;
  - (5) Non-payment related defaults;
  - (6) The consummation of a merger, consolidation, or acquisition involving the Authority or the sale of all or substantially all of the assets of the Authority, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms; or
  - (7) Appointment of a successor or additional trustee or the change of name of a trustee.

- (c) Notwithstanding the foregoing, notice of the Listed Events described in subsections (a)(7) and (b)(3) need not be given under this subsection any earlier than the notice (if any) of the underlying event is given to Holders of affected 2017 Bonds pursuant to the Indenture.
- (d) The Trustee and the Co-Trustee shall, within one (1) Business Day (or as soon thereafter as practicable) of obtaining actual knowledge of the occurrence of any of the Listed Events, inform the Disclosure Representative of the event, and request that the Authority promptly notify the Dissemination Agent in writing whether or not to report the event pursuant to subsections (e) and (f) hereof.
- Whenever the Authority obtains knowledge of the occurrence of a Listed Event under subsection 5(b), whether because of a notice from the Trustee or Co-Trustee pursuant to subsection (d) or otherwise, the Authority shall as soon as practicable determine if such event is material under applicable federal securities laws. If the Authority determines that the occurrence of such Listed Event would be material under applicable federal securities laws, the Authority shall promptly notify the Dissemination Agent in writing of the occurrence of the Listed Event. Such notice shall instruct the Dissemination Agent to report the occurrence pursuant to subsection 5(f) hereof and shall be accompanied by a Certification. If in response to a request under subsection 5(d), the Authority determines that such Listed Event would not be material under applicable federal securities laws, the Authority shall so notify the Dissemination Agent in writing and instruct the Dissemination Agent not to report the occurrence. If in response to a request under subsection 5(d), the Authority determines that such Listed Event is a Listed Event under subsection 5(a), the Authority shall so notify the Dissemination Agent in writing and instruct the Dissemination Agent to report the occurrence. Such notice or Certification shall identify the Listed Event that has occurred (which shall be any of the categories set forth in Section 5 (a) or (b) of this Disclosure Agreement), include the text of the disclosure that the Authority desires to make, contain the written authorization of the Authority for the Dissemination Agent to disseminate such information, and identify the date the Authority desires for the Dissemination Agent to disseminate the information.
- (f) The Dissemination Agent is under no obligation to notify the Authority or the Disclosure Representative of an event that may constitute a Listed Event. In the event the Dissemination Agent so notifies the Disclosure Representative, the Disclosure Representative will promptly instruct the Dissemination Agent that either (i) a Listed Event has not occurred and no filing is to be made or (ii) a Listed Event has occurred and the Dissemination Agent is to report the occurrence pursuant to subsection (e) of this Section 5, together with a Certification. Such Certification shall identify the Listed Event that has occurred (which shall be any of the categories set forth in Section 5 (a) or (b) of this Disclosure Agreement), include the text of the disclosure that the Authority desires to make, contain the written authorization of the Authority for the Dissemination Agent to disseminate such information, and identify the date the Authority desires for the Dissemination Agent to disseminate the information.
- (g) If the Dissemination Agent has been instructed by the Authority as prescribed in subsection (e) or (f)(ii) of this Section 5 to report the occurrence of a Listed Event, the Dissemination Agent shall file a notice of such occurrence with the MSRB within the time frame set forth in Section 3(f). This notice will be filed with a cover sheet completed by the Dissemination Agent."
- (e) With respect to the 2017 Bonds, Section 7 of the Master Continuing Disclosure Agreement as originally executed shall not apply and shall be deemed to be replaced by the following:
  - "Section 7. <u>Dissemination Agent.</u> The Authority has appointed Digital Assurance Certification, L.L.C. as exclusive Dissemination Agent under this Disclosure Agreement. The Authority may, upon thirty days' prior written notice to the Dissemination Agent and the Trustee, replace or appoint a successor Dissemination Agent. Upon termination of DAC's services as Dissemination Agent, whether by notice of the Authority or DAC, the Authority agrees to appoint a successor Dissemination Agent or, alternately,

agrees to assume all responsibilities of Dissemination Agent under this Disclosure Agreement for the benefit of the holders of the 2017 Bonds. Notwithstanding any replacement or appointment of a successor, the Authority shall remain liable until payment in full for any and all sums owed and payable to the Dissemination Agent. The Dissemination Agent may resign at any time by providing thirty days' prior written notice to the Authority."

(f) With respect to the 2017 Bonds, Section 11 of the Master Continuing Disclosure Agreement as originally executed shall not apply and shall be deemed to be replaced by the following:

### "SECTION 11. Duties, Immunities and Liabilities of Disclosure Dissemination Agent

(a) The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement. The Dissemination Agent's obligation to deliver the information at the times and with the contents described herein shall be limited to the extent the Authority has provided such information to the Dissemination Agent as required by this Disclosure Agreement. The Dissemination Agent shall have no duty with respect to the content of any disclosures or notice made pursuant to the terms hereof. The Dissemination Agent shall have no duty or obligation to review or verify any Information or any other information, disclosures or notices provided to it by the Authority and shall not be deemed to be acting in any fiduciary capacity for the Authority, the Holders of the 2017 Bonds or any other party. The Dissemination Agent shall have no responsibility for the Authority's failure to report to the Dissemination Agent a Listed Event or a duty to determine the materiality thereof. The Dissemination Agent shall have no duty to determine, or liability for failing to determine, whether the Authority has complied with this Disclosure Agreement. The Dissemination Agent may conclusively rely upon Certifications of the Authority at all times.

The obligations of the Authority under this Section shall survive resignation or removal of the Dissemination Agent and defeasance, redemption or payment of the 2017 Bonds.

- (b) The Dissemination Agent may, from time to time, consult with legal counsel (either inhouse or external) of its own choosing in the event of any disagreement or controversy, or question or doubt as to the construction of any of the provisions hereof or its respective duties hereunder, and shall not incur any liability and shall be fully protected in acting in good faith upon the advice of such legal counsel. The reasonable fees and expenses of such counsel shall be payable by the Authority.
- (c) All documents, reports, notices, statements, information and other materials provided to the MSRB under this Disclosure Agreement shall be provided in an electronic format and accompanied by identifying information as prescribed by the MSRB necessary to file such information in accordance with this Disclosure Agreement."

SECTION 5. <u>Ratification of Disclosure Agreement</u>. As heretofore supplemented and as amended and supplemented hereby, the Disclosure Agreement is in all respects confirmed, except with respect to such provisions which apply expressly to the 2017 Bonds as set forth herein, and the Disclosure Agreement, all agreements supplemental thereto and this Supplemental Continuing Disclosure Agreement shall be read, taken and considered as one instrument.

SECTION 6. <u>Counterparts</u>. This Supplemental Continuing Disclosure Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, this Supplemental Continuing Disclosure Agreement has been executed on behalf of the Authority and the Dissemination Agent by their duly authorized representatives as of the date first written above.

GUAM WATERWORKS AUTHORITY
Ву
Authorized Officer
DIGITAL ASSURANCE CERTIFICATION, L.L.C.
P <sub>V</sub>
Authorized Officer

#### APPENDIX F

#### DTC AND ITS BOOK-ENTRY ONLY SYSTEM

The Depository Trust Company ("DTC"), New York, NY, will act as securities depository for the 2015 Bonds. The 2017 Bonds will be issued as fully registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered 2017 Bond certificate will be issued for each maturity of each series of the 2017 Bonds in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary The Depository Trust & Clearing Corporation ("DTCC"). DTCC is a holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned and operated by the users of its regulated subsdiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has a Standard & Poor's rating of AA+. The DTC Rules applicable to its Direct and Indirect Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of 2017 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2017 Bonds on DTC's records. The ownership interest of each actual purchaser of each 2017 Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the 2017 Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in 2017 Bonds, except in the event that use of the book-entry system for the 2017 Bonds is discontinued.

To facilitate subsequent transfers, all 2017 Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of 2017 Bonds with DTC and their registration in the name of Cede & Co. or such other nominee does not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the 2017 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such 2017 Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of 2017 Bonds may wish to take certain steps to augment transmission to them of notices of significant events with respect to the 2017 Bonds, such as redemptions, tenders, defaults, and proposed amendments to the 2017 Bond documents. Beneficial Owners of 2017 Bonds may wish to ascertain that the nominee holding the 2017 Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative,

Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of the notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the 2017 Bonds within a series and maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such series and maturity to be redeemed.

Neither DTC nor Cede & Co. (nor such other DTC nominee) will consent or vote with respect to the 2017 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the 2017 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Payment of principal of, Redemption Price of and interest on the 2017 Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Authority or the Trustee on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Authority or the Trustee, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal of, Redemption Price or interest on the 2017 Bonds to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Authority or the Trustee, disbursement of such payments to Direct Participants shall be the responsibility of DTC, and disbursement of such, payments to the Beneficial Owners shall be the responsibility of DTC, and Indirect Participants.

DTC may discontinue providing its services as securities depository with respect to the 2017 Bonds at any time by giving reasonable notice to the Authority. Under such circumstances, in the event that a successor securities depository is not obtained, 2017 Bond certificates are required to be printed and delivered. The Authority may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, 2017 Bond certificates will be printed and delivered.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Authority believes to be reliable, but the Authority takes no responsibility for the accuracy thereof.

The preceding information in this APPENDIX F was provided by DTC for inclusion herein, and has not been independently verified by the Authority or the Underwriters. No representation is made by the Authority as to the completeness or the accuracy of such information or as to the absence of material adverse changes in such information subsequent to the date hereof.

The Authority cannot and does not give any assurances that DTC will distribute to the Participants, or that the Participants or others will distribute to the Beneficial Owners, payments of debt service on the 2017 Bonds paid or any redemption or other notices or that they will do so on a timely basis or will serve and act in the manner described in this Official Statement. The Authority is not responsible or liable for the failure of DTC or any Direct Participant or Indirect Participant to make any payments or give any notice to a Beneficial Owner with respect to the 2017 Bonds or any error or delay relating thereto.

Neither the Authority nor the Trustee shall have any responsibility or obligation to any DTC Participant, any beneficial owner or other persons claiming a beneficial ownership interest in the 2017 Bonds under or through DTC or any DTC Participant, with respect to (i) the accuracy of any records maintained by DTC or any DTC Participant with respect to the beneficial ownership interest in the 2017 Bonds; (ii) the payment by DTC or any DTC Participant of any amount in respect of the principal of and premium, if any, or interest on the 2017 Bonds to any beneficial owner or other person for the 2017 Bonds; or (iii) the delivery to any beneficial owner of the 2017 Bonds, or any other person of any notice which is permitted or required to be given to owners under the Indenture. Neither the Authority nor the Trustee shall have any responsibility with respect to obtaining consents from anyone other than the registered owners.



# General Manager's Report

GWA CCU Work Session, July 19, 2017

# "One Guam" Initiative – GWA and DOD NAVFAC

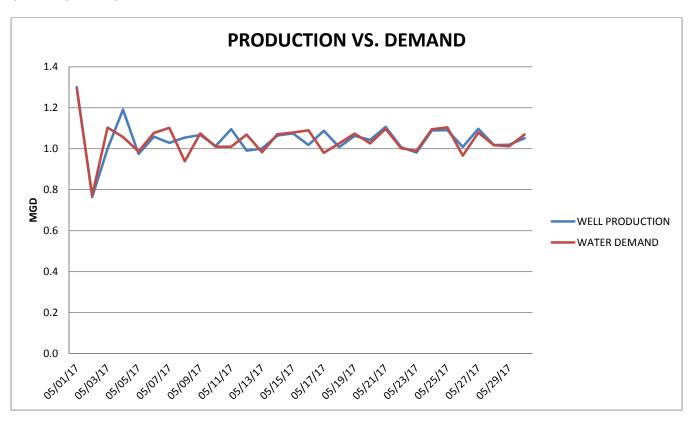
# 1. Tumon Maui Well:

- a. Power Line Transfer / Generator Status
  - i. Still waiting on resolution for service transfer between DOD / GPA; billing to GWA pending. The GPA transfer is still not complete, there is a low voltage issue that needs to be resolved before it can be transferred to GWA.
- b. Renewal of license DOD is preparing the paper work for the yearly license. Inspections for all Navy licensed facilities (TMW, AG-1 and Tarague) completed July 18<sup>th</sup>.
- c. Potts Junction Intertie (Water Service): Installation completed. Testing completed. GWA has fulfilled its obligation on this matter.

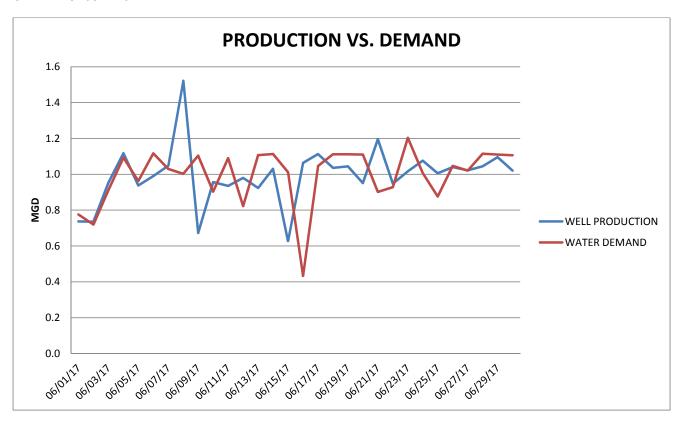
### d. Production:

- i. In May, production ranged consistently between 1.0 and 1.1 million gallons per day (MGD), with the exception of one day where production dropped to 0.8 million gallons due to system trips and maintenance activity - see Chart 1 below.
- ii. In June, production ranged consistently between 1.0 and 1.1 million gallons per day (MGD), with the exception of several days where production dropped between 0.6 million gallons through 0.8 million gallons due to system trips and maintenance activity see Chart 2 below.
- iii. Total production in April was **30,907,300 gallons.** Total Production in May was **32,424,800.** Total Production in June was **30,910,200.**

# **CHART 1 for MAY 2017**



### **CHART 2 FOR JUNE 2017**



# 2. Issues for Agat WWTP Project

- a. Appraisal still pending
  - Determination of mitigations for easement and document based on appraisal.
- b. Mixing zone study cooperation
  - i. Draft report under review. Final report issued June 2017.
  - ii. Currently under review with USEPA and Guam EPA
- c. GWA asking for temporary construction easement in advance of appraisal. NAVFAC stated it was possible and a 90 day allowance can be provided. The Navy Real Estate will write appropriate documents to allow GWA to move forward with construction prior to official estimates of mitigation needed. DOD is finalizing Grant of Easement.

#### 3. Santa Rosa Tank

- a. GWA first draft of the MOU in on hold completion is pending finalization requirements based on designed improvements.
- b. Project Status design is on ongoing (~ 60% complete).
- c. GWA is working on the specification for the intertie for the DOD and GWA tanks. GWA is drafting a request for a short term license to allow GWA's contractors enter the property. GWA will pursue and easement for the final agreement. The access and operation of the intertie will be specified in an MOU that is currently being drafted. The MOU will specify access to the intertie including requirements by both parties to be present for use, mutual access, and maintenance requirements.
- d. DOD is requiring that modeling for the two systems be available before they sign the MOU. The parameters and limits from the model will be incorporated as standard operating procedures as part of the MOU.

#### 4. OEA Coordination

- a. Funding to cover DON work related to Observation Wells project
  - i. Money will not come from GWA
  - ii. Funding source identified by DoD/DoN; issue has been resolved

# 5. Hydraulic modeling – on going

- a. GWA/NAVFAC continues joint effort to develop an analysis report of existing models leading toward direction.
- b. Pipe segments provided by GWA to NAVFAC.

# 6. Other issues

a. GWA has started to look at available data on GWA infrastructure along Route 16. As soon as the date is compiled, GWA will provide to NAVFAC.

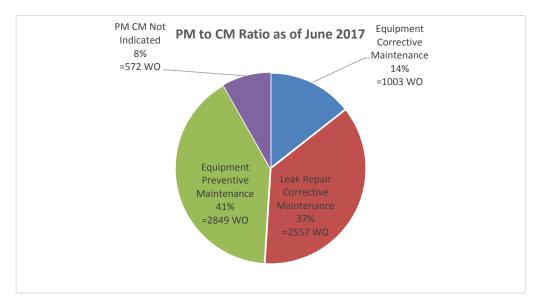
# OEA Grants – Guam Water-Wastewater Infrastructure Projects

- Activity Updates.
  - o Project Management Plan and Schedule Draft submitted; under GWA review
  - o Outfall Diffuser concept design coordinated with USEPA for permitting; final design in progress.
  - Sewer Interceptor Bridging documents in progress, GWA awaiting draft for review from PM; Anticipated D-B solicitation issuance date in August 2017. PM is coordinating with NavFac and DPW for concurrent projects in the Route 9/Route 3 corridor
  - o NDWWTP A/E Designer in procurement target July 31<sup>st</sup> to finalize selection and award.
- OEA will be on island next week for meetings July 26<sup>th</sup> 9:30am; Next Quarterly GWWIST meeting scheduled for September in Guam.

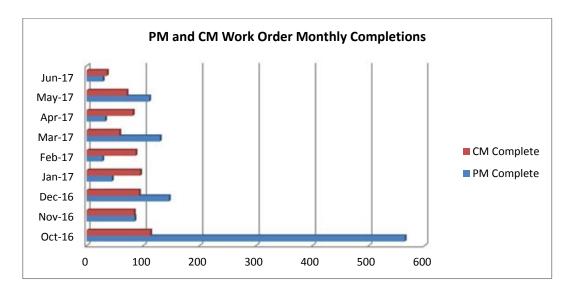
		Date		
Action Item	Date (Target)	(Actual)	Status	Remarks
Project Funds Available	July-16	AUG-30-16	Completed	
Land Acquisition	Jan-17	Jan-17 (Compensation Pending)	On-target	Survey complete, pending appraisals (in procurement)
Procure PM/CM Firm	Jan-17	Jan-17 (NTP Issued Feb 10th)	On-target	
Procure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

# Asset Management

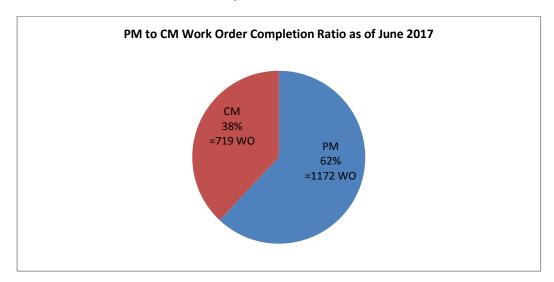
# I. PM to CM Ratio as of June 2017 (All Work Order Status- Completed and Pending)



# II. PM and CM Work Order Completions



#### III. PM to CM Work Order Completion Ratio



#### IV. New Asset Additions



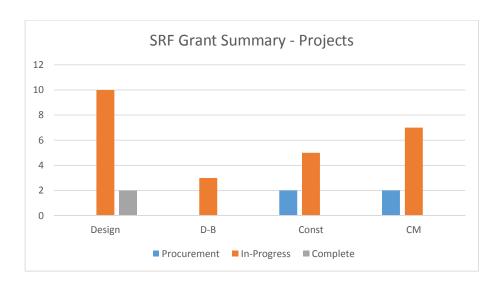
# **USEPA SRF Projects**

• Summary of all SRF grant funded projects are shown below.

# **SRF Grant Summary -**

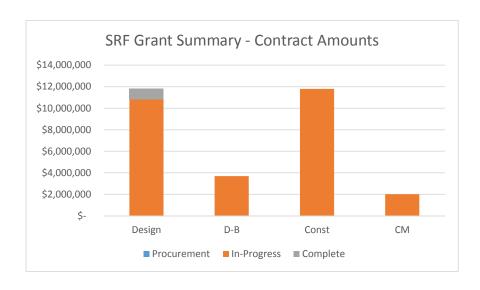
# **Projects**

	Procurement	In-Progress	Complete	Totals	%
Design	0	10	2	12	39%
D-B	0	3		3	10%
Const	2	5		7	23%
CM	2	7		9	29%
Totals	4	25	2	31	•
%	13%	81%	6%		



# **SRF Grant Summary - Contract Amounts**

	Procurement	In-Progress	Complete	Totals	%
Design	\$-	\$10,812,544	\$994,468	\$11,807,012	40%
D-B	\$-	\$3,697,408		\$3,697,408	13%
Const	\$-	\$11,799,256		\$11,799,256	40%
CM	\$-	\$2,021,827		\$2,021,827	7%
Totals	\$-	\$28,331,035	\$994,468	\$29,325,503	•
%	0%	97%	3%		



#### Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	77	2	8	6	97.8%

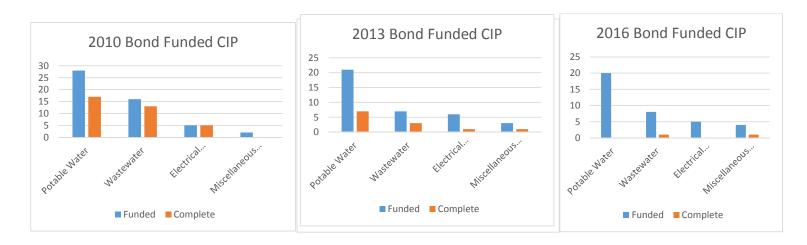


- 6 items delayed.
  - Changed to Completed Late (SSES)
  - Changed to Completed Late (Agat/SR)
  - o Cl Residual Monitors
  - Meters
- Final Date to complete all Court Order items is December 31, 2020.
- Overflow or Bypass events reported to USEPA:
  - o 2 WW spills in the Dededo area due to FOG.
  - o 1 spill at Southern Link power phase loss
- The new Agat WWTP is operating well and the UV system well exceeds the permit limits.

## **CIP Summary**

# CIP Summary - Project Encumbrance

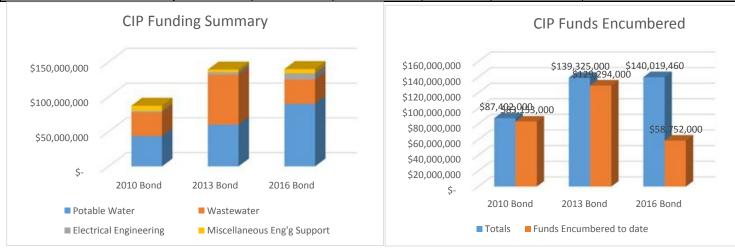
	2	2010 Bond	2013 B	ond	2016 B	ond		
	Funded	Complete	Funded	Complete	Funded	Complete	Total CIP Projects	%
Potable Water	28	17	21	7	20	0	35	49%
Wastewater	16	13	7	3	8	1	22	31%
Electrical Engineering	5	5	6	1	5	0	10	14%
Miscellaneous Eng'g Support	2	0	3	1	4	1	4	6%
Totals	51	35	37	12	37	2	71	100%
% of Total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



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# **CIP Summary - Project Amounts**

	2010 Bond		2013 Bond		2016 Bond			
	Funded	%	Funded	%	Funded %		Total CIP Projects	%
Potable Water	\$41,903,305	48%	\$58,317,117	42%	\$64,647,830	46%	\$164,868,252	45%
Wastewater	\$36,009,577	41%	\$73,837,883	53%	\$60,227,170	43%	\$170,074,630	46%
Electrical Engineering	\$1,748,118	2%	\$3,395,000	2%	\$8,750,000	6%	\$13,893,118	4%
Miscellaneous Eng'g Support	\$7,741,000	9%	\$3,775,000	3%	\$6,394,460	5%	\$17,910,460	5%
Totals	\$87,402,000	100%	\$139,325,000	100%	\$140,019,460	100%	\$366,746,460	100%
Funds Encumbered to date	\$83,153,000	95%	\$129,294,000	93%	\$58,752,000	42%		
% of Total CIP Funding	23.8%		38.0%		38.2%			



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# Land Acquisition Status

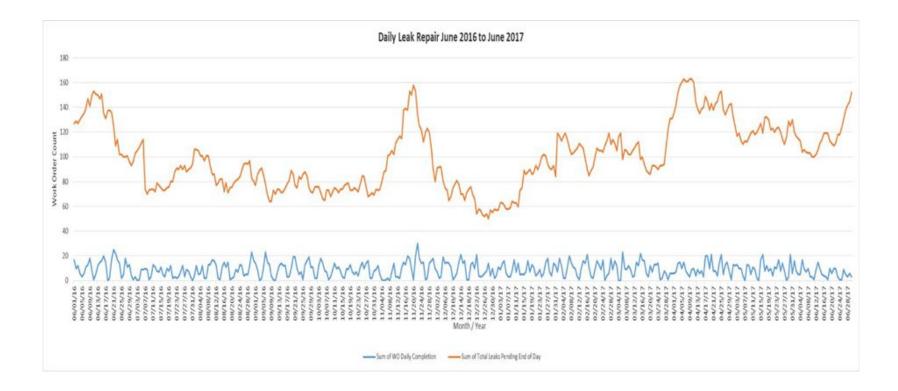
- ALC property for NDWWTP: Survey complete; Appraiser in procurement.
- CLTC properties: See chart below.
- Private properties needed for Court-order improvement projects: See chart below.

		Gov. or Private	
GWA Facility	Location	Property	Land Acquisition Status
GVVATacility	Location	Floperty	GWA has received authorization from
			property owner of Lot 3 on 07/10/17.
			Preliminary work will begin pending
	Ugum	Private	change order approval.
	Oguili	Filvate	Property Ownership vested in GWA
	Manenggon	Private	05/02/17.
			Conditional Grant Deed pending
			signature from AG's office and Governor
	Santa Rita	Gov't. – CLTC	of Guam 07/15/17.
			Survey map ongoing. GWA and DLM
			working together on Land Registration
			process. Abstract of Title sent to GWA
			for review 06/26/17. Pending technical
	Astumbo	Gov't CLTC	description from DLM survey division.
			Conditional Grant Deed pending
			signature from AG's office and Governor
	Upper Tumon	Gov't CLTC	of Guam 07/15/17.
			GWA consultants drafting Letter of Intent
			for private property owners; GWA is
			inquiring with DLM for possible use of
			portion of park area for Booster Pump
	Piti	Private	Station.
			NTP for survey services issued to DCA on
	Y-8	Gov't CLTC	06/19/17.
Deep Well		Dept. of	
		Agriculture/Manhita	NTP for survey services issued to DCA on
	AG-12	Farms	06/19/17.
Booster Pump Station			Purchase and Sale Agreement sent to
	Brigade	Private	property owner for signature 07/11/17

## Key Operational Issues

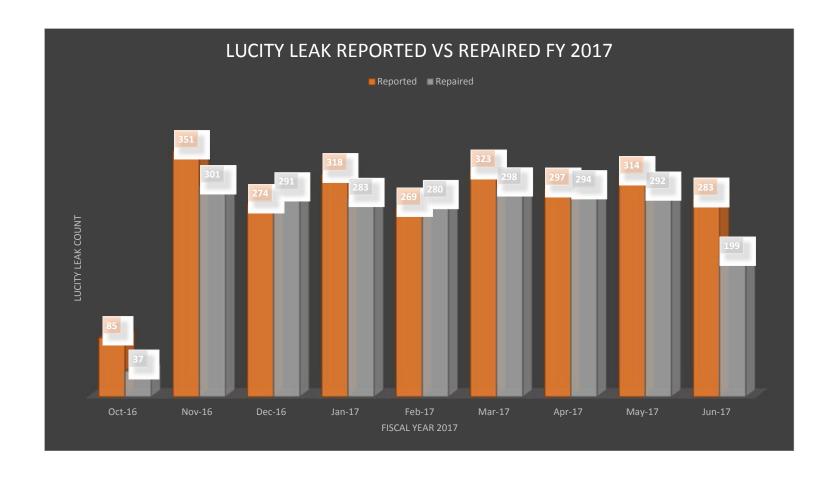
Leak Repair: WOs Completed & Pending (Daily)

(up to June 30, 2017)



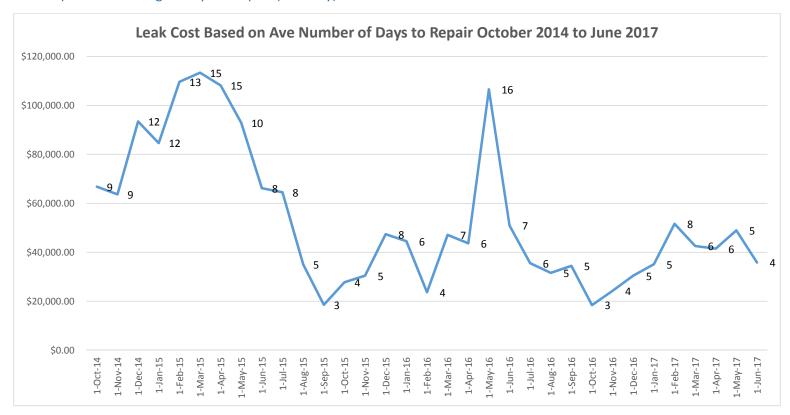
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### Leak Repair: Leaks Reported and Repaired (Monthly)



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#### Leak Repair: Cost Savings – Days to Repair (Monthly)

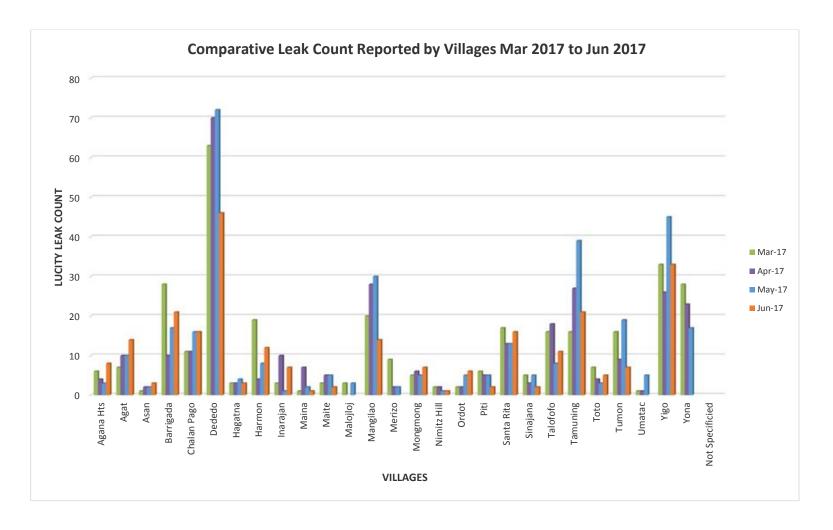


#### Assumptions:

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

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#### Leak Repair: Reported by Village



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2011 Court Order Performance Report Card / Dashboard as of 07/05/2017



# **Court Order Performance Report Card**

	Items	On-time Items Completed/Continuous		Completed Late	Items on Schedule	Performance %
Court order total	93	77	2	8	6	97.8%

Legend in detail section below.

8								
Fill Color	Meaning							
Lime green	Done/Completed							
Yellow	On Schedule							
Blue	Behind Schedule							
Violet	Completed Behind Schedule							
Yellow Green	Ongoing and Continuous							

#### 2011 Court Order Performance Report Card / Dashboard as of 07/05/2017

Name	SO #	No	Project	GWA SO	Due to EPA	Status
Northern District	2	1	Interim Primary Treatment Improvements Complete	Timeline	@EPA	Done Construction completed 12/13/2012
WWTP Primary	3(a)	2	Interim Effluent to meet Table 1	09/30/2012 monitoring started	@EPA	<b>Done</b> Table 1 compliance beginning January 9, 2013.
Treatment Upgrades.	3(a)(1)	3	PE Review (Application for 7.5 MGD pending)	3 months after compliance with 3(a)	@EPA	3(a)(1) Application to increase to 7.5 MGD Submitted 07/26/2016
	3(a)(2)	4	(Application for 9 MGD)	3 months after compliance with 3(a)(1)	TBD	
l l	3(c)	5	Effluent monitoring (calendar-year quarter)	Completed	@EPA	Done. Full year completed 01/08/2012
	4(a)	6	Sludge & Biosolids Management Plan	12/31/2011	@EPA	Done. Biosolids to Landfill EPA Approval 08/17/2014
	4(a)	7	Adequate stabilization and dewatering	9/30/2012	@EPA	Done. By Design-Build contract.
	4(b)	8	Biosolids Management, Quarterly Report	Quarterly Report	@EPA	Routine Monitoring Report, Repeats Quarterly
	4(c)	9	Biosolids Management, repair & replace facilities	09/30/2012	@EPA	Done Construction Complete 12/13/2012. Biosolids to Landfill
l l	4(d)	10	Biosolids Management, implement plan	9/30/2012	@EPA	Done - Biosolids to Landfill
Agaña WWTP Interim	5	11	Primary Treatment Plant Upgrades	06/30/2013	@EPA	Done. CEPT is operational and in final tune-up stages.
Measures.	5(a)	12	Scope and schedule	09/30/2011	@EPA	Done: OET 1 to operational and in initial tand up stages.
	5(b)	13	Septage Handling Complete	06/30/2013	@EPA	Done. Septage Receiving is completed at the NDWWTP (location option) reported
l l	5(b) 1	14	Septage handling design contract signed	12/31/2011	@EPA	06/26/2013.
	5(b) 2	15	Septage handling construction notice to proceed	06/30/2012	@EPA	
	5(c)	16	Grit and FOG Complete	06/30/2013	@EPA	Phase III CEPT is in operations.)
l l	5(c) 1	17	Grit and FOG design contract signed	12/31/2011	@EPA	Done Grit and FOG reported 06/06/2013
l l	5(c) 2	18	Grit and FOG construction notice to proceed	06/30/2012	@EPA	Done Submitted 11/17/2011
	5(d)	19	Repair Solids handling	11/17/2011	@EPA	<b>Done</b> O & M Plan reported 05/31/2012
	5(e)	20	O & M Plan	05/31/2013	@EPA	
	5(f)	21	Effluent monitoring (calendar-year quarter)	Completed	@EPA	Done. Full year completed 01/08/2012
	6	22	Prevent Effluent Back Surge	06/30/2013	@EPA	Done Old outfall decommissioned (plugged) 06/25/2013 Done Old outfall
	6	23	Effluent Back Surge Plan	12/30/2011	@EPA	decommissioned (plugged) 06/25/2013
I&I SSES	7	24	Collection System SSES and I/I evaluation	Done.	@EPA	Done.
SSES Work Plan	8	25	Work Plan	180 days	@EPA	Done Reported 08/13/2012
0020 110111 11111	8(a)	26	Flow and rainfall data	N/A	@EPA	Done Reported 04/25/2013
	8(b)	27	I/I Southern	540 days	@EPA	Done Reported 04/25/2013
	8(c)	28	I/I Central	900 days	@EPA	Done Reported 04/28/2014
	8(d)	29	SSES Southern	540 days	@EPA	<b>Done</b> Reported 04/30/2013 – update 04/29.2016
	8(e)	30	SSES Central	900 days 09/15/2015 EPA Disap. Ltr.	@EPA	Done – Completed June 2, 2017
	8(e) 2	31	SSES Central Report	09/15/2015 EPA Disapproval Letter	@EPA	Done – Completed June 2, 2017
Agat / Santa Rita,	9(a)	32	By Pass Report	60 days	@EPA	Done Reported 01/04/2012
3	9(b)	33	Flow Meter	180 days	@EPA	Done Reported 07/26/2012
	9(c)1,2,3	34	Report evaluating near term measures	180 days response sent 09/29/2014	@EPA	Done Reported 05/07/2012 GWA response 09/292014.
i i	9(d)	35	Implement near term measures d - Disinfection	03/23/2016	@EPA	EPA specifications of 9(c), 9(d) and 9(f) on 09/24/2015.
	9(e)	36	Implement near term measures e – sludge mgmt.	03/23/2016	@EPA	
	9(f)	37	Implement near term measures f – 75% Bypass Red.	03/23/2016	@EPA	
	10	38	System Evaluation	12/31/2013 response sent 09/29/2014	@EPA	CO Done Reported 12/28/2013 GWA response 09/29/2014 update 04/29/2016
i i	11	39	System Upgrades	02/27/2017 Estimated		Delay Letter sent November 16, 2016
	11(a)	40	System Upgrades design	06/30/2014-NTP 10/13/2014	@EPA	CCU approval 08/26/2014. NTP was issued on 10/13/2014
	11(b)	41	System Upgrades notice to proceed	06/30/2015-NTP 10/02/2015	@EPA	NTP Ph.1 issued 10/02/2015 - NTP Ph.2 due 01/04/2016
Baza Gardens	12(a)	42	Interim Measures Evaluation (Independent PE)	180 days	@EPA	Done Reported 05/07/2012, PMO task
	12(b)	43	Interim Measures Complete	540 days	@EPA	Done Reported 05/01/2013 PMO task
į į			Evaluation Bio Solids Report	180 days	@EPA	Done-EPA Approval 08/28/2014
	12(c)	44	Evaluation bio Solius Report			
		44 45	Complete Bio Solids	360 days	@EPA	Done Reported 03/21/2013
	12(c)				@EPA @EPA	Done Reported 03/21/2013   Done Reported 04/30/2014 GWA response 10/02/2014
	12(c) 12(d)	45	Complete Bio Solids	360 days		Done Reported 04/30/2014 GWA response 10/02/2014 Critical path, need to complete I&I/SSES
	12(c) 12(d) 13	45 46	Complete Bio Solids System Evaluation	360 days 04/30/2014	@EPA	Done Reported 04/30/2014 GWA response 10/02/2014

#### 2011 Court Order Performance Report Card / Dashboard as of 07/05/2017

Name	SO #	No	Project	GWA SO Timeline	Due to EPA	
Umatac-Merizo	15	50	Complete Evaluation	12/31/2013	@EPA	CO 15 Done Reported 12/31/2013 Critical path, need to complete I&I/SSES
	16	51	System Upgrades	12/31/2018	<u> </u>	
	16(a)	52	System Upgrades, Design Starts	06/30/2016		
	16(b)	53	System Upgrades, Notice to Proceed	06/30/2017		NTP Issued 06/29/2017
Sewer Cleaning	17	54	Sewer Cleaning (in annual and quarterly reports)	2017-2022 Preliminary Goal set.	@EPA	2017-2022 Preliminary Goal set.
Hot Spot Plan	18	55	Hot Spot Plan	EPA Revision letter o9/08/2015	@EPA	Last Revision submitted 10/23/2015 GWA WW Ops
ссту	19	56	CCTV (in annual and quarterly reports)	2017-2022 Preliminary Goal set Entire System Every5 years		2017-2022 Preliminary Goal set Entire System Every5 years
Sewer Hook-Up	20	57	Sewer Hook-Up	In Operation	@EPA	Done – available on GWA web site or at GWA Customer Service
Groundwater Chlorination	21	58	Groundwater Chlorination	540 days	@EPA	Done Reported 04/29/2013
Chlorine Residual	22	59	Plan	180 days	@EPA	Done Reported 09/94/2012
Monitors	22(a)	60	High Risk Wells	540 days	@EPA	Done Reported 05/02/2013
	22(b)	61	Moderate Risk Wells	2 years	@EPA	Done Reported 07/31/2013
	22(c)	62	All Other Wells	3 years (Substantially complete)	@EPA	All but 5-10/27/2015 Site electrical upgrade in progress at 5 locations
Water Metering	23(a)	63	Plan & schedule	180 days	@EPA	Done Reported 05/08/2012
	23(a)	64	All connections are metered and mapped	2 years	@EPA	10/31/2016 Substantially complete 2 Sensus, 0 Metron left
	23(b)	65	Plan repair & maintain	180 days	@EPA	Done GWA Test facility operational 06/28/2013
Ugum Surface Water	24	66	Construction complete	One year	@EPA	Done Reported 11/09/2012
Treatment Plant	24	67	PE Inspection	60 days before start-up		Done EPA Approval 08/26/2014
	25	68	PE Performance Operation Assessment	60 days before start-up	@EPA	Done EPA Approval 08/26/2014
	26	69	O&M Plan and Procedures	90 days before start-up	@EPA	Done Reported 08/10/2012 EPA Approval 08/17/2014
	27	70	Plant compliance	365 days	@EPA	Done Reported 02/07/2013
Sinajana Water	28(a)	71	Existing Construction Complete	180 days	@EPA	Done Reported 12/23/2011
Transmission Line	28(b)	72	Hydraulic Evaluation	180 days		Done EPA No Further Comment 08/26/2014
	28(c)	73	Construction Complete (2 tanks)	540 days from 11/21/2013	@EPA	GEPA Delays Tank Constr. Completed August 2015: In Service July 2016.
	28(d) 1	74	Monitoring Plan	90 days prior	@EPA	Done Reported 09/07/2012
	28(d) 1	75	Implement- Monitoring Plan	For one year after start up	@EPA	GWA Compliance
	28(d) 2	76	Monitoring Plan	180 days prior	@EPA	Done EPA Approval 08/26/2014
	28(e)	77	Implement- Monitoring Plan	For one year after start up	@EPA	Start 09/01/2015 – end 08/31/2016
Storage Tank/Reservoir	29(a) 1	78	Plan hydraulic analysis	90 days	@EPA	Done Reported 11/09/2012
Rehabilitation and	29(a) 2	79	Hydraulic analysis	540 days	@EPA	Done EPA No Further Comment 08/26/2014
Replacement Program.	29(b) 1	80	Plan minimize service interruptions	90 days after approval	@EPA	Done EPA approval 08/26/2014
	29(b) 2	81	Tank inspection schedule	540 days	@EPA	Done EPA approval 08/26/2014
	29(b) 3	82	Complete Barrigada (1 @ 2 MG tank)	540 days	@EPA	Done
	29(b) 4	83	Assess additional 7 tanks	5 years (11/10/2016)	@EPA	DCA contract task, on schedule
	29(b) 5	84	RRR 7 additional tanks	5 years (11/10/2016)		On schedule, PMO to execute procurement
	29(b) 6 i	85	RRR 10 additional tanks	7 years (11/10/3018)		Critical path, need to complete hydraulic analysis
	29(b) 6 ii	86	RRR remaining	12/31/2020		
	29(c)	87	In Quarterly / Annual Report	Quarterly / Annual Report	@EPA	GWA Compliance Repeats Quarterly
Section III	31(a)(1)	88	Quarterly Report	Jan., April, July, Sept. Continuous	@EPA	Due by the 30th of the specified months
REPORTING	31(a)(2)	89	Reports on Non Compliance	Within 30 days from determination of delay	@EPA	As determined by GWA
REQUIREMENTS	31(b)	90	SSO and Bypass Report	Jan., April, July, Sept. Continuous	@EPA	Due by the 30th of the specified months
	31(c)	91	Annual Report	January each year	@EPA	Included with 31(a) each Year
Section IV NOTICES	35	92	CO contacts		@EPA	GWA Compliance report 06/29/2016
	36	93	Formal notices of change in CO contacts	Whenever specified staffing changes	@EPA	GWA Compliance report 06/29/2016
	50	90	i onnai notices di change in CO contacts	vvinemever specified stailing changes	⊎LF/A	OWA Compliance report 100/23/2010

GWA Utility Services Division Monthly Status Report Month ending June 30, 2017

UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE MAY 2017	MAY 2017 MONTHLY TOTAL	WEEK ENDING: 6/3/2017	WEEK ENDING: 6/10/2017	WEEK ENDING: 6/17/2017	WEEK ENDING: 6/24/2017	WEEK ENDING: 7/1/2017	WEEKLY AVERAGE JUNE 2017	JUNE 2017 MONTHLY TOTAL
Collections Unit									
I. Number of accounts cut for nonpayment:	67	269	58	71	91	69	75	73	364
II. Number of accounts restored for nonpayment:	63	251	51	53	67	50	69	58	290
III. Number of No water reports responded to:	5	18	1	0	1	2	3	1	7
IV. Number of Secure/Unsecure valve reports responded to:	1	5	0	1	2	0	0	1	3
V. Number of Verify reads responded to:	2	8	0	2	0	2	4	2	8
VI. Number of new pay plans negotiated for <b>active</b> accounts:	13	52	11	16	16	38	65	29	146
VII. Number of active pay plans negotiated and ongoing :	_		446	395	354	334	370	380	
VIII. Number of <b>inactive</b> accounts with a payment arrangement:	8	420	8	5	5	5	5	6	242
IX. Number of broken payment plans:	35	139	31	67	57	58	29	48	242
Customer Service Unit  1. Service Delivery Points:  a. GBN Public Service Building – Fadian  i. Total Customers Assisted :	246	985	262	275	240	225	275	255	1277
ii. Total Abandoned Requests :	16	62	25	38	26	15	26	26	130
ii. Average Wait Time:	11 minutes		8 minutes	13 minutes	11 minutes	10 minutes	14 minutes	11 minutes	
iii. Average Service Time:	13 minutes		13 minutes	12 minutes	13 minutes	12 minutes	12 minutes	13 minutes	
iv. Breakdown by request type:									
<ol> <li>Apply for water</li> </ol>	69	274	61	64	73	57	81	67	336
Restore water cut for non payment		56	14	10	6	8	14	10	52
3. Terminate Water	21	85	40	24	23	14	30	26	131
4. Copy of Bill	40	161	38	40	35	21	32	33	166
5. Billing Dispute	47	186	54	49	40	62	43	50	248
<ol> <li>Billing Dispute follow up</li> <li>General Questions &amp; Other</li> </ol>	2 36	8 145	4 31	3 15	4 40	33	1 40	3 32	14 159
7. General Questions & Other  8. Report a water leak	1	2	1	6	1	1	2	2	11
9. Report water theft	0	0	0	0	0	0	1	0	1
·					-				
10. Payment Arrangement	28	111	19	40	18	27	31	27	135
b. Julale Satellite Office – Hagatna									
i. Total Customers Assisted :	239	955	235	267	247	245	248	248	1242
ii. Total Abandoned Requests :	8	30	20	15	11	10	10	13	66
ii. Average Wait Time:	7 minutes		9 minutes	10 minutes	6 minutes	7 minutes	9 minutes	7 minutes	
iii. Average Service Time:	13 minutes		11 minutes	11 minutes	11 minutes	11 minutes	11 minutes	12 minutes	
iv. Breakdown by request type:	46	182	55	65	40	50	65	55	275
Apply for water     Restore water cut for non payment		63	12	14	14	11	11	12	275 62
2. Restore water cut for non payment 3. Terminate Water	23	90	26	24	25	25	36	27	136
4. Copy of Bill	53	212	49	74	55	46	42	53	266
5. Billing Dispute	53	212	56	37	45	52	48	48	238
6. Billing Dispute follow up	2	7	0	3	0	0	1	1	4
7. General Questions & Other	24	95	25	12	39	34	22	26	132
8. Report a water leak	1	5	0	0	0	0	0	0	0
<ol><li>Report water theft</li></ol>	0	1	0	0	0	0	0	0	0
10. Payment Arrangement	23	93	13	28	29	29	26	25	125

GWA Utility Services Division Monthly Status Report Month ending June 30, 2017

	301 31	1205					7/1/2017		TOTAL
ii. Total Abandoned Requests : ii. Average Wait Time:	31	1205							
ii. Average Wait Time:			270	328	315	288	298	300	1499
		125	7	12	11	21	26	15	77
	11 minutes		14 minutes	14 minutes	10 minutes	12 minutes	18 minutes	12 minutes	
iii. Average Service Time:	9 minutes		9 minutes	10 minutes	12 minutes	11 minutes	11 minutes	11 minutes	
iv. Breakdown by request type:									
Apply for water	68	271	57	73	70	82	80	72	362
Restore water cut for non payment	14	56	7	7	8	5	16	9	43
3. Terminate Water	24	97	36	18	27	25	26	26	132
4. Copy of Bill	74	295	46	76	67	49	52	58	290
5. Billing Dispute	57	226	73	79	77	62	68	72	359
Billing Dispute follow up	2	9	0	3	4	2	1	2	10
7. General Questions & Other	33	132	25	38	22	34	23	28	142
8. Report a water leak	4	14	1	5	0	2	2	2	10
Report water theft	0	0	2	2	0	0	1	1	5
10. Payment Arrangement	26	105	23	27	40	28	29	29	147
II. Customer Call Center									
a. Calls Recieved :	1029	4116	1182	1077	325	369	267	644	3220
b. Calls Immediately Answered :	148	590	87	81	63	61	71	73	363
c. Calls Abandoned	181	725	202	195	61	84	51	119	593
d. Calls Handled by Voice mail:	699	2796	893	801	201	224	145	453	2264
e. Ratepayers called back after voice mail message placed:									<u> </u>
f. Average duration of calls answered:	16 minutes		17 minutes	16 minutes	15 minutes	17 minutes	14 minutes	16 minutes	
III. Customer Emails:  a. Emails Recieved:  i. customers@guamwaterworks.org	37	146	45	48	44	46	46	46	229
Breakdown by request type (email):	3,	110	.5	10		.0	.0	.0	223
1. Apply for water	3	10	1	3	0	10	8	4	22
2. Terminate Water	2	8	1	3	1	5	3	3	13
3. Copy of Bill	1	4	0	2	3	2	1	2	8
4. Billing Dispute & follow up	6	23	3	4	7	6	12	6	32
5. General Questions & Other	15	59	20	19	26	16	19	20	100
6. Report a water leak	5	18	8	7	3	2	0	4	20
7. Report water theft	0	0	0	0	0	0	0	0	0
8. Online services inquiry	6	24	12	10	4	5	3	7	34
ii. realtors@guamwaterworks.org	1	24	0	5	3	2	7	3	17
b. Emails Replied (both):	36	145	22	39	41	33	38	35	173

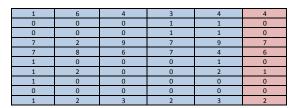
20

GWA Utility Services Division Monthly Status Report Month ending June 30, 2017

	WEEKLY	MAY 2017	WEEK	WEEK	WEEK	WEEK	WEEK	WEEKLY	JUNE 2017
	AVERAGE	MONTHLY	ENDING:	ENDING:	ENDING:	ENDING:	ENDING:	AVERAGE	MONTHLY
UTILITY SERVICES DIVISION UNITS & ACTIVITIES:	MAY 2017	TOTAL	6/3/2017	6/10/2017	6/17/2017	6/24/2017	7/1/2017	JUNE 2017	TOTAL
			6/3/2017	6/10/2017	6/17/2017	6/24/2017	7/1/2017		

19

- IV. Saturday Services: 9AM TO 1PM ONLY
  - a. VISITS: Breakdown by request type:
    - 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
    - Report water theft
    - 10. Payment Arrangement



21

21

21



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



6/24/2017

7/1/2017

6/17/2017

6/3/2017

6/10/2017

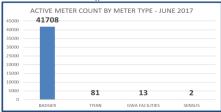
GWA Utility Services Division Monthly Status Report Month ending June 30, 2017

JTILITY SERVICES DIVISION UNITS & ACTIVITIES:	WEEKLY AVERAGE MAY 2017	MAY 2017 MONTHLY TOTAL	WEEK ENDING: 6/3/2017	WEEK ENDING: 6/10/2017	WEEK ENDING: 6/17/2017	WEEK ENDING: 6/24/2017	WEEK ENDING: 7/1/2017	WEEKLY AVERAGE JUNE 2017	JUNE 2017 MONTHLY TOTAL
Dispute Resolution & Document Control	WAT 2017	TOTAL	0/3/2017	0/10/2017	0/1//201/	0/24/2017	7/1/2017	JOINE 2017	TOTAL
I. Dispute Resolution:									
a. Number of disputed accounts resolved:	14	57	14	7	6	5	12	9	44
b. Number of disputed accounts under review:	179	716	179	179	179	179	179	179	895
II. Document Control:								•	
a. Number of field activities posted :	439	1754	395	436	354	350	370	381	1905
b. Number of field activities pending:	281	1125	126	126	120	194	187	151	753
Disconnect/Reconnect Unit									
Number of field activities received:	68	272	309	309	308	319	324	314	1569
II. Number of field activities completed:	281	1125	307	309	308	319	319	312	1562
III.Number of field activities pending field action:	2	8	3	0	0	0	5	2	8
Meter Reading Unit									
I. Number of meters read:									
a. Electronically Read Meters:	8000	31998	6617	5049	10287	10045	10045	8409	42043
b. Manually Read Meters:	26	102	22	24	22	34	34	27	136
II. Unread meters (Meters scheduled to be read but not read):	76	302	63	30	68	141	141	89	443
III. Number of data logs received:	27	108	38	23	16	31	31	28	139
IV. Number of data logs retrieved:	26	104	22	41	16	25	25	26	129
V. Number of data logs pending field action:	8	32	16	4	6	6	6	8	38
VI. Number of estimated readings (for the week):	17	67	8	0	18	41	41	22	108
a. Reasons for Estimations:	•	•	•	•		•	•		
i. Cant locate meter:	1	4	0	1	1	2	2	1	6
ii. Temporary Obstruction	0	0	0	0	0	0	0	0	0
iii. Vicious Dog	0	0	0	0	0	0	0	0	0
iv. Flooded meter	2	7	0	2	2	3	3	2	10
iiv. Corrective action requested (database corrections needed)	10	41	1	15	7	18	18	12	59
iiiv. Possible changed out meter:	4	15	1	6	8	0	0	3	15
ix. Other:	10	38	16	4	0	18	18	11	56
VII. Electronic Read Percentage: (for the week):	99%	99%	99%	99%	99%	99%	99%	99%	99%
Revenue Protection Unit									
Number of Inactive Still Consuming Reports rec'd & investigated:	1	0	1	2	0	1	1	1	5
II.Number of Illegal Connection reports rec'd & investigated:	1	0	1	2	1	0	0	1	4

III. Meter Replacement Project – Post 2010 Metron Farnier & Sensus Status Report (as of June 30 2017):

METER TYPE	COUNT
SENSUS	2
METRON	
FARNIER	0
	2

a. Account & Meter Type Count :





# **Engineering Monthly Report June/July 2017**

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

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# A. Summary Table of 2010, 2013 and 2016 Bond Potable Water

				%			%			%	
CIP#	CIP Description	201	0 Bond Allotment	encumbered	% available	2013 Bond Allotment	encumbered	% available	2016 Bond Allotment	encumbered	% available
PW 05-01	Ground Water Disinfection	\$	500,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 05-03	Santa Rita Springs Booster Pump Rehab Phase II	\$	-	N/A	N/A	\$ 100,000.00	100.00%	0.00%	\$ -	N/A	N/A
PW-05-05	"A Series Well Transmission Line	\$	518,143.96	100.00%	0.00%	\$ 400,000.00	100.00%	0.00%	\$ -	N/A	N/A
PW 05-06	Water Booster Pump Station	\$	500,000.00	100.00%	0.00%	\$ 1,861,000.00	99.49%	0.51%	\$ 4,139,000.00	0.00%	100.00%
PW 05-07	Meter Replacement Program	\$	10,300,000.00	99.84%	0.16%	\$ 999,000.00	99.75%	0.25%	\$ 4,501,000.00	3.33%	96.67%
PW 05-08	Barrigada Tank Repair/Replacement	\$	5,450,000.00	99.92%	0.08%	\$ 4,987,000.00	99.32%	0.68%	\$ 1,013,000.00	0.00%	100.00%
PW 05-09	Leak Detection	\$	200,000.00	100.06%	-0.06%	\$ 20,000.00	96.25%	3.75%	\$ 1,180,000.00	0.00%	100.00%
PW 05-10	Potable Water System Planning	\$	200,000.00	100.00%	0.00%	\$ 624,000.00	100.00%	0.00%	\$ 2,276,000.00	20.93%	79.07%
PW 05-11	Implement Ground Water Rule	\$	1,700,000.00	100.00%	0.00%	\$ 1,000,000.00	100.00%	0.00%	\$ -	N/A	N/A
PW 05-12	Brigade II (Ugum Lift) BPS Upgrade	\$	1,700,000.00	14.96%	85.04%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 05-13	Deep Well Rehabilitation	\$	548,000.00	100.00%	0.00%	\$ 200,000.00	100.00%	0.00%	\$ 250,000.00	0.00%	100.00%
PW 05-14	New Deep Wells at Down Hard	\$	638,252.85	76.11%	23.89%	\$ 810,000.00	0.00%	100.00%	\$ 1,190,000.00	0.00%	100.00%
PW 05-15	Rehabilitation of Asan Springs	\$	900,000.00	33.71%	66.29%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 05-16	Master Meters	\$	1,600,000.00	99.44%	0.56%	\$ 784,000.00	99.88%	0.12%	\$ 3,616,000.00	0.00%	95.81%
PW 09-01	Ugum Water Treatment Plant Intake	\$	700,000.00	99.47%	0.53%	\$ 982,000.00	100.00%	0.00%	\$ 18,000.00	0.00%	100.00%
PW 09-02	Water Wells	\$	-	N/A	N/A	\$ 4,200,000.00	46.77%	53.23%	\$ 2,500,000.00	13.60%	86.40%
PW 09-03	Water Distribution System	\$	3,174,748.00	100.00%	0.00%	\$ 11,151,000.00	79.08%	20.92%	\$ 49,000.00	0.00%	100.00%
PW 09-04	Pressure Zone Realignment	\$	-		N/A	\$ 431,000.00	99.95%	0.05%	\$ 1,141,000.00		
PW 09-06	Central Water Distribution System 2005	\$	900,000.00	91.67%	8.33%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 09-08	Mechanical/Electrical Equipment	\$	1,200,000.00	100.00%	0.00%	\$ 430,000.00	99.60%	0.40%	\$ 100,000.00	0.00%	100.00%
PW 09-09	Water Reservoir Internal/External	\$	2,000,000.00	67.68%	32.32%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 09-10	Water Reservoir Internal/External	\$	-	N/A	N/A	\$ -	N/A	N/A	\$ 800,000.00	0.00%	100.00%
PW 09-11	Water System Reservoirs 2005 Improvements	\$	1,050,000.00	100.00%	0.00%	\$ 13,878,000.00	99.06%	0.94%	\$ 28,350,000.00	6.68%	93.32%
PW 11-01	Distribution System Upgrades	\$	474,159.85	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 11-02	Ugum Water Treatment Plant Reservoir	\$	-	N/A	N/A	\$ 90,000.00	0.00%	100.00%	\$ -	N/A	N/A
PW 12-01	Water Audit Program & Water Loss Control Plan	\$	100,000.00	78.46%	21.54%	\$ -	N/A	N/A	\$ 1,000,000.00	0.00%	100.00%
PW 12-02	Production Plan / Reduce Navy Purchases	\$	100,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 12-03	Hydraulic Assessment of Tanks	\$	500,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 12-04	Agana Heights & Chaot Tanks	\$	4,700,000.00	100.00%	0.00%	\$ 3,280,000.00	8.51%	91.49%	\$ 1,220,000.00	0.00%	100.00%
PW 12-05	Tank Major Repair Yigo #1, Mangilao #2, Astumbo#1	\$	1,900,000.00	95.16%	4.84%	\$ 11,605,000.00	99.99%	0.01%	\$ 1,895,000.00	96.15%	3.85%
PW 12-06	Tank Replacement Piti & Hyundai	\$	-	N/A	N/A	\$ -	N/A	N/A	\$ 7,409,830.00	0.00%	100.00%
PW 12-07	Assessment of Malojloj Elevated & Yigo Elevated	\$	200,000.00	100.00%	0.00%	\$ 485,117.00	100.00%	0.00%	\$ -	N/A	N/A
PW 12-08	Public Water System Asset Inventory/ Condition Assessment	\$	100,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 12-09	Public Water System GIS & Mapping	\$	50,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
PW 14-01	Fire Hydrant Replacement Program	\$		N/A	N/A	\$ -	N/A	N/A	\$ 2,000,000.00	0.00%	100.00%
		\$	41,903,304.66			\$ 58,317,117.00			\$ 64,647,830.00		

#### Wastewater

O.D	ove e		%			%			%	
CIP #	CIP Description	2010 Bond Allotment			2013 Bond Allotment					
WW 05-04	Wastew ater System Planning	\$ 1,500,000.00	100.00%	0.00%	\$ 651,000.00	100.00%	0.00%	\$ 349,000.00	89.68%	10.32%
WW 05-05	Wastew ater Vehicles	\$ 235,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 05-07	NDWWTP - Chlorine Tanks	\$ 250,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 09-01	Lift station upgrades	\$ -	N/A	N/A	\$ 946,000.00	84.08%	15.92%	\$ 2,404,000.00	12.21%	87.79%
WW 09-06	Wastew ater Collection System Repl/ Rehabilitation	\$ 1,105,000.00	99.93%	0.07%	\$ 780,000.00	97.55%	2.45%	\$ 2,920,000.00	0.00%	100.00%
WW 09-08	Facilities Plan/Design for Baza Gardens WWTP	\$ 1,250,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 09-10	Facilities Plan/Design for Agat-Santa Rita WWTP	\$ 899,630.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 11-03	Baza Gardens STP Replacement	\$ 1,301,947.00	24.27%	11.57%	\$ 3,114,883.00	99.97%	0.03%	\$ 29,400,170.00	100.00%	0.00%
WW 11-04	Facilities Plan/Design for Umatac-Merizo WWTP	\$ 900,000.00	100.00%	0.00%	\$ 473,000.00	100.00%	0.00%	\$ 527,000.00	47.44%	52.56%
WW 11-08	Agat/Santa Rita STP Replacement	\$ 2,218,000.00	99.91%	0.09%	\$ 67,200,000.00	99.43%	0.57%	\$ 3,000,000.00	14.91%	85.09%
WW 12-01	Northern District WWTP Primary Treatment Upgrade	\$ 11,750,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-02	Biosolids Management Plan	\$ 200,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-03	Agana WWTP Interim Measures	\$ 11,500,000.00	100.00%	0.00%	\$ 673,000.00	100.00%	0.00%	\$ 827,000.00	0.00%	100.00%
WW 12-04	I&I SSES Southern	\$ 800,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-05	I&I SSES Central	\$ 850,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-06	I&I SSES Northern	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12 -07	Umatac Merizo Replacement	\$ 250,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ 20,800,000.00	93.12%	0.00%
WW 12-08	Wastewater System GIS & Mapping	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-09	Wastew ater Facility Back Up Pow er	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 12-10	Wastew ater System Asset Inventory	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ -	N/A	N/A
WW 17-01	Wastew ater Sew er System Expansion									
WW 17-02	Northern District WWTP Secondary Treatment Upgrade	\$ 1,000,000.00	0.00%	100.00%						
		\$ 36,009,577.00			\$ 73,837,883.00			\$ 60,227,170.00		

**Electrical Engineering Support** 

			%			%			%	
CIP #	CIP Description	2010 Bond Allotment	encumbered	% available	2013 Bond Allotment	encumbered	% available	2016 Bond Allotment	encumbered	% available
EE 05-02	SCADA Pilot Project	\$ 61,950.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
EE 09-01	Wastewater Pumping Station Electrical Upgrade	\$ -	N/A	N/A	\$ 620,000.00	16.13%	83.87%	\$ 100,000.00	0.00%	100.00%
EE 09-02	Electrical Upgrade - Water Wells	\$ 354,226.63	100.00%	0.00%	\$ 1,500,000.00	100.00%	0.00%	\$ 650,000.00	76.92%	23.08%
EE 09-03	Electrical Upgrade - Water Booster	\$ -	N/A	N/A	\$ 2,000.00	0.00%	100.00%	\$ 323,000.00	0.00%	100.00%
EE 09-04	Electrical Upgrade - Water Booster	\$ -	N/A	N/A	\$ 200,000.00	0.49%	99.51%	\$ -	N/A	N/A
EE 09-05	Electrical Upgrade - Other Water	\$ -	N/A	N/A	\$ 150,000.00	40.47%	59.53%	\$ -	N/A	N/A
EE 09-06	SCADA Improvements - Phase I	\$ 250,000.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
EE 09-07	SCADA Improvements - Phase 2	\$ 1,056,986.00	100.00%	0.00%	\$ -	N/A	N/A	\$ -	N/A	N/A
EE 09-08	SCADA Improvements - Phase 3	\$ 24,955.71	100.00%	0.00%	\$ 923,000.00	99.93%	0.07%	\$ 1,177,000.00	0.00%	63.24%
EE 09-09	SCADA Improvements - Phase 4	\$ -	N/A	N/A	\$ -	N/A	N/A	\$ 6,500,000.00	0.00%	100.00%
		\$ 1,748,118.34			\$ 3,395,000.00			\$ 8,750,000.00		

Miscellaneous Engineering Support

			%			%			%	
CIP #	CIP Description	2010 Bond Allotment	encumbered	% available	2013 Bond Allotment	encumbered	% available	2016 Bond Allotment	encumbered	% available
MC 05-01	Laboratory Modernization	\$ -	N/A	N/A	\$ 1,173,000.00	100.00%	0.00%	\$ 1,127,000.00	100.00%	0.00%
MC 05-02	Land Survey	\$ 500,000.00	99.94%	0.06%	\$ 2,000.00	0.00%	100.00%	\$ 1,998,000.00	5.36%	36.91%
MC 09-01	General Plant Improvements	\$ 7,241,000.00	99.58%	0.42%	\$ 2,600,000.00	99.48%	0.52%	\$ 2,769,460.00	53.31%	46.69%
MC 15-01	Information Technology Intergration Improvements							\$ 500,000.00	40.70%	59.30%
		\$ 7,741,000.00			\$ 3,775,000.00			\$ 6,394,460.00		

	2010 Bond Allotment	2013 Bond Allotment	2016 Bond Allotment
CIP Water	\$ 41,903,304.66	\$ 58,317,117.00	\$ 64,647,830.00
CIP Wastewater	\$ 36,009,577.00	\$ 73,837,883.00	\$ 60,227,170.00
CIP Electrical	\$ 1,748,118.34	\$ 3,395,000.00	\$ 8,750,000.00
CIP Miscellaneous	\$ 7,741,000.00	\$ 3,775,000.00	\$ 6,394,460.00
	\$ 87,402,000.00	\$ 139,325,000.00	\$ 140,019,460.00

Bond Fund	Construction Fund Amount (\$M)	Estimated # of mont fund available for us	9	Total Funds encumbered to date (\$M)		Rate of Spending: (\$M) per year
2005	\$82.930	82	*	\$82.930	100.00%	12.14
2010	\$87.402	78	**	\$83.153	95.14%	12.79
2013	\$139.325	41	**	\$129.294	92.80%	37.84
2015	\$140.019	11		\$58.752	41.96%	64.09
	* - End date Nov	ember 2013 via CCl	JR	esolution 06-FY201	4	
	** - Includes mon	th of May and June 2	017	7		

# **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.

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

BID PACKAGE WW 11-04	Umatac Merizo WWTP Design Build Improvements Project	
100% Complete	Activities/Notes: Bid opened, and lowest bidder deemed responsive and responsible. CCU approved contract with CoreTech and contract fully executed June 29, 2017. NTP issued June 29, 2017.	
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.	

BID PACKAGE	New Well Construction	
PW 09-02		
<50% Complete	Activities/Notes: GWA engineering continuing discussion with Dept. of Agriculture and lessee on options of acquisition of property for well site at AG-10. Internal GWA discussions underway for survey and appraisal services.	
Project Description:	The project is to construct three new production wells for GWA as well as installation of a water main to connect the new production wells to the Ysengsong Reservoirs.	

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

BID PACKAGE WW 09-08 WW 11-03	Baza Gardens Cross Island Road Sewer Conveyance Construction Phase III	
100% Complete	Activities/Notes: CCU approved lowest bid by Sumitomo Construction. Contract fully executed June 16, 2017. NTP issued June 19, 2017.	
Project Description:	The work performed under this project consist of construction of gravity main, force mains and sewer pump station #1 at the Baza Garden WWTP as well as two equalization basins.	

RFP WW 11-04	Umatac Merizo WWTP Design Build Improvements Construction Management	
95% Complete	Activities/Notes: Proposals evaluated with SSFM being highest ranked. Scope and fee negotiated. GWA presenting resolution for approval to CCU in July meetings.	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the improvements works at the aeration basin, new sewer pump station, overland field improvements, effluent storage tank. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

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

Project Description:	The work performed under this project procurement shall consist of
	Construction Management and Inspection Services for the construction
	of three water reservoirs; 0.5MG Chaot #2, 1MG Tumon #2 (Nissan)
	and 1MG Hyundai. The overall goal of the Construction Manager (CM)
	is to manage the entire construction process so that the project can be
	delivered efficiently and professionally.

BID PACKAGE PW 12-04, PW 12- 06 AND PW 09-11	Central Tank Phase I (Chaot #2, Tumon #2, Hyundai) Construction	
50% Complete	Activities/Notes: Final designs complete. GWA preparing Bid package with anticipation to advertise by end of July.	
Project Description:	The work performed under this project procurement Construction of three water reservoirs; 0.5MG Chaw (Nissan) and 1MG Hyundai. Some piping work reservoir is also required to ensure the reservoirs	aot #2, 1MG Tumon off site from the

RFP MC 05-02	Land Survey Phase II
96% Complete	Activities/Notes: Scope and fee with DCA completed and CCU resolution approved. GWA petitioning the PUC for approval given project not court order or grant funded and is greater than \$1M. Petition expected to be presenting in July PUC meeting.
Project Description:	The work performed under this project procurement shall consist of a professional land surveyor conducting field work to mark corners of existing government properties as a means of severing out portions of the larger property to be deeded to GWA. Surveyor shall also prepare all necessary maps and documents for recording at DLM

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

<b>RFP</b> WW 09-01	Yigo SPS Flood Protection and Rehabilitation Design
50% Complete	Activities/Notes: SOW being finalized by engineering. Work to obtain PO to advertise.
Project Description:	The work performed under this project procurement shall consist of a

design services to implement storm water mitigation measures to protect the facility during extreme weather as well as rehabilitate the
facility to provide better redundancy and operate efficiently.

Northern and Southern Tank Phase I	
(Santa Rosa, Sinifa, Santa Rita)	
Construction Management	
Activities/Notes:	
Proposal evaluated and GWA negotiating with	
highest rank firm.	
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	
	(Santa Rosa, Sinifa, Santa Rita) Construction Management Activities/Notes: Proposal evaluated and GWA negotiating with highest rank firm.  The work performed under this project procureme Construction Management and Inspection Service of three water reservoirs; 1MG Santa Rosa, 1MG

RFP OEA GRANT	Design Services for the Upgrade of the Northern District WWTP	
95% Complete	Activities/Notes: Selection process completed and GWA currently in negotiations with DCA for their fee. GWA also seeking CCU approval for the intent and fee range for the design so as to work towards meeting internal project milestones.	
Project Description:	The work performed under this project procurement shall consist of engineering design services for the conversion of the existing WWTP to secondary treatment. The design will require the existing plant to stay operational and the designer will use the new 17 acres GWA acquired to place new headworks, oxidation ditches and UV disinfection systems.	

# BOX KEY FOR PROJECT: (Type of Project) (Project Title) (Relevant CIP NO.) (Contractor or consultant) (month and year) (Percentage complete for project) (brief description of activity) (month and year) (Court Order Paragraph No.) (Project type) Project Description Project Description Narrative

## **C. CIP Water Section**

INSPECTION CIP PW 05-02	Inspection & Maintenance Repairs to GWA Island-Wide Steel Water Tank Reservoirs Phase 2 (DCA)	Start Date: April 2010
80% Complete	Activities/Notes: Quotes for take bypass/take down for Umatac #1 and Pigua on-going. Work compete for Agat/Umatac tank by-pass. Pending testing. Ops field testing for Malojloj tank take down. Working on plan for Kaiser, Windward and Agat #1 take down.	Completion Date: Anticipate December 2021
CO 38C	Engineering inspection services	
Project Description:	The Court Order requires GWA to inspect all active and in some cases inactive water reservoirs. The inspection results will allow GWA to determine if a reservoir requires repair or replacement.	

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

DESIGN / BUILD CIP PW 12-04	Reservoirs 2005 Improvements, Chaot & Agana Heights Reservoirs (GSI Construction)	Start Date: April 2013
99% Complete	Activities/Notes: Punch work at production wells complete. Waiting for contractor to provide training on equipment.	Completion Date: Due to delays from contractor new anticipate completion is September 2017
CO 38B	Design/Construction services	

Project Description:	The project is to replace the existing 1.0MG steel reservoirs with 0.5MG
	concrete tanks at the Chaot and Agana Heights reservoir locations. The
	contractor shall also link certain A-series wells to the reservoir via
	SCADA.

DESIGN	Yigo and Astumbo 2MG Tank Design	Start Date:
CIP PW 12-05	Project (Lyons)	September 2013
99% complete	Activities/Notes:	Completion Date:
	Design complete. Design firm to provide RFI	January 2016
	support during the bid phase.	
CO 9 (b)(4)	Engineering design services	
Project Description:		

CONSTRUCTION	Chlorine Residual Analyzer	Start Date:
CIP PW 05-11	(Asanuma)	Oct. 17, 2014
96% complete	Activities/Notes:	Completion Date:
	Final inspection for all sites on-going.	Anticipate July 2017
CO 22	Construction services	
Project Description:	The project intent is to install at all GWA production wells Chlorine residual analyzers, including all appurtenance, to ensure the production wells have controls built in to the facility that will shut of a well when chlorine residuals are detected to be low.	

DESIGN PW 09-11	Northern and Southern Guam Reservoir Design (TG Engineers)	Start Date: May 2015
60% Complete	Activities/Notes: Santa Rosa – 100% design in hand. Santa Rita – 100% design in hand. Inarajan – Land procurement second site related to new BPS's still on-going. Sinifa – 100% design in hand. Ugum – GWA still in discussion with reevaluation and discussion with property owner of alternative property on-going.	Completion Date: Update: Due to property acquisitions issues for Piti and Tumon #1, design completion 6 months after property issue resolved.
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid	

dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural
resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto
CAD, relevant permit, construction bid support service, and response to
request for interpretation/information during construction. The tank locations are Ugum, Santa Rita, Santa Rosa, Inarajan and Sinifa.
locations are Ogum, Santa Kita, Santa Kosa, marajan and Siniia.

DESIGN	Central Guam Reservoirs Design	Start Date:
PW 12-04	(GHD Inc.)	May 2015
65% Complete	Activities/Notes:	Completion Date:
	Chaot #2 – 100% design in hand.	Update: Due to
	Tumon #2 – 100% design in hand.	property acquisitions
	Hyundai - 100% design in hand.	issues for Piti and
	Piti – GWA still evaluating alternative solutions	Tumon #1, design
	to storage needs in Piti area.	completion 6 months
	Manenggon – GWA waiting for DPW permit for	after property issue
	access ramp for drilling rig. 30% design on-	resolved.
	going.	
00.00 (1)(4)	Tumon #1 – GWA working on land issues.	
CO 29 (b)(4)	Engineering design services	
Project Description:	The design services will consist of preparation of plans, specifications, and estimates (PS&E), which includes Basis of Design, design calculations, hydraulic modeling (EPANET), computational fluid dynamic modeling (CFD), construction schedule, topographical survey, property research, property mapping, geotechnical engineering, cultural resource inventory and evaluation of historic resources, hazardous materials survey, construction documents, design drawings in Auto CAD, relevant permit, construction bid support service, and response to request for interpretation/information during construction The tank locations are Hyundai, Pulantat, Chaot #2, Tumon #2, Piti and Tumon #1.	

CONSTRUCTION PW 09-03	Line Replacement Phase IV (Giant Construction)	<b>Start Date:</b> 02/14/16
60% Complete	Activities/Notes: Work along Chalan Agoun complete. Contractor mobilizing to Santa Rita (Santa Rosa Subd.) and Famha Rd in Chalan Pago. Issues related to ROW/easement being discovered for Famha Rd.	Completion Date: 02/06/18
	Construction Services	
Project Description:	The project is intended for a contractor to replace existing water lines that have been found by operations to be leaking and/or are causing service delivery to less than what GWA is required to provide. The project will replace water mains and ten known locations throughout the island and there is a component within the bid where line replacement work for unknown locations is accounted for.	

DESIGN	Asan Spring Rehabilitation Design	Start Date:
PW 05-15	(HDR)	August 24, 2016
10% Complete	Activities/Notes:	Completion Date:
•	GWA receive approval from Parks Service start	Due to delays from

	design field investigation work.	the Park Services related to property access the anticipated completion of the design is February 2018.
	Engineering design services	
Project Description:	<ul> <li>Perform site visits and condition assessment for determine demolition and rehabilitation require equipment condition, structural condition, and condition assessment shall include all disciplin project.</li> <li>Review and validate the current property boun confirm the available space for the project deviderm an environmental impact study and propermits as needed.</li> <li>Perform an archeological and historical resour potential impact to the project, prepare all requireded.</li> <li>Coordinate with Guam Historic Resources Dividereservation Office (SHPO) on historical resour all necessary reports and documents as required by and Wildlife Resources (DAWR) on vegetation necessary reports and documents required by Identify the existing and projected service area and Identify and recommend conceptual water treated the Perform a Class 4 engineering cost estimate and American Association of Cost Engineers (AAC Estimate Classification System for construction include all disciplines, permit, construction and are necessary to execute the project. All costs dollars and escalated to the estimated midpoin</li> </ul>	ement, process electrical system. Site es to execute the dary information to elopment. epare all required ces study to identify aired permits as dision State Historic carces study. Prepare ed by SHPO. care, Division of Aquatic clearance. Prepare all DAWR. disperiod of design. datment system. decording to the disperiod of the di

CONSTRUCTION PW 09-11, PW 12-05	Yigo/Astumbo Tank Construction (Pernix)	Start Date: 12/1/16
25% Complete	Activities/Notes: Foundation rebar installation for Yigo #1 ongoing. Concrete pour for take under piping at Astumbo on-going. Underground pipe at Yigo #2 being installed.	Completion Date: 02/06/18
	Construction Services	
Project Description:	This project will involve construction of two (2) 2MG concrete tanks and Booster Pump Station at the Yigo site and a one (1) 2MG concrete tank at the Astumbo site. Work will involve new pipe line, valves, electrical controls, pumps and motors, site drainage, paving, generator for the BPS, SCADA, etc.	

CONSTRUCTION MANAGEMENT PW 09-11, PW 12-05	Yigo/Astumbo Tank Construction Management (GHD)	Start Date: December 2016
25% complete	Activities/Notes: Processing submittals and on-site inspection	Completion Date: February 2018
N/A	Construction Management services	
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the demolition of existing steel elevate and ground tanks as well as the construction of the 2MG concrete tanks at the Yigo tank location and Astumbo tank location. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

# **D. CIP Wastewater Section**

DESIGN WW 11-08	Agat-Santa Rita WWTP Replacement (DCA)	Start Date: October 2014
99% Complete	Activities/Notes: Design complete. Services during construction on-going through Nov 2017.	Completion Date: Nov. 2015 (design); April 2017 (construction)
CO 11	Engineering design services	
Project Description:	The engineering design consultant is required to design a new wastewater treatment facility that will meet secondary treatment limits. The new facilities will incorporate provisions for redundancy to improve reliability and facilitate operations and maintenance activities at the existing facility	

INSPECTION 2010 BOND WW 12-05 2010 BOND WW 05-04 2013 BOND WW 05-04	SSES Central Sewer System (HDR)	Start Date: November 2014
98% Complete	Activities/Notes: Draft final report submitted. GWA final review on-going	Completion Date: Anticipate June 2017
CO 8 (c)	Engineering Inspection Services	
Project Description:	Work specifically required includes data analysis, development of hydraulic modeling, and development of an SSES fieldwork plan, manhole inspections, smoke testing, CCTV inspection and preparation of a Project Report.	

CONSTRUCTION MANAGEMENT WW 11-08	Agat Santa Rita WWTP CM (GHD)	Start Date: November 2014
100% (PH 1) 100% Complete (PH 2, Part 1) 15% Complete (PH 2, Part 2)	Activities/Notes: CM services for Part 1 and Part 2 of Phase II on-going. GWA seeking CCU approval to extend CM services to December 2017 with contingency to go to March 2018.	Completion Date: Anticipate December 2017 due to contractor extensions.
CO 11	Construction Management services	ant shall consist of
Project Description:	The work performed under this project procurement shall consist of Construction Management and Inspection Services for the construction of the Agat Santa Rita WWTP Phase II project. GWA plans to replace the existing wastewater treatment plant for a new plant that can meets permit limits. The overall goal of the Construction Manager (CM) is to manage the entire construction process so that the project can be delivered efficiently and professionally.	

MONITOR WW 11-04	Toguan River Flow Monitoring for Umatac WWTP (UOG WERI)	Start Date: November 2014
95% Complete	Activities/Notes: GWA receive draft final report and under review.	Completion Date: Anticipate completion June 2017.

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

CONSTRUCTION WW 11-08	Agat Santa Rita WWTP Phase II (Sumitomo Construction)	Start Date: January 2016
Part 1 of Phase II- 100% Complete Part 2 of Phase II- 15% complete	Activities/Notes: Work on second ditch, second clarifier, off site water line and equalization basin on-going.	Completion Date: Phase A: 12/31/16 Phase B: 12/31/17
CO 11	Construction services	
Project Description:	This project includes construction of the head works, clarifier, oxidation ditches and UV disinfection and administration facilities. Rehabilitation work at the existing WWTP will also occur to ensure the wastewater can be pumped to the new plant. The new plant will also tie into the Tipalao SPS.	

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

DESIGN WW 11-04	Toguan River Sample Collection for Umatac WWTP (EA Engineering and Science)	<b>Start Date:</b> 03/16/16
90% Complete	Activities/Notes: Sample collection work on-going.	Completion Date: Anticipate completion 09/30/17
	Engineering services	
Project Description:	The scientific/engineering firm will perform surface water sampling, wastewater treatment plant discharge monitoring and site observation at Toguan River and Umatac-Merizo Wastewater Treatment Plant (UMWWTP). The goal of this sampling and monitoring effort is to better understand the characteristics of the effluent and the receiving water, which will be used to determine the necessary plant upgrades	

MONITOR WW 11-04	Toguan River Flow Analysis for Umatac WWTP (UOG WERI)	Start Date: 03/16/16
90% Complete	Activities/Notes: Data collection work on going.	Completion Date: Anticipate completion 09/30/17
CO 15	Data collection services	
Project Description:	WERI will: conduct laboratory analysis of the water samples collected by consultant hired to collect samples at designated location along the Toguan River.	

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

CONSTRUCTION WW 09-08, WW 11-03	Baza Gardens Cross Island Road Sewer Conveyance Construction Phase I (BME and Sons)	Start Date: October 2016
10% Complete	Activities/Notes:  SPS site grading and force main installation along Route 17 (near river) on-going.  Construction services	Completion Date: Phase I: 10/23/17
Project Description:	The work performed under this project consist of construction of 14,714' of gravity main, 2,767' of force main and sewer pump station #3 next to the Aplacho River in Santa Rita.	

CONSTRUCTION MANAGEMENT WW 09-08 WW 11-03	Baza Gardens Cross Island Road Sewer Conveyance (Construction Management) (SSFM)	Start Date: December 5, 2016
10% (PH 1)	Activities/Notes: Field inspection and project coordination ongong. Construction Management services	Completion Date: April 2018
Project Description:	The work performed under this project shall consist of Construction Management and Inspection Services for the construction of gravity main, force mains and sewer pump station as well as an equalization basin at the Baza Garden WWTP.	

CONSTRUCTION	Baza Gardens Cross Island Road Sewer	Start Date: March 2017
WW 09-08, WW 11-03	Conveyance Construction Phase II (BME and Sons)	2017
10% Complete	Activities/Notes: SPS site grading and force main installation along Route 17 on-going. Construction services	Completion Date: Phase II: 03/16/18
Project Description:	The work performed under this project consist of construction of 1,767' of gravity main, 14,400' of force mains and sewer pump station #2 along Route 17.	

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

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

# E. CIP Engineering Support

DESIGN EE 09-08	SCADA System for Water and Wastewater Facilities Phase A-1 (AECOM)	Start Date: June 2015
98% complete	Activities/Notes: 100% design submitted for under review.	Completion Date: Anticipate March 2017 January 2019 (Bid and Construction Support)
N/A	Engineering design services	_
Project Description:	The A/E firm will design an integrated, robust and	secure Supervisory

Control and Data Acquisition (SCADA) system for GWA's water and
wastewater systems, and to provide support services during bid and
construction. The 22 sites will consist of a combination of water facilities
such as production wells, reservoirs, booster pump station and
wastewater sites include sewer treatment plants and sewer pump
stations. Executed by approved change orders, number of sites in
original design scope has changed from 22 sites to 19 sites and design
of High Water Alarm for 20 critical sewer pump stations has been
added. Scope also includes bid and construction support of the design-
build project of GPWA SCADA EMS project.

DESIGN	New GWA Lab Design Project	Start Date:
MC 05-01	(Laguana Architects)	June 2015
100% complete	Activities/Notes:	Completion Date:
	Design complete however services continue into	February 2016
	construction phase.	
N/A	Engineering design services	
Project Description:	The design firm is required to review all laboratory activities GWA's lab staff conduct for water and wastewater analysis after which they are to develop design drawing and specification to be bid out for construction. The design firm shall also take into account power and water needs to ensure the facility is self-sufficient.	

CONSTRUCTION MC 05-01	New GWA Lab Construction (Mega United Construction)	Start Date: NTP issued August 18, 2016
75% Complete	Activities/Notes: Change #4 extended completion October 9, 2017. Contractor still working on interior wall partitions, window and doors, painting and electrical on-going. Construction services	Completion Date: Change Order moved complete to October 2017
Project Description:	The project will involve construction of a new building at the GWA Upper Tumon compound to house the laboratory section. The facility will include office, laboratory and storage space for the lab employees. The facility will also include a back-up generator.	

# F. GIS Section

MAPPING MC 05-02	Island Wide Survey- (Duenas, Camacho & Ass.)	Start Date: December 2007
88% complete	Activities/Notes: Task Order #11 fully executed, surveyor working on two properties. GWA working on a Task #12 to encumber complete contract value with goal to complete all work and spending by December 2017. Survey services	Completion Date: New anticipated complete is December 2017
	Survey services	
Project Description:	The contracted land surveyor is required to conduct title research, property valuation and mapping of property boundaries where GWA facilities are located but the lot is not registered under GWA's name.	

## **G. Permits Section**

#### PERMITS MONTHLY REPORT 2017

	2016	2017							
Description	Jan	Jan	Feb	Mar	Apr	May	June/July		
Building Permit		27	11	13	17	23	27		
Occupancy Permit		64	10	17	5	25	28		
New Installation		11	5	10	15	15	33		
Sewer Application		10	5	4	3	4	3		
Sewer Inspection		6	0	1	0	1	0		
Private Utility Acceptance		0	0	0	0	0	0		
Relocation of Water Meter		1	0	1	0	0	0		
Tapping-Water		4	2	2	0	3	8		
Tapping-Sewer		3	2	2	1	3	5		
Clearance-Water		15	13	15	2	20	26		
Clearance-Sewer		15	13	15	2	20	26		
Highway Encroachment		59	3	27	6	20	12		
Verification of Utilities		12	15	2	5	1	8		
Fire Flow Test		1	0	0	0	0	3		
Schedule Water Outage		1	0	0	0	0	0		

### H. SRF Project Status Report

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

#### Percentage Key:

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

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

	Project	Project Description	Project Manager	Grant Expiration Date	Phase		Start Date (NTP Issued)	Anticipated Completion Date		Contract Amount (+) ange orders	Contractor	Status as of 7/18/17		
						Grant N	umber M96	5902611-5						
1	Northern District SSES & I/I Study	Sanitary sewer system evaluation study (SSES) and inflow and	J. Davis	9/30/2017	Design	1	10/10/2014	2/29/2016	\$	792,980	Stanley	100% Complete.		
		infiltration (I/I) study designed to evaluate high I/I areas within the Northern sewer basin with the			Construction									
		goal of identifying projects to eliminate them.			Const. Mgmt							The project does not involve construction.		
2	Southern SSES Rehabilitation	Rehabilitation of segments of sewer lines in Umatac, Merizo,	Brown & Caldwell	9/30/2017	Design						The	design was previously completed under bond funding.		
	(Agat-Santa Rita- Umatac-Merizo)	Agat, and Santa Rita where the Sanitary Sewer Evaluation Study recommends rehabilitation.			Construction	1	10/30/2015	2/28/2017	\$	7/10.  Reliable CIPP quality issues found during April 2017 GWA warranty period CCTV		CIPP quality issues found during April 2017 GWA warranty period CCTV inspection. CM submitted videos to contractor, still awaiting contractor official		
					Const. Mgmt	1	11/10/2015	3/30/2017	\$	211,722	TG Engineers	CM continue to work on CIPP quality issue for GWA		
ЗА	Asan-Adelup- Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos concrete that is dilapidated and some areas have disintegrated crowns.	Brown & Caldwell	9/30/2017	Design	2	12/11/2015	3/30/2017 for Design requirements	\$	1,702,903	HDR	Design completed and bid out. Bid came in very high that GWA rejected all bids. HDR assisting with pre-packaging bid so that GWA can re-bid.		
4A	RT2 Agat War in the Pacific Sewer Line Rehabilitation and Replacement	Rehabilitation of a large segment of sewer line fronting the War in the Pacific Park in Agat that has collapsed.	Brown & Caldwell	9/30/2017	Design	3	11/17/2015	3/30/2017 for Design requirements	\$	316,681	SSFM	SSFM providing services during bidding process as well as construction phase		
5	Brown & Caldwell Project	Brown & Caldwell to provide program management services	T. Cruz	9/30/2017	Design	4	3/24/2015	2/6/2017	\$	1,089,850	B&C	Project underway.		
	Management	and support.			Construction							The project does not involve construction.		
					Const. Mgmt				7					
6	Wastewater, Water and Source Water System Master Plan Upgrade	Update of the existing water and wastewater master plan while factoring in military integration and secondary treatment plant options.	Brown & Caldwell	9/30/2017	Design	5	7/6/2015	3/6/2017	\$	2,623,300	B&C	Volume 2 Final Draft submittal on June 27. Waiting for review comments. Working to finalize cost estimates and Volume 3 final Draft. Submittal expected 7/24. Had Telecon with Eric Rothstein and GWA finance 7/13.		
					Construction							The project does not involve construction.		
					Const. Mgmt							the project does not involve construction.		

_	T	Γ	1								1	
	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells to be rehabilitated are A-2, A-7, A 12, D-5, & F-3.	Brown & Caldwell	9/30/2017	Design	6	5/27/2016	9/1/2017	\$	1,758,247	AECOM	Proposed Change Order No. 3 being discussed.  A-2: AECOM/APDI planning to drill additional borehole. Demo work completed. Waiting on line guards for overhead power line. Previous borehole Pump Testing up to 74 gpm, with 41 feet drawdown.  A-12: After deepening, APDI performed Pump Testing up to 200 gpm, with 38 feet drawdown. May need to re-do pump test due to GEPA requirements. AECOM proceeding with 30% design.  A-7: Pump Testing up to 95 gpm, with 25 feet drawdown. Drilling deeper should be included in proposed CO #3.  D-5: Pump Testing up to 126 gpm, with 39 feet drawdown. AECOM proceeding with 30% design.  F-3: Drill bit lost in bottom of the hole and is now buried. APDI indicates that pilot well will need to be abandoned. AECOM instructed to look into reallocation of remaining F-3 project funds into additional drilling work at A-7.
8A	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where sewer overflows are known to occur in Tumon San Vitores.	Brown & Caldwell	9/30/2017	Design	7	6/24/2016	6/30/2017	\$	572,089	TG Engineers	TGE completed CCTV/MH inspections of additional lines/MH. Permit for borings received; will start borings 7/15. TGE reviewing what is needed on Frank Cushing road; to submitted supplemental report with alternatives by next week.
9	Critical Sewer Pump Stations	Rehabilitation of various components of 7 pump stations	CDM	9/30/2017	Design						The d	esign will be incorporated into the design/build package.
	(7 stations)	that were identified to by the CDM design team: Macheche, Ypaopao, Astumbo 1, Fujita,			Design/Build	1	8/8/2016	7/8/2017	\$	1,505,760	ProPacific	Awaiting long lead items and site prep work on going at all sites. Continue coordination with operations.
		Santa Ana, Southern Link, and Route 1.	J. Davis		Const. Mgmt	2	9/9/2016	7/8/2017	\$	299,519.00	Stanley	CM work such as reviewing submittals on-going
10	Sewer Pump Station High Water	This project will design and installed telemetry	C. Yam	9/30/2017	Design						The d	esign will be incorporated into the design/build package.
	Alarm Systems (20 stations)	equipment/SCADA type alarms that will alert when pump station failure occurs.			Design	8	8/12/2016	02/30/2017	\$	183,171	AECOM	Design complete
					Construction	5	4/5/2017	8/2/2017	\$	1,444,888	Pacific Rim	Contractor waiting for long lead items. Delay to move completion back to early September.
					Const. Mgmt	3	02/30/2017	9/30/2017	\$	145,186	EMSPCO	CM working with contractor on submittals.
11	Sewer Pump Station Backup	Construction of the housing and installation of new generators for	B. Cruz	9/30/2017	Design						The d	esign will be incorporated into the design/build package.
	Power (2 stations)	the Casimero pump station (Mongmong) and the Namo pump station (Yona central).			Design/Build	2	6/24/2016	7/30/2017	\$	362,693	ProPacific	GWA processing Change Order no. 2. Building permit still awaiting approval form GPA, GEPA.
					Const. Mgmt				B. Cruz is the construction manager.			
12/	RT4 Relief Sewer	Rehabilitation of sewer lines that	Brown & Caldwell	9/30/2017								
	Line Rehabilitation and Replacement	are located from Agana McDonalds to Marine Drive that have been known to overflow due to structural issues.			Design	9	3/1/2016	4/22/2017	\$	794,000	AECOM	AECOM to resubmit final 100% next week     AECOM editing front end docs for Route 4; CM RFP advertised on 7/7.
1												

12 (	Groundwater Wells	Rehabilitation of existing deep	Brown & Caldwell	9/30/2017							
	Rehabilitation	wells and/or in cases where pipe	Brown & Caldwell	3/30/201/	Design					The	design was previously completed under bond funding.
	D-3, D-17, D-18, D- 22, M-9)	column needs replacing will be re-drilled. D-3, D-17, D-18, D-22, and M-9.			Construction	2	8/19/2016	6/22/2017	\$ 6,149,647	Pacific Rim	D-03: Continuing site work; wet tap beginning next week. D-17: Waiting on GWA Ops to determine how to isolate area for tapping. D-18: Onsite work continues. Waiting on GWA to isolate area for tapping. D-22: Working on underground piping; pressure test soon. Will need dry tap to connect; GWA to mark lines. M-09: EA to review revised cost proposal; will be part of CO#8. GWA conducted a pump pullout on 7/12; EA/APDI on hand to observe and gather info.
					Const. Mgmt	4	3/22/2016	5/22/2017	\$ 798,503	EA	CM work on-going.
14	Southern SSES Sewer	Rehabilitation of segments of sewer lines in Windward Hills,	Brown & Caldwell	9/30/2017	Design					The	design was previously completed under bond funding.
	Rehabilitation (Baza Gardens- Talofofo)	Talofofo area where the Sanitary Sewer Evaluation Study recommends rehabilitation.			Construction	n	8/2/2016	7/2/2017	\$ 1,189,815	ProPacific	- Contractor has submitted additional claims for cost and time. BC/CM has rejected claims, so far Perma-Liner / PPBC completed two CIPP lines under wetland, which have quality issues PPBC currently bypass pumping through the wetland area, due to collapse of CIPP liner Baza Gardens area: One CIPP line completed on 6/7 (MH 4136 MH 3418) Current contract end date was 5/15. CM is counting days for potential LDs On 7/12, ProPacific stated that Perma-Liner plans to return to Guam on 7/31 CO #Z (Removal of Obstructions): CM issued recommendation letter on 7/10.
					Const. Mgmt	5	7/29/2016	5/28/2017	\$ 289,096	EMPSCO	CM on hold with field work until issue with Propacific addressed. Potential need for contact extension due to Propacific issues.
15A	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam Premium Outlets.	Brown & Caldwell	9/30/2017	Design	10	9/9/2016	7/9/2017	\$ 663,629	TG Engineers	TGE finishing up survey work; working on letter and following up on land issues for New Plaza Market. TGE working toward 90%. Borings to start 7/15.
16A	Talofofo Sewer Pump Stations (4 stations)	Design and construction of 4 sewer lift stations in the Talofofo village where sewer lines are installed but never completed.	J. Davis	9/30/2017	Design (for Talofofo and Chalan Pago PS)	11	8/17/2016	6/28/2017	\$ 478,000	EMPSCO	60% design submitted for Talafofo SPS's and Chalan Pago 30% Design on going.
17A (	Chalan Pago Sewer Pump Station	Design and construction of sewer lift stations and gravity lines in Scott Laguana, Santa Cruz Street Chalan Pago.	J. Davis	9/30/2017	Design		8/17/2016	6/28/2017		The design	will be included with the Talofofo Pump Station design project.
1 ( i	Vater Hydraulic Model SCADA ready nstruments to Ipdate Model)	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water hydraulic model.	Barbara Cruz	9/30/2017	Design	12	8/3/2016	3/15/2017	\$ 491,498	GHD	90% design received and under GWA review.
19	Macheche Hill Sewer Rehabilitation/	Rehabilitation of sewer lines on Macheche road. Segments of this sewer line has collapsed recently	J. Davis	9/30/2017	Design-Build	3	8/29/2016	9/30/2017	\$ 1,634,000	Giant Const.	Construction work for force main segment nearly complete. Contractor waiting for approval of deeper gravity main segment.
	Replacement	and is consider a high priority.			Const. Mgmt	6	9/16/2016	8/29/2017	\$ 245,150	Am Orient	CM working with contractor on submittals.

20	Asan-Adelup-	Rehabilitation of sewer line in	Brown & Caldwell	9/30/2017	Design						. Design cost covered under 3A above.
	Hagatna Rt. 1 Sewer Line Rehabilitation and Replacement Emergency Repairs	Asan that collapsed and which is current fitted with a temporary pumping system.			Construction	4	3/8/2017	5/31/2017	\$ 2,470,658		HDR requesting GWA concurrence on replacing the whole segment by Harley Davidson, due to potential sags and missing crown/pipe; will not be doing additional sections upstream of the 126' section.     Found connection across Asan Beach Park; HDR working on design for review and concurrence before moving forward.
					Const. Mgmt	7	1/24/2017	5/31/2017	covered under 3A		HDR waiting on revised PRC Invoice #2, to include May and June.
						Grant N	umber M96	902615-1			
3B	Asan-Adelup- Hagatna RT1 Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines from the War in the Pacific Asan Park to the Governor's Complex in Adelup. This line is asbestos	Brown & Caldwell	9/30/2021	Construction		10/16/2016	4/30/2018			Procurement 70%. Bids received higher than budget available. Deign firm working or revised bid schedule for rebid by July.
		concrete that is dilapidated and some areas have disintegrated crowns.			Const. Mgmt		6/30/2017	12/30/2018			Procurement 90%. CM scope and fee proposal received 6/23 (\$698K); will setup a meeting to discuss details.
4B	RT2 Agat War in the Pacific Sewer Line	Rehabilitation of a large segment of sewer line fronting the War in	Brown & Caldwell	9/30/2021	Construction		11/16/2016	11/30/2017	\$ 4,392,765		Procurement 95%, CCU resolution to be presented 071917 seeking approval of project and contract with ProPacific Construction.
	Rehabilitation and Replacement	the Pacific Park in Agat that has collapsed.			Const. Mgmt		6/30/2017	6/30/2018			Procurement 90%, CM fee proposal discussed with TGE. Should receive revised fee proposal by 7/21.
7B	Groundwater Wells Rehabilitation (F-3, A-2, A-7, A-12, D-5)	Rehabilitation of existing deep wells and/or in cases where pipe column needs replacing, wells will be re-drilled. The deep wells	Brown & Caldwell	9/30/2021	Construction		3/23/2017	4/30/2018			
	5-3)	to be rehabilitated are A-2, A-7, A-12, D-5, & F-3.			Const. Mgmt		3/23/2017	4/30/2018			
8B	Tumon Sewer Hot Spots	Investigation, evaluation, and repair of possible solutions, to long plaguing issues where sewer overflows are known to	Brown & Caldwell	9/30/2021	Construction		3/23/2017	3/22/2018			
		occur in Tumon San Vitores.			Const. Mgmt		3/23/2017	3/22/2018			
12B	RT4 Relief Sewer Line Rehabilitation and Replacement	Rehabilitation of sewer lines that are located from Agana McDonalds to Marine Drive that	Brown & Caldwell	9/30/2021	Construction		4/23/2017	10/31/2018			
		have been known to overflow due to structural issues.			Const. Mgmt		4/23/2017	10/31/2018			
15B	Tamuning Sewer Hot Spots	Sewer rehabilitation for lines at Winner Apartments, Segund Leon Guerrero, and behind Guam	Brown & Caldwell	9/30/2021	Construction  Const. Mgmt		4/29/2017 4/29/2017	4/30/2018 4/30/2018			
16B	Talofofo Sewer	Premium Outlets.  Design and construction of 4	J. Davis	9/30/2021	Construction		4/29/2017	4/30/2018			
	Pump Stations (4 stations)	sewer lift stations in the Talofofo village where sewer lines are			Const. Mgmt		4/29/2017	4/30/2018			
17B	Chalan Pago Sewer Pump Station	installed but never completed.  Design and construction of sewer lift stations and gravity lines in	J. Davis	9/30/2021	Construction		4/29/2017	4/30/2018			
		Scott Laguana, Santa Cruz Street Chalan Pago.			Const. Mgmt		4/29/2017	4/30/2018			
18B	Water Hydraulic Model (SCADA ready instruments to	Design and construction of instrumentation at key water sites in the Barrigada service area necessary to update GWA Water	C. Huntington	9/30/2021	Construction		2/1/2017	9/30/2017			
	update Model)	hydraulic model.			Const. Mgmt		2/1/2017	9/31/2017		-	

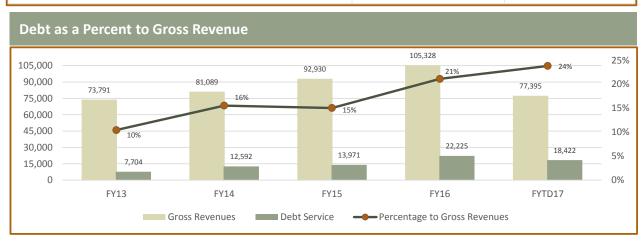
# **DASHBOARD**

#### June 2017 YTD Budget vs Actual (\$000)

Catagony	Description	Budget FY17	Actual FY17	Variance
Category	Description	buuget F117	Actual F117	Variance
Rate Based Revenues	Water	\$52,851	\$48,631	(\$4,219)
	Wastewater	30,412	28,325	(2,087)
	Total	83,263	76,957	(6,306)
Operations & Maintenance	Salaries & Benefits	19,656	14,910	(4,747)
	Power	9,556	8,785	(771)
	Water Purchases	6,088	5,441	(647)
	A&G	7,938	6,288	(1,650)
	Contractual	3,135	2,819	(316)
	Total	\$60,864	\$51,665	(\$9,198)

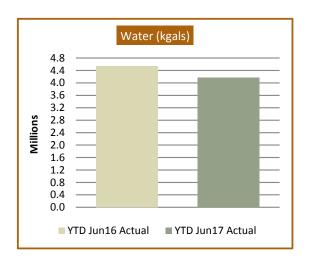
### **Key Financial Ratios (\$000)**

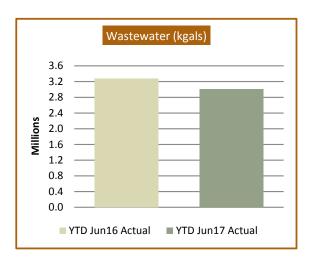
Category	FY17	FY16
Accounts Payable \$\$/Days	\$4,546 / 54 days	\$4,909 / 53 days
Accounts Receivable \$\$/Days	\$16,192 / 48 days	\$16,709 / 51 days
Days Cash On Hand	192 days	178 days
Annual Debt Service (Revenue Bonds)	\$24,563	\$22,225
Debt Service Coverage (Bond/PUC)	2.05 / 2.50	2.33 / 2.54

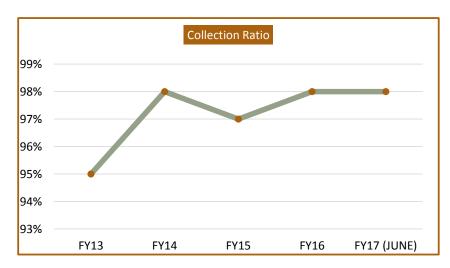


- (1) Gross Revenues excludes SDC
- (2) Debt Service Excludes Cap I

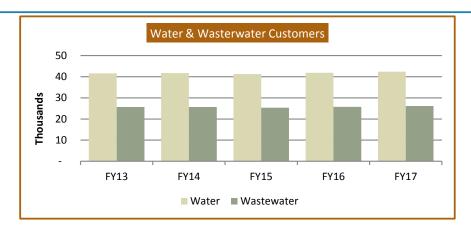
# **Water & Wastewater Analytics**

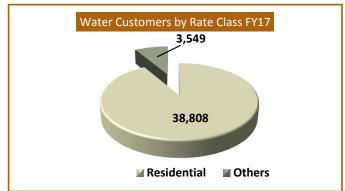


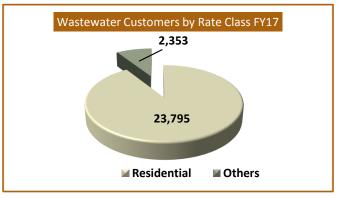


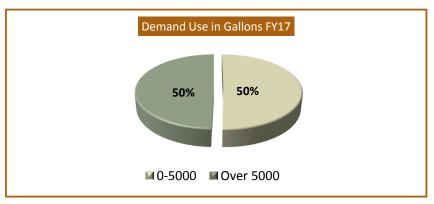


### **Water & Wastewater Customers**





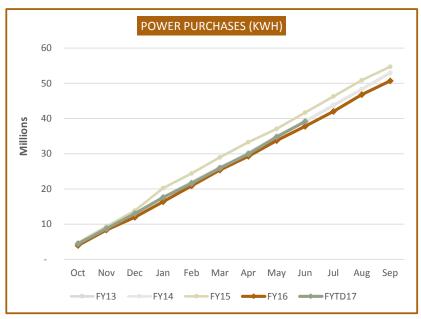


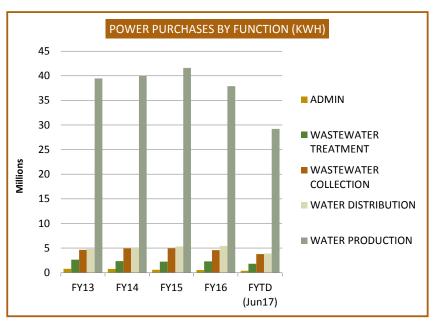


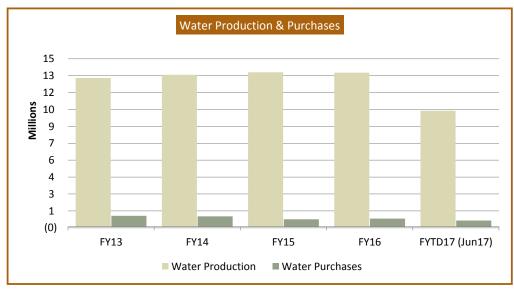
# **Top Ten Largest Water and Wastewater Customers – June 2017**

Water			Wastewater							
Customer Name	FY17 YTD Revenues	% of Total		Customer Name	FY17 YTD Revenues	% of Total				
1) MDI GUAM CORPORATION/LEOPALACE	\$994,154	2.04%	1)	AIR FORCE DOD	\$2,960,295	10.46%				
2) PACIFIC ISLANDS CLUB	912,932	1.88%	2)	NAVY DOD	1,241,358	4.39%				
3) HOTELS OF THE MARIANAS INC	734,585	1.51%	3)	HOTELS OF THE MARIANAS INC	785,517	2.77%				
4) SHERATON LAGUNA GUAM RESORT	659,624	1.36%	4)	SHERATON LAGUNA GUAM RESORT	706,093	2.49%				
5) HYATT	626,636	1.29%	5)	HYATT	670,663	2.37%				
6) HOTEL NIKKO GUAM	604,211	1.24%	6)	HOTEL NIKKO GUAM	645,493	2.28%				
7) PACIFIC STAR RESORT & SPA	489,530	1.01%	7)	PACIFIC STAR RESORT & SPA	522,323	1.85%				
8) GUAM REEF HOTEL INC	472,907	0.97%	8)	GUAM REEF HOTEL INC	505,556	1.79%				
9) MDI GUAM CORPORATION/WESTIN	469,699	0.97%	9)	MDI GUAM CORPORATION/WESTIN	502,111	1.77%				
10) OUTRIGGER GUAM RESORT	443,371	0.91%	10)	OUTRIGGER GUAM RESORT	474,921	1.68%				
Total	\$6,407,650	13.17%		Total	\$9,014,331	31.84%				

## **Power, Water Purchases and Water Production**

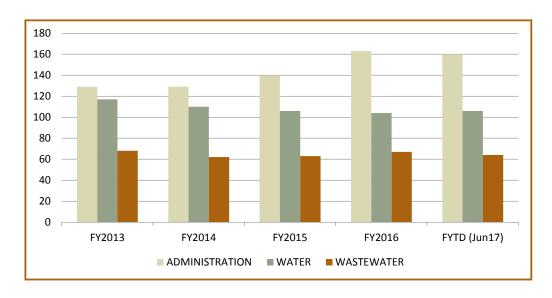






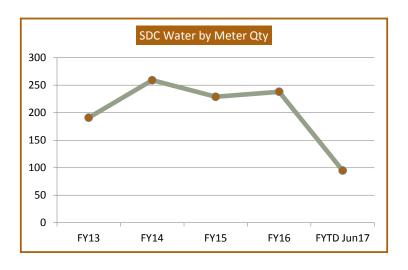
# **FTE by Major Division**

<u>DIVISION</u>	<u>FY2013</u>	FY2014	<u>FY2015</u>	<u>FY2016</u>	<u>FYTD</u> (Jun17)
ADMINISTRATION	129	129	140	163	160
WATER	117	110	106	104	106
WASTEWATER	68	62	63	67	64
TOTAL NUMBER OF STAFF	<u>314</u>	<u>301</u>	<u>309</u>	<u>334</u>	<u>330</u>
Gross Salaries & Wages (\$000)	14,929	15,532	15,805	16,442	12,617
Water Customers	41,582	41,702	41,274	42,259	42,357
Staff to Customers Ratio	0.76%	0.72%	0.75%	0.79%	0.78%

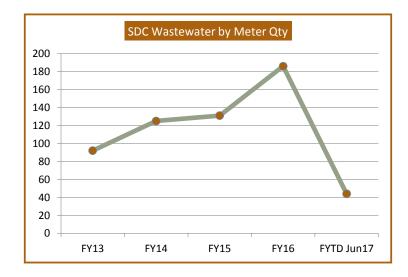


Note: FYTD17 number of employees 330 is as of June 2017

# **SDC Water & Wastewater (Meter Quantity)**



Actual Meter Sizes					FYTD
(Inches)	FY 2013	FY 2014	FY 2015	FY 2016	(Jun17)
5/8 x 3/4	179	248	220	239	89
1	-	5	5	7	2
1 1/2	5	1	1	1	1
2	4	3	2	4	2
3	-	1	-	1	-
4	3	-	1	-	-
6	-	-	-	-	1
8	-	1	-	-	-
10	-	-	-	-	-
Total SDC by Water	<u>191</u>	<u>259</u>	<u>229</u>	<u>252</u>	<u>95</u>



Actual Meter Sizes	FV 2042	FV 2014	FV 201F	FV 2016	FYTD
(Inches)	FY 2013	FY 2014	F1 2015	F1 2010	(Jun17)
5/8 x 3/4	80	115	124	179	40
1	-	4	3	2	-
1 1/2	5	1	1	1	1
2	4	3	2	3	2
3	-	1	-	1	-
4	3	-	1	-	-
6	-	-	-	-	1
8	-	1	-	-	-
10	-	-	-	-	-
Total SDC by					
Wastewater	<u>92</u>	<u>125</u>	<u>131</u>	<u>186</u>	<u>44</u>

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#### GUAM WATERWORKS AUTHORITY Balance Sheet June 30, 2017

SCHEDULE A

ASSETS	Unaudited June 30, 2017	Audited September 30, 2016	Increase (Decrease)
Current Assets:			, , ,
Cash:	4 40 4 700	5 457 400	(000 740)
Unrestricted (Schedule G) Restricted Funds (Schedule G)	4,494,720	5,157,430 51,436,547	(662,710)
Accounts Receivable - Trade, Net of Allowance for Doubtful Receivables	63,198,489 14,587,505	14,562,072	11,761,943 25,433
of \$11,865,079 at June 30, 2017 and \$11,302,579 at Sep 30, 2016	14,367,303	14,302,072	25,455
Other Receivable	1,604,985	2,147,155	(542,170)
Materials & Supplies Inventory, Net of Allowance	1,001,000	2,,.00	(0.12,1.0)
for Obsolescence of \$457,370 at June 30, 2017 and Sep 30, 2016	2,017,250	2,269,775	(252,525)
Total Current Assets	85,902,950	75,572,979	10,329,971
Property, Plant and Equipment			
Utility plant in service:			
Water system	308,999,392	306,262,568	2,736,824
Wastewater system	279,981,871	259,512,407	20,469,464
Non-utility property	22,988,723	22,474,787	513,936
Total property	611,969,985	588,249,761	23,720,224
Less Accumulated Depreciation	(294,798,685)	(282,837,613)	(11,961,072)
Land	1,110,998	254,288	856,710
Construction Work in Progress	110,639,833	81,877,561	28,762,272
Property, Plant and Equipment, net	428,922,131	387,543,997	41,378,134
rioporty, riant and Equipment, not	720,322,131	301,343,331	41,570,154
Other noncurrent assets			
Restricted cash (Schedule G)	249,770,662	285,277,784	(35,507,122)
Investments (Schedule G)	53,292,803	41,029,262	12,263,541
Other Prepaid Expenses	478,129	652,000	(173,871)
Total other noncurrent assets	303,541,595	326,959,047	(23,417,452)
Total differ floridations about	000,041,000	020,000,047	(20,417,402)
TOTAL ASSETS	818,366,676	790,076,022	28,290,653
Deferred cutfleurs of recourses			
Deferred outflows of resources:	4 744 606	4 979 600	(426.066)
Debt defeasance loss on refunding Deferred outflows from pension	1,741,636 3,727,684	1,878,602 4,668,010	(136,966) (940,326)
Total Assets and Deferred Outflows of Resources	823,835,996	796,622,635	27,213,361
=	020,000,000		21,210,001
LIABILITIES AND NET ASSETS			
Current Liabilities:			
Current maturities of long-term debt			
-Series 2010 Bond	1,655,000	1,655,000	-
-Series 2014 Refunding	3,385,000	3,385,000	-
-Notes Payable	2,873,988	2,873,988	-
Accounts Payable -Trade	4,545,777	4,909,146	(363,369)
Accrued Expense	42,126	42,126	0
Interest Payable	13,382,702	6,748,638	6,634,064
Accrued Payroll and Employee Benefits	1,759,171	1,692,622	66,549
Accrued Annual Leave	1,740,839	1,641,497	99,342
Current portion of employee annual leave	546,553	548,845	(2,292)
Contractor's Payable Customer Deposits	8,768,329 2,056,962	3,436,908 2,228,235	5,331,421 (171,273)
Total Current Liabilities	40,756,446	29,162,004	11,594,442
Total Current Liabilities	40,730,440	29,102,004	11,394,442
Long Term Debt, less current maturities			
Series 2010 Revenue Bond	114,525,000	114,525,000	_
Series 2013 Revenue Bond	172,630,000	172,630,000	-
Series 2014 Refunding	75,995,000	75,995,000	-
Series 2016 Revenue Bond	143,310,000	143,310,000	-
Unamortized Discount - Bond 2010	(1,887,695)	(1,948,205)	60,510
Unamortized Discount - Bond 2013	(1,351,526)	(1,389,850)	38,325
Unamortized Premium - Bond 2014	4,871,347	5,071,307	(199,960)
Unamortized Premium - Bond 2016	17,414,849	17,870,470	(455,621)
Notes Payable	6,479,693	8,578,203	(2,098,510)
Unfunded Ret Liability (GASB 67/68)	36,179,835	38,195,938	(2,016,103)
Employee Annual Leave, Less Current Portion	867,867	887,084	(19,217)
TOTAL LIABILITIES	609,790,817	602,886,951	6,903,866
Not Accets	244.045.472	400 705 004	20 000 407
Net Assets	214,045,179	193,735,684	20,309,495
Total Liabilities and Net Assets	823,835,996	796,622,635	27,213,361

# GUAM WATERWORKS AUTHORITY Statement of Operations and Retained Earnings (Unaudited) Comparative Budget vs. Actual for the period ending June 30, 2017

SCHEDULE B

			- Data	Marian
	Budget June-17	Month t Encumbered June-17	o Date Actual (Unaudited) June-17	Variance Increase / (Decrease)
OPERATING REVENUES	5.070.540		5.005.005	(0.40, 0.40)
Water Revenues Wastewater Revenues	5,678,548 3,284,461		5,335,305 3,000,181	(343,242) (284,279)
Legislative Surcharge	288,387		247,553	(40,834)
Other Revenues	43,750		46,564	2,814
System Development Charge	133,333		25,744	(107,590)
Total Operating Revenues	9,428,479		8,655,347	(773,132)
OPERATING AND MAINTENANCE EXPENSES	070 004		050 400	(00.000)
Water Purchases Power Purchases	676,391 1,061,804		652,403 1,021,506	(23,988) (40,298)
Total Utility Costs	1,738,195		1,673,909	(64,286)
Salaries and Wages	1,586,470		1,495,998	(90,472)
Pension and Benefits	597,585		267,257	(330,327)
Total Salaries and Benefits Capitalized Labor and Benefits	2,184,055 (292,554)		1,763,255 (200,000)	(420,799) 92,554
Net Salaries and Benefits	1,891,501		1,563,255	(328,245)
Administrative and General Expenses	1,001,001		1,000,200	(020)2.10)
Sludge removal	174,395	47,710	126,595	(89)
Chemicals	205,222	-	202,709	(2,513)
Materials & Supplies	151,071	-	150,980	(90)
Transportation	71,419	9,342	59,892	(2,185)
Communications Claims	14,152 18,284	931	11,271 17,656	(1,950) (627)
Insurance	91,312	-	75,480	(15,832)
Training & Travel	99,570	_	99,021	(549)
Advertising	7,045	-	7,082	38
Miscellaneous	80,963	-	75,382	(5,581)
Total Administrative and General Expense	913,431	57,983	826,069	(29,379)
Regulatory Expense	21,791	-	20,379	(1,412)
Bad Debts Provision	62,500	-	62,492	(8)
Depreciation Expense	1,529,550	-	1,329,008	(200,542)
Contractual Expense Audit & Computer Maint.	78,630	_	65,928	(12,702)
Building rental	38,368		36,582	(1,785)
Equipment rental	64,270	_	63,809	(461)
Legal	439	-	-	(439)
Laboratory	10,086	7,617	1,630	(839)
Other	126,292	-	123,243	(3,048)
Total Contractual Expense	318,085	7,617	291,192	(19,275)
Retiree Supp. Annuities and health care costs Contribution to Government of Guam	239,312		228,588	(10,724)
Total Retiree Benefits	48,285 287,597		49,500 278,088	1,215 (9,509)
Total Operating Expenses	6,762,648	65,600	6,044,392	(652,656)
Earnings (Loss) from Operations	2,665,830	(65,600)	2,610,955	(120,475)
Interest Income-2010/13/14/16 Series Bond	1,029	, , ,	96,503	95,475
Interest Income-Other Funds	642		14,801	14,159
Interest Income-SDC			2,444	2,444
Interest Expense- 2010/13/14/16 Series Bond	(2,223,983)		(2,223,983)	(0)
Interest Expense- ST BOG Federal Expenditures	(46,124)		(49,438)	(3,314)
Loss on Asset Disposal AFUDC	625,000		- 625,000	- -
Amortization of Discount, Premium and Issuance Costs	37,738		61,861	24,123
Loss on Defeasance Bond05 Refunding	(19,483)		(15,218)	4,265
Deferred outflows from pension Prior Year Adjustment	(66,928)		(104,481)	(37,552)
Total non-operating revenues (expenses)	(1,692,111)		(1,592,512)	99,599
Net Income (Loss) before capital contributions	973,720	(65,600)	1,018,443	(20,877)
Capital Contributions Grants from US Government	250,000		1,341,580	1,091,580
Grants from GovGuam & Others	-		-	-
Other Contributions	-		-	-
Total Capital Contributions	250,000	-	1,341,580	1,091,580
Change in Net Assets	1,223,720	(65,600)	2,360,023	1,070,703
Debt Service Calculation	0.005.000		0.040.055	
Earnings From Operations System Development Charge	2,665,830		2,610,955	
Interest/Investment Income	(133,333) 642		(25,744) 14,801	
Depreciation	1,529,550		1,329,008	
Balance Available for Debt Service per Section 6.12	4,062,689	-	3,929,020	
Working Capital Reserve Available for Debt Service	632,083	-	932,134	
Transfer to Working Capital Debt Service Reserve	(304,167)	_	-	
Balance Available for Debt Service inclusive of reserves Debt Service	4,390,606	<del>-</del>	4,861,154	
Principal				
Interest	420,000		420,000	
interest	420,000 1,626,858		420,000 1,626,858	
Total	1,626,858 2,046,858	- -	1,626,858 2,046,858	
	1,626,858	- - -	1,626,858	

#### GUAM WATERWORKS AUTHORITY Statement of Operations and Retained Earnings (Unaudited) Comparative for the period ending June 30, 2017 and 2016

SCHEDULE C

Comparative for the period ending 30	Comparative for the period ending June 30, 2017 and 2010						
	Month to I Actual (Unaudited)	Variance Increase /					
	June-17	Actual (Audited) June-16	(Decrease)				
OPERATING REVENUES							
Water Revenues	5,335,305	5,361,643 3,102,398	(26,338)				
Wastewater Revenues Legislative Surcharge	3,000,181 247,553	3,102,396 241,527	(102,217) 6.026				
Other Revenues	46,564	43,325	3,239				
System Development Charge	25,744	119,028	(93,284)				
Total Operating Revenues OPERATING AND MAINTENANCE EXPENSES	8,655,347	8,867,921	(212,574)				
Water Purchases	652,403	531,170	121,233				
Power Purchases	1,021,506	935,490	86,016				
Total Utility Costs	1,673,909	1,466,660	207,249				
Salaries and Wages	1,495,998	1,333,993	162,005				
Pension and Benefits	267,257	454,904	(187,647)				
Total Salaries and Benefits	1,763,255	1,788,897	(25,642)				
Capitalized Labor and Benefits  Net Salaries and Benefits	(200,000) 1,563,255	(248,363) 1,540,534	48,363 22,721				
Administrative and General Expenses	1,000,200	1,040,004	22,721				
Sludge removal	126,595	130,423	(3,828)				
Chemicals	202,709	186,596	16,113				
Materials & Supplies Transportation	150,980 59,892	103,711 47,876	47,269 12,016				
Communications	11,271	10,265	1,006				
Claims	17,656	10,618	7,039				
Insurance	75,480	101,111	(25,631)				
Training & Travel Advertising	99,021 7,082	12,457 15,907	86,564 (8,825)				
Miscellaneous	75,382	68,429	6,953				
Total Administrative and General Expense	826,069	687,393	138,677				
Regulatory Expense	20,379	27,104	(6,726)				
Bad Debts Provision	62,492	86,193	(23,701)				
Depreciation Expense Contractual Expense	1,329,008	1,279,008	50,000				
Audit & Computer Maint.	65,928	86,467	(20,539)				
Building rental	36,582	33,279	3,304				
Equipment rental	63,809	58,162	5,647				
Legal Laboratory	1,630	362 10,234	(362) (8,604)				
Other	123,243	154,589	(31,346)				
Total Contractual Expense	291,192	343,094	(51,901)				
Retiree Supp. Annuities and health care costs	228,588	230,355	(1,767)				
Contribution to Government of Guam Total Retiree Benefits	49,500 278,088	48,667 279,022	833 (934)				
Total Operating Expenses	6,044,392	5,709,007	335,385				
Earnings (Loss) from Operations	2,610,955	3,158,914	(547,959)				
Interest Income-2010/13/14/16 Series Bond	96,503	2,083	94,421				
Interest Income-Other Funds Interest Income-SDC	14,801 2,444	1,281 1,896	13,519 549				
Interest Expense - 2010/13/14/16 Series Bond	(2,223,983)	(1,994,375)	(229,608)				
Interest Expense- ST BOG	(49,438)	(59,096)	9,657				
Federal Expenditures	-	(88,189)	88,189				
Loss on Asset Disposal AFUDC	- 625,000	(4,150)	4,150				
Amortization of Discount, Premium and Issuance Costs	61,861	1,142,370 (160,812)	(517,370) 222,672				
Loss on Defeasance Bond05 Refunding	(15,218)	(19,483)	4,265				
Deferred outflows from pension	(104,481)	(7,452)	(97,029)				
Prior Year Adjustment	(4.500.540)	(51,397)	51,397				
Total non-operating revenues (expenses)  Net Income (Loss) before capital contributions	(1,592,512) 1,018,443	(1,237,323) 1,921,591	(355,189) (903,148)				
Capital Contributions	1,010,443	1,321,331	(303,140)				
Grants from US Government	1,341,580	434,254	907,326				
Grants from GovGuam & Others	-	23,151	(23,151)				
Other Contributions Total Capital Contributions	1,341,580	457,405	884,174				
Change in Net Assets	2,360,023	2,378,996	(18,974)				
		· · ·	<u> </u>				
Debt Service Calculation							
Earnings From Operations	2,610,955	3,158,914					
System Development Charge Interest/Investment Income	(25,744) 14,801	(119,028) 1,281					
Depreciation	1,329,008	1,279,008					
Balance Available for Debt Service per Section 6.12	3,929,020	4,320,176					
Working Capital Reserve Available for Debt Service	932,134	382,083					
Transfer to Working Capital Debt Service Reserve  Balance Available for Debt Service inclusive of Reserves	4 004 454	4 700 050					
Debt Service	4,861,154	4,702,259					
Principal	420,000	409,167					
Interest	1,626,858	1,442,950					
Total	2,046,858	1,852,116					
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture) Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.92 2.37	2.33 2.54					
Debt del tide develage (1.73A) illelusive di leselves (PUC)	2.31	2.04					

# GUAM WATERWORKS AUTHORITY Statement of Operations and Retained Earnings (Unaudited) Comparative Budget vs. Actual for the period ending June 30, 2017

SCHEDULE D

, 2		Year to D	ate	Variance
	Budget June-17		Actual (Unaudited) June-17	Increase / (Decrease)
OPERATING REVENUES	ounc 17	ounc 11	ounc 17	(Decircuse)
Water Revenues	51,106,928		47,048,167	(4,058,761)
Wastewater Revenues Legislative Surcharge	29,560,145 2,595,483		27,553,395 2,354,960	(2,006,751) (240,523)
Other Revenues	393,750		438,908	45,158
System Development Charge	1,200,000		721,146	(478,854)
Total Operating Revenues	84,856,307		78,116,576	(6,739,731)
OPERATING AND MAINTENANCE EXPENSES Water Purchases	6,087,515		5,441,014	(646,501)
Power Purchases	9,556,236		8,785,339	(770,897)
Total Utility Costs	15,643,751		14,226,353	(1,417,398)
Coloring and Manage	44.070.000		40.047.470	(4.004.050)
Salaries and Wages Pension and Benefits	14,278,232 5,378,261		12,617,176 2,292,538	(1,661,056) (3,085,723)
Total Salaries and Benefits	19,656,494		14,909,714	(4,746,779)
Capitalized Labor	(2,632,988)		(1,800,000)	832,988
Net Salaries and Benefits  Administrative and General Expenses	17,023,505		13,109,714	(3,913,791)
Sludge removal	1,569,552	308,840	1,259,909	(803)
Chemicals	1,846,998	114,058	1,589,888	(143,052)
Materials & Supplies	889,435	302,193	1,168,670	581,428
Transportation	642,773	301,024	334,312	(7,436)
Communications Claims	127,367 212,555	31,447	95,359 76,909	(560) (135,645)
Insurance	821,805	_	860,792	38,987
Training & Travel	1,010,129	-	163,247	(846,882)
Advertising	88,401	-	87,430	(971)
Miscellaneous Total Administrative and General Expense	728,669 7,937,682	1,057,562	651,163 6,287,680	(77,506) (592,440)
Regulatory Expense	196,115	1,007,002	172,748	(23,367)
Bad Debts Provision	562,500	-	562,453	(47)
Depreciation Expense	13,765,950	-	11,961,072	(1,804,878)
Contractual Expense	000.070		200 004	(40)
Audit & Computer Maint. Building rental	889,673 345,309	-	889,624 328,932	(49) (16,377)
Equipment rental	666,428	-	467,840	(198,587)
Legal	6,149	-	6,132	(17)
Laboratory	90,776	42,078	36,568	(12,130)
Other Total Contractual Expense	1,136,626 3,134,961	42,078	1,089,898 2,818,994	(46,727) (273,888)
Retiree Supp. Annuities and health care costs	2,153,805	42,010	2,080,838	(72,968)
Contribution to Government of Guam	445,565		445,500	(65)
Total Retiree Benefits	2,599,370	-	2,526,338	(73,033)
Total Operating Expenses  Earnings (Loss) from Operations	60,863,834 23,992,473	1,099,640 (1,099,640)	51,665,352 26,451,224	(8,098,841) 1,359,110
Interest Income-2010/13/14/16 Series Bond	9,258	(1,000,040)	366,178	356,920
Interest Income-Other Funds	5,777		58,322	52,546
Interest Income-SDC	(00.045.054)		16,758	16,758
Interest Expense - 2010/13/14/16 Series Bond Interest Expense- ST BOG	(20,015,851) (415,117)		(20,015,851) (428,604)	(0) (13,487)
Federal Expenditures	(410,117)		(256,661)	(256,661)
Loss on Assets Disposal	-		-	- 1
AFUDC	5,625,000		5,625,000	- 017.100
Amortization of Discount, Premium and Issuance Costs Loss on Defeasance Bond05 Refunding	339,638 (175.347)		556,746 (136,966)	217,109 38,381
Deferred outflows from pension	(602,354)		(940,326)	(337,972)
Prior Year Adjustment	-		(424,548)	(424,548)
Total non-operating revenues (expenses)	(15,228,996)	- (4.000.040)	(15,579,952)	(350,956)
Net Income (Loss) before capital contributions Capital Contributions	8,763,477	(1,099,640)	10,871,272	1,008,155
Grants from US Government	2,250,000		9,436,337	7,186,337
Grants from GovGuam & Others	-		1,886	1,886
Other Contributions				7 400 000
Total Capital Contributions Change in Net Assets	2,250,000 11,013,477	(1,099,640)	9,438,223 20,309,495	7,188,223 8,196,377
	11,010,111	(1,000,010)	20,000,100	0,100,011
Debt Service Calculation				
Earnings From Operations	23,992,473		26,451,224	
System Development Charge	(1,200,000)		(721,146)	
Interest/Investment Income Depreciation	5,777 13,765,950		58,322 11,961,072	
Balance Available for Debt Service per Section 6.12	36,564,200		37,749,472	
Working Capital Reserve for Debt Service	5,688,750	_	8,389,208	
Transfer to Working Capital Debt Service Reserve	(2,737,500)		-	
Balance Available for Debt Service inclusive of Reserves Debt Service	39,515,450	_	46,138,680	
Principal	3,780,000		3,780,000	
Interest	14,641,726		14,641,726	
Total	18,421,726	_	18,421,726	
Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	1.98	_	2.05	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.15	_	2.50	

# GUAM WATERWORKS AUTHORITY Statement of Operations and Retained Earnings (Unaudited) Comparative for the period ending June 30, 2017 and 2016

SCHEDULE E

Comparative for the period ending 30	ine 30, 2017 and 2016	SCHEDULE E	
	Year to Da	Variance	
		ACTUAL (Audited) June-16	Increase /
OPERATING REVENUES	June-17	June-16	(Decrease)
Water Revenues	47,048,167	48,254,786	(1,206,618)
Wastewater Revenues	27,553,395	27,921,586	(368,191)
Legislative Surcharge	2,354,960	2,173,743	181,216
Other Revenues System Development Charge	438,908 721,146	389,924 1,071,249	48,984 (350,103)
Total Operating Revenues	78,116,576	79,811,288	(1,694,712)
OPERATING AND MAINTENANCE EXPENSES		-,- ,	( , , , ,
Water Purchases	5,441,014	4,780,526	660,488
Power Purchases	8,785,339	8,419,413	365,926
Total Utility Costs	14,226,353	13,199,939	1,026,414
Salaries and Wages	12,617,176	12,005,936	611,240
Pension and Benefits	2,292,538	4,094,138	(1,801,600)
Total Salaries and Benefits	14,909,714	16,100,074	(1,190,359)
Capitalized Labor and Benefits  Net Salaries and Benefits	(1,800,000) 13,109,714	(2,235,269) 13,864,805	435,269 (755,091)
Administrative and General Expenses	13,103,714	13,004,003	(755,091)
Sludge removal	1,259,909	1,173,810	86,099
Chemicals	1,589,888	1,679,360	(89,472)
Materials & Supplies	1,168,670	933,401	235,269
Transportation Communications	334,312 95,359	430,882 92.384	(96,570) 2,975
Claims	76,909	95,559	(18,650)
Insurance	860,792	909,995	(49,203)
Training & Travel	163,247	112,110	51,136
Advertising	87,430	143,167	(55,737)
Miscellaneous	651,163	615,864	35,300
Total Administrative and General Expense	6,287,680	6,186,533	101,147
Regulatory Expense	172,748	243,939 775,733	(71,191)
Bad Debts Provision Depreciation Expense	562,453 11,961,072	11,511,076	(213,280) 449,996
Contractual Expense	11,301,072	11,511,070	443,330
Audit & Computer Maint.	889,624	778,207	111,417
Building rental	328,932	299,507	29,424
Equipment rental	467,840	523,457	(55,617)
Legal Laboratory	6,132 36,568	3,261 92,107	2,871
Other	1,089,898	1,391,303	(55,539) (301,404)
Total Contractual Expense	2,818,994	3,087,842	(268,848)
Retiree Supp. Annuities and health care costs	2,080,838	2,073,197	7,641
Contribution to Government of Guam	445,500	438,000	7,500
Total Retiree Benefits  Total Operating Expenses	2,526,338 51,665,352	2,511,197 51,381,063	15,141 284,288
Earnings (Loss) from Operations	26,451,224	28,430,224	(1,979,001)
Interest Income-2010/13/14/16 Series Bond	366,178	18,743	347,435
Interest Income-Other Funds	58,322	11,533	46,789
Interest Income-SDC	16,758 (20,015,851)	17,060 (17,949,375)	(302)
Interest Expense - 2010/13/14/16 Series Bond Interest Expense- ST BOG	(428,604)	(531,860)	(2,066,475) 103,256
Federal Expenditures	(256,661)	(793,697)	537,036
Loss on Assets Disposal	-	(37,347)	37,347
AFUDC	5,625,000	10,281,331	(4,656,331)
Amortization of Discount, Premium and Issuance Costs	556,746	(1,447,305)	2,004,051
Loss on Defeasance Bond05 Refunding Deferred outflows from pension	(136,966) (940,326)	(175,347) (67,065)	38,381 (873,261)
Prior Year Adjustment	(424,548)	(462,575)	38,027
Total non-operating revenues (expenses)	(15,579,952)	(11,135,904)	(4,444,047)
Net Income (Loss) before capital contributions	10,871,272	17,294,320	(6,423,048)
Capital Contributions Grants from US Government	0.400.007	2 000 204	5 500 050
Grants from US Government Grants from GovGuam & Others	9,436,337 1,886	3,908,284 208,363	5,528,053 (206,477)
Other Contributions	-	200,303	(200,477)
Total Capital Contributions	9,438,223	4,116,647	5,321,576
Change in Net Assets	20,309,495	21,410,967	(1,101,472)
Dobt Sarving Coloulation			
Debt Service Calculation Earnings From Operations	26,451,224	28,430,224	
System Development Charge	(721,146)	(1,071,249)	
Interest/Investment Income	58,322	11,533	
Depreciation	11,961,072	11,511,076	
Balance Available for Debt Service per Section 6.12	37,749,472	38,881,584	
Working Capital Reserve Available for Debt Service Transfer to Working Capital Debt Service Reserve	8,389,208	3,438,750	
Balance Available for Debt Service inclusive of Reserves	46,138,680	42,320,334	
Debt Service			
Principal	3,780,000	3,682,500	
Interest	14,641,726	12,986,546	
Total  Debt Service Coverage (1.25X)- per Section 6.12 (Indenture)	18,421,726 2.05	16,669,046 2.33	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	2.50	2.54	

#### SCHEDULE F

Bond Compliance		(\$\$\$) <u>Per Indenture</u>	As of 06/30/17 (\$\$\$) Bond 2010/2013/2014/2016
Operation and Maintenance Fund-BOG  Equivalent to 5	i5 days of the annual O&M budget less depreciation	\$10.5M	\$10.5M
Bond Reserve Fund - US Bank     Fully funded- F	Principal and Interest (Bond Series 2010, 2013, 2014 Refunding and 2016)	\$34.9M	\$34.9M
Operation, Maintenance, Renewal and Replacement Reserve Fund-BOG Trust  Reserve Fund-BOG Trust	/4 of the annual O&M budget & CIP budget to be funded in 5 years (\$2M/year)	\$17.4M	\$17.4M
Capital Improvement Fund  Balance remain  Balance remain	ning in the Revenue Fund after the foregoing deposits	\$3.9K	\$4.5K
Capitalized Interest Fund			\$1.8M

#### GUAM WATERWORKS AUTHORITY Restricted and Unrestricted Cash Summary FY 2017

SCHEDULE G

Description	Unaudited	Audited	Increase
Description UNRESTRICTED	June 30, 2017	September 30, 2016	(Decrease)
Change Fund	2,000	2,000	0
Petty Cash	5,000	5,000	0
BOG - General Fund	4,457,681	5,126,177	(668,496)
BOG - PRN Payroll	30,039	24,253	5,786
Sub-total Unrestricted	4,494,720	5,157,430	(662,710)
RESTRICTED			_
BOG - Credit Card-Sweep	-	-	0
BOG - On Line Payment	- (2)	- 76	0 (78)
BOG - Sweep Account Bank of Hawaii	(2) 118,338	76 121,322	(78)
ANZ Bank	1,018	229	(2,984) 789
First Hawaiian Bank	17,365	47,741	(30,376)
Bank Pacific	13,930	14,194	(264)
Community First FCU	3,722	4,638	(915)
BOG - Customer Refunds	1,838,756	1,431,631	407,125
Bank Pacific - Surcharge	604,385	666,763	(62,377)
Bank Pacific - Escrow Deposit	665,788	845,734	(179,946)
BOG Emergency Reserve Fund	6,120	6,114	5
BOG - Revenue Trust	130,420	3,095,751	(2,965,331)
BOG Revenue Trust Fund	2,047,233	8,182,472	(6,135,239)
BOG Capital Improvement Fund- Bond	4,500	3,933	567
BOG Capital Improvement Revenue Fund	2,922,495		2,922,495
BOG-O & M Reserve	13,016,998	4,050,319	8,966,679
BOG-Debt Service Reserve	11,200,917	11,185,610	15,308
BOG-CAPEX Reserve BOG Sewer Hookup Revolving Fund	11,625,416 63,275	8,710,383 62,132	2,915,033 1,143
BOG Sewel Flookup Revolving Fund  BOG Short Term Loan DSF	-	-	0
BOG Subord. Sec. Fund	859,233	859,233	0
BOG Operation and Maintenance Fund	8,209,375	3,083,482	5,125,894
	53,349,283	42,371,755	10,977,528
BOG - SDC Deposit	4,599,207	1,064,792	3,534,415
BOG - SDC CDs	5,250,000	8,000,000	(2,750,000)
Total Restricted	63,198,489	51,436,547	11,761,943
Reserve Funds	47 400 040	47 400 040	•
BOG Series 05 OMRRRF Fund	17,423,213	17,423,213	0
BOG Series 10 Construction Fund BOG Series 13 Construction Fund	9,751,028	11,725,749	(1,974,720)
BOG Series 13 CAP I Fund	83,890,854	107,622,618	(23,731,764) 0
BOG Series 14 Refunding Construction Fund	821,659	820,529	1,129
BOG Series 16 Construction Fund	136,104,788	138,748,131	(2,643,343)
BOG Series 16 Cap Int Fund	1,779,121	8,937,545	(7,158,424)
BOG Series 16 COI Fund	-,	-	0
Total Restricted - Held by Trustee	249,770,662	285,277,784	(35,507,122)
_			
USB Series 2010 Debt Service Fund	4,861,923	2,016,414	2,845,509
USB Series 2010 Debt Service Reserve Fund	7,566,460	7,566,460	0
USB Series 2013 Debt Service Fund	4,667,445	2,333,083	2,334,363
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	0
USB Series 2014 Refunding Debt Service Fund	5,276,869	1,791,266	3,485,604
USB Series 2014 Refunding Debt Service Reserve Fund	7,719,609	7,707,628	11,981
USB Series 2016 Debt Service Fund	3,582,750	7 500 705	3,582,750
USB Series 2016 Debt Service Reserve Fund  Total Investments	7,586,059 53,292,803	7,582,725 41,029,262	3,334 12,263,541
10tai 111463011161115	33,282,003	41,023,202	12,203,341
Total Restricted and Unrestricted Cash	370,756,675	382,901,023	(12,144,348)
	3,0,100,010	302,001,020	(12,177,070)

	SCHEDULE H
Guam Waterworks Authority Statement of Cash Flows (Unaudited) FY 2017	YTD Jun-17
Increase (decrease) in cash	
Cash flows from operating activities:	
Cash received from trade and others	76,820,574
Cash payments to suppliers/contractors for goods and services	(23,333,290)
Cash payments to employees for services	(16,695,947)
Net cash provided by operating activities	36,791,337
Cash flows from capital and related financing activities:	
Contributed capital received (grants)	9,619,798
Acquisition of utility plant	(42,128,497)
Repayment of Long Term Debt	768,139
Interest expense	(18,041,913)
Net cash provided by (used in) capital and related financing activities	(49,782,472)
Cash flows from investing activities:	
Transfers from (to) restricted fund	11,903,925
Interest income received	424,500
Net cash provided by investing activities	12,328,425
Net increase (decrease) in cash	(662,710)
Unrestricted cash at beginning of the period	5,157,430
Unrestricted cash at end of period	4,494,720
Reconciliation of operating loss to net cash provided by operating activities:	
Operating Income (loss)	25,729,089
Adjustments to reconcile to net cash provided by operating activities:	
Depreciation expense	11,961,072
Other Expense/income	
(Increase) decrease in assets:	
Accounts receivable	158,870
Materials and supplies inventory	252,524
Other Assets	326,446
Increase (decrease) in liabilities:  Accounts payable, Contractors, Retention & Escrow Deposit	(405 405)
Accounts payable, Contractors, Retention & Escrow Deposit  Accrued payroll	(405,495) (1,059,895)
Customer deposits	(1,059,695)
Net cash provided by operating activities	36,791,337
not each promise by operating adminion	00,701,007

#### Guam Waterworks Authority Accounts Receivable - Government as of June 30, 2017

SCHEDULE I

				AGING			
		Current					Outstanding
<u>Customer Name</u>	No of Accounts	Balance	31-60 days	61-90 days	91-120 days	Over 120 days	Bal.
GUAM POWER AUTHORITY	24	51,079	96,262	91,744	48,708	835	288,628
GUAM INT'L AIRPORT AUTHORITY	4	29,956	25,239	27,977	23,780	138,296	245,249
PORT AUTHORITY OF GUAM	3	42,779	30,465	14,643	-	-	87,887
GUAM MEMORIAL HOSPITAL AUTHORITY	3	34,610	-	-	-	-	34,610
UNIVERSITY OF GUAM	2	11,305	-	-	-	-	11,305
GUAM HOUSING & URBAN RENEWAL AUTHORITY	7	1,611	-	-	-	92	1,703
GUAM HOUSING CORPORATION	1	27	-	-	-	-	27
AUTONOMOUS AGENCIES	44	171,368	151,966	134,365	72,488	139,224	669,410
DEPT OF EDUCATION	50	474,258	188,926	34,823	4,636	161,584	864,227
DEPT OF PARKS & RECREATION	20	40,829	26,869	42,316	16,254	86,090	212,357
DEPT OF PARKS & RECREATION  DEPT OF CORRECTIONS	8	130,780	20,869	42,310	10,234	-	130,835
DEPT OF CORRECTIONS  DEPT OF PUBLIC HEALTH & SOCIAL SERVICES	7	3,782	1,657	540	367	103,831	110,178
MAYORS' COUNCIL OF GUAM	7 52	22,082	1,657 529	0	307	103,031	22,611
GUAM FIRE DEPARTMENT	9	8,138		U	-	-	10,595
	2		2,457	-	-	-	
DEPT OF AGRICULTURE DEPT OF CHAMORRO AFFAIRS	2	5,891 5,489	221	-	-	-	5,891 5,710
OFFICE OF THE GOVERNOR	2	5,469 4.036	-	-	-	-	4.036
	11	,	647	-	-	-	,
DEPT OF PUBLIC WORKS DIVISION OF SENIOR CITIZENS. DPH&SS	2	3,093 3,316	198	152	-	-	3,740
DEPT OF MILITARY AFFAIRS/GUARNG	1	3,316 2.945	190	152	-	-	3,667 2,945
	1	,	-	-	-	-	,
GUAM POLICE DEPARTMENT DEPT OF ADMINISTRATION	1	2,222 2,064	-	-	-	-	2,222
SANCTUARY INC	1	2,064 837	-	-	-	-	2,064 837
GUAM VETERANS AFFAIRS OFFICE	2	469		-	-	-	753
GHURA-AGAFU GUMAS PARK	1	469 278	283 34	34	26	233	753 604
	1		34	34	20	233	
GUAM ASSOCIATION OF RETIRED PERSONS GUAM LEGISLATURE		561 81	- 44	- 84	-	-	561 209
GUAM PUBLIC LIBRARY	2	155	- 44	84	-	-	
	· · · · · · · · · · · · · · · · · · ·		-	-	-	-	155
DEPT OF YOUTH AFFAIRS	3	119	-	-	-	-	119
MERIZO MAYOR	1	26	25	23	31	-	105
GUAM SOLID WASTE AUTHORITY	2	75	-	-	-	-	75 -
LINE ACENOISO		744 55-	004.0.10	77.070	04.515	054 700	
LINE AGENCIES	185	711,527	221,946	77,972	21,313	351,738	1,384,496
TOTAL June 30, 2017	229	882,895	373,911	212,336	93,802	490,962	2,053,906
TOTAL September 30, 2016	243	1,516,081	325,256	94,308	95,259	717,692	2,748,597
% INCREASE/ (DECREASE)	-6%	-42%	15%	125%	-2%	-32%	-25%

**GUAM WATERWORKS AUTHORITY** 2010 Series Bond Project Status As of June 30, 2017

SCHEDULE J

		ORIGINAL						TOTAL EXPENDITURES			Construction fund						
PROJECT NAME		APPROVED PROJECT COST								djusted Project Cost	EXPENDITUR AS OF 06/30/		OUTSTANDING ENCUMBRANCES	AND ENCUMBRANCES	UNOBLIGATED PROJECT COST		balance AS OF 06/30/17
Ground Water Disinfection	\$	-	\$	500,000	\$ 438,		\$ 61,859	\$ 500,000	\$ 0	\$	61,859						
"A" Series Well Transmission Line	\$	600,000	\$	518,144	\$ 474,	134	\$ 1,274	\$ 475,709	\$ 42,435	\$	43,710						
Water Booster Pump Station	\$	500,000	\$	500,000	\$ 418,8		\$ 81,156	\$ 500,000	\$ (0)	\$	81,156						
Meter Replacement Program	\$	2,500,000	\$	10,300,000	\$ 10,254,2		\$ 19,409	\$ 10,273,628	\$ 26,372	\$	45,780						
Barrigada Tank Repair/Replacement	\$	-	\$	5,450,000	\$ 5,442,	302	\$ 7,698	\$ 5,450,000	\$ 0	\$	7,698						
Leak Detection			\$	200,000	\$	-	\$ 200,000	\$ 200,000	\$ -	\$	200,000						
Potable Water System Planning	\$	200,000	\$	200,000	\$ 179,0		\$ 20,362	\$ 200,000	\$ -	\$	20,362						
Implement Ground Water Rule	\$	1,200,000	\$	1,700,000 1,700,000	\$ 1,499,4 \$ 83,3		\$ 200,535 \$ 202,199	\$ 1,700,000 \$ 285,595	\$ 1 \$ 1,414,405	\$	200,536						
Brigade II (Ugum Lift) BPS Upgrade Deep Well Rehabilitation	\$	548,000	\$	548,000	\$ 548,0		\$ 202,199	\$ 285,595 \$ 548,000	\$ 1,414,405	\$	1,616,605						
New Deep Wells at Down Hard	\$	3,773,000	\$		\$ 485,		\$ -	\$ 485,743	\$ 152,509	\$	152,509						
Rehabilitation of Asan Springs	\$	900.000	\$	900,000	\$ 188,		\$ 152,068	\$ 340,838	\$ 559,162	\$	711.229						
Master Meters	\$	1,600,000	\$	1,600,000	\$ 1,421,2		\$ 68,690	\$ 1,489,957	\$ 110,043	Š	178,733						
Ugum Water Treatment Plant Intake	\$	3,670,000	\$	700,000	\$ 543,0		\$ 156,385	\$ 700,000	\$ -	\$	156,385						
Water Wells	\$	2,000,000	\$	-	\$	-		\$ -	\$ -	\$	-						
Water Distribution System	\$	384,000	\$	3,174,748	\$ 3,174,	48	\$ -	\$ 3,174,748	\$ (0)	\$	(0)						
Pressure Zone Realignment /	\$	3,550,000	\$	-	\$	-		\$ -	\$ -	\$							
Northern System Water Distribution	\$	2,725,000	\$	-	\$	-	\$ -	\$ -	\$ -	\$	-						
Central Water Distribution System 2005	\$	1,200,000	\$	900,000	\$ 634,8	330	\$ 140,172	\$ 775,002	\$ 124,998	\$	265,170						
Southern Water Distribution System	\$	1,800,000	\$	-	\$	-		\$ -	\$ -	\$	-						
Mechanical/Electrical Equipment	\$	1,360,000	\$	1,200,000	\$ 1,079,4		\$ 120,505	\$ 1,200,000	\$ (0)	\$	120,505						
Water Reservoir Internal/External	\$	500,000	\$	2,000,000	\$ 855,2	242	\$ 584,234	\$ 1,439,476	\$ 560,524	\$	1,144,758						
Water Reservoir Internal/External	\$	2,400,000	\$	-	\$	-		\$ -	\$ -	\$	-						
Water System Reservoirs 2005 Improvements	\$	11,697,000	\$	1,050,000	\$ 1,050,0			\$ 1,050,000	\$ 0	\$	0						
Distribution System Upgrades	\$	3,182,000	\$	474,160	\$ 451,4	162	\$ 22,698	\$ 474,160	\$ 0	\$	22,698						
Ugum Water Treatment Plant Reservoir	\$	3,672,000	\$	-	\$	-		\$ -	\$ -	\$	-						
Water Audit Program & Water Loss Control Plan			\$	100,000	\$ 15,0		\$ 63,428	\$ 78,459	\$ 21,541	\$	84,970						
Production Plan / Reduce Navy Purchases			\$	100,000	\$ 94,2		\$ 5,714	\$ 100,000	\$ - \$ -	-	5,714						
Hydraulic Asessment of Tank			\$	500,000 4,700,000	\$ 497,0 \$ 4,144,7	JU4	\$ 2,996 \$ 555,285	\$ 500,000 \$ 4,700,000	\$ - \$ -	\$	2,996 555,285						
Agana Heights & Chaot Tanks Tank Major Repair Yigo#1 Mangilao#2 Agat#2			\$		\$ 1,738,		\$ 109,171	\$ 1,848,013	\$ 51.987	\$	161,157						
Tank Major Repair Yigo#1 Mangilao#2 Agat#2  Tank Major Repair Yigo#1 Mangilao#2 Agat#2			\$	1,500,000	φ 1,730,6	143	φ 109,171	\$ 1,040,013	\$ 51,567	\$	101,137						
Assessment of malojloj Elevetad & Yigo Elevated			\$	200,000	\$ 200,0	າດດ	\$ -	\$ 200,000	\$ -	\$	_						
Public Water System Asser Inventory/Condition Assesment			\$	100,000	\$ 96,		\$ 3,446	\$ 100,000	\$ -	Š	3,446						
Public Water System GIS & Mapping			\$		\$ 50.0		\$ -	\$ 50,000	š -	\$	-						
			\$	-			•	\$ -	\$ -	\$	-						
Wastewater System Planning	\$	1,500,000	\$	1,500,000	\$ 1,465,8	358	\$ 8,142	\$ 1,474,000	\$ 26,000	\$	34,142						
Wastewater Vehicles	\$	235,000	\$	235,000	\$ 209,	95	\$ 25,205	\$ 235,000	\$ 0	\$	25,205						
NDWWTP - Chlorine Tanks	\$	250,000	\$	250,000	\$ 250,0	000		\$ 250,000	\$ -	\$	-						
Tumon Bay Sewer Upgrades	\$	100,000	\$	-	\$	-		\$ -	\$ -	\$	-						
Wastewater Collection System Repl/Rehab			\$	1,105,000	\$ 718,0		\$ 283,287	\$ 1,001,323	\$ 103,677	\$	386,964						
Facilities Plan/Design for Baza Gardens WWTP	\$	1,250,000	\$	1,250,000	\$ 1,239,2		\$ 10,750	\$ 1,250,000	\$ -	\$	10,750						
Facilities Plan/Design for Agat-Santa Rita WWTP	\$	900,000	\$	899,630	\$ 881,	49	\$ 17,881	\$ 899,630	\$ -	\$	17,881						
Priority 1 Sewer Upgrades – Baza Gardens WWTP	\$	650,000	\$		\$			\$ -	\$ -	\$							
Baza Gardens STP Replacement	\$	3,567,000	\$	1,301,947	\$ 268,		\$ 48,850	\$ 317,000	\$ 984,947	\$	1,033,797						
Facilities Plan/Design for Umatac Merizo WWTP	s	0.000.000	\$	900,000	\$ 545,4		\$ 125,344	\$ 670,791	\$ 229,209	\$	354,553						
Agat/Santa Rita STP Replacement	\$	2,968,000	\$	2,218,000 11,750,000	\$ 2,215,5 \$ 11,363,4		\$ 387 \$ 211,161	\$ 2,215,978 \$ 11,574,600	\$ 2,022 \$ 175,400	\$	2,409 386,561						
Northern District WWTP Primary Treatment Upgrades Biosolids Management Plan	Ф	-	\$	200.000	\$ 11,363,4		\$ 3,586	\$ 11,574,600 \$ 200,000	\$ 175,400	\$	3,586						
Agana WWTP Interim Measures	\$		\$	11,500,000	\$ 11,242,		\$ 57,614	\$ 11,300,000	\$ 200,000	\$	257,614						
I&I SSES Southern	Ф	-	\$	800,000	\$ 692,		\$ 107,118	\$ 800,000	\$ 200,000	\$	107.118						
I&I SSES Central			\$		\$ 794,		\$ 55,675	\$ 850,000	\$ (0)	\$	55,675						
I&I SSES Northern			\$	-	•,		ψ 00,070	\$ -	š -	Š	-						
Umatac Merizo Replacement			\$	250,000	\$ 247,4	131	\$ 2,569	\$ 250,000	\$ -	\$	2,569						
Northern District WWTP Secondary Treatment Upgrades			\$	1,000,000						\$	1,000,000						
, , , , ,			\$	-													
Well Electrical Protection	\$	26,000	\$	-	\$	-		\$ -	\$ -	\$	-						
SCADA Pilot Project	\$	300,000	\$	61,950	\$ 19,8	312	\$ 42,138	\$ 61,950	\$ (0)	\$	42,138						
Electrical Upgrade - Water Wells	\$	3,000,000	\$	354,227	\$ 335,	378	\$ 18,849	\$ 354,227	\$ 0	\$	18,849						
Electrical Upgrade - Water Booster	\$	325,000	\$	-	\$	-		\$ -	\$ -	\$	-						
Electrical Upgrade -Water Booster	\$	350,000	\$	=	\$	-		\$ -	\$ -	\$	•						
Electrical Upgrade - Other Water	\$	250,000	\$	-				\$ -	\$ -	\$	-						
SCADA Improvements – Phase 1	\$	250,000	\$		\$ 193,9		\$ 56,011	\$ 250,000	\$ -	\$	56,011						
SCADA Improvements – Phase 2	\$	1,100,000	\$	1,056,986	\$ 1,027,4		\$ 29,562	\$ 1,056,986	\$ -	\$	29,562						
SCADA Improvements – Phase 3	\$	2,500,000	\$	24,956	\$ 24,9	156	\$ -	\$ 24,956	\$ 0	\$	0						
SCADA Improvements – Phase 4	\$	850,000	\$	-	\$	-		\$ -	\$ -	\$	-						
Laboratory Modernization	s	1,200,000	\$	-	\$	_		\$ -	s -	s							
Land Survey	\$	1,500,000	\$	500.000	\$ 461,9	986	\$ 37.701	\$ 499,687	\$ 313	\$	38,014						
General Plant Improvements / Water	\$	14,370,000	\$		\$ 7,241,0		\$ 37,701	\$ 7,241,000	\$ 313	\$	30,014						
Interest Earned	Ψ	14,575,000	Ψ	7,241,000	¥ 1,241,1	,50	<b>~</b>	¥ 1,241,000	<b>.</b>	\$	44,371						
										•	,						
Total Construction Fund (2010 Series Revenue Bond)	\$	87,402,000	\$	87,402,000	\$ 77,695,	343	\$ 3,921,112	\$ 81,616,454	\$ 4,785,546	\$	9,751,028						

PUC's Docket 11-01 \$29,000,000.00 dated 09/19/11authorized GWIA for reallocation 2) PUC's Docket 11-01 Reallocation 6 \$23,246,000.00 dated 07/30/12 3) PUC's Dockeet Reallocation dated February 2013

#### GUAM WATERWORKS AUTHORITY 2013 Series Bond Project Status As of June 30, 2017

SCHEDULE K

		ORIGINAL					то	TAL EXPENDITURES				Construction fund
PROJECT NAME		APPROVED	A	djusted Project	EXPENDITURES	OUTSTANDING		AND		UNOBLIGATED		balance
	PR	OJECT COST		Cost	AS OF 06/30/17	<b>ENCUMBRANCES</b>		ENCUMBRANCES	- 1	PROJECT COST		AS OF 06/30/17
Santa Rita Springs Booster Pump Rehab Phase II	\$	100,000	\$	100,000	24,098	75,902	\$	100,000	\$		\$	75,902
"A" Series Well Transmission Line	\$	400,000	\$	400,000	314,479	55,367	\$	369,846	\$		\$	85,521
Water Booster Pump Station	\$	6,000,000	\$	1,861,000	1,606,279	23,685	\$	1,629,964	\$	,	\$	254,721
Meter Replacement Program			\$	999,000	996,532	-	\$	996,532	\$		\$	2,468
Barrigada Tank Repair/Replacement	\$	6,000,000	\$	4,987,000	4,924,959	62,041	\$	4,987,000	\$	•	\$	62,041
Leak Detection	\$	100,000	\$	20,000	16,916		\$	16,916	\$	-,	\$	3,084
Potable Water System Planning	\$	800,000	\$	624,000	598,453	25,547	\$	624,000	\$		\$	25,547
Implement Ground Water Rule	Þ	1,000,000	\$	1,000,000	1,000,000	40.000	\$	1,000,000	\$	-	\$	40.000
Deep Well Rehabilitation	ф	800,000 2.000.000	\$ \$	200,000 810.000	189,780	10,220	\$	200,000	\$ \$	810.000	\$	10,220 810.000
New Deep Wells at Down Hard	φ	4,000,000	\$	784,000	531,188	180,872	\$	712,060	\$		\$	252,812
Master Meters	Φ	1,000,000	\$	982,000	578,549	281,252	\$	859,801	\$	,	\$	403,451
Ugum Water Treatment Plant Intake Water Wells	φ 2	4.200.000	\$	4,200,000	1,415,921	760,700	\$	2,176,621	\$		\$	2,784,079
Water Distribution System	\$	12,000,000	\$	11,151,000	4,177,802	4,627,558	\$	8,805,360	\$		\$	6,973,198
Pressure Zone Realignment /	Š	1,000,000	\$	431,000	321,464	1,260	\$	322,725	\$		\$	109,536
Mechanical/Electrical Equipment	\$	430,000	\$	430,000	328,686	98,112	\$	426,798	\$		\$	101,314
Water Reservoir Internal/External	\$	800.000	\$	-	020,000	00,1.2	\$	.20,7.00	\$		\$	-
Water System Reservoirs 2005 Improvements	\$	21,000,000	\$	13,878,000	6,921,514	785,254	\$	7,706,768	\$	6,171,233	\$	6,956,486
Ugum Water Treatment Plant Reservoir	\$	7,000,000	\$	90,000		•	\$	· · · -	\$	90,000	\$	90,000
Agana Heights & Chaot Tanks	\$	4,500,000	\$	3,280,000	233,265	47,022	\$	280,287	\$	2,999,713	\$	3,046,735
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	\$	13,500,000	\$	11,605,000	578,397	983,307	\$	1,561,703	\$	10,043,297	\$	11,026,604
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	\$	8,000,000	\$	-			\$	-	\$		\$	-
Assessment of maloiloi Elevetad & Yigo Elevated	\$	500,000	\$	485,117	438,644	46,473	\$	485,117	\$		\$	46,473
Fire Hydrant Replacement Program	\$	-	\$	-			\$	-	\$	-	\$	-
	_		\$				_		_		_	
Wastewater System Planning	\$	800,000	\$	651,000	526,453	124,548	\$	651,000	\$	(0)	\$	124,547
Lift Station Upgrades	\$	5,000,000	\$	946,000	561,748	363	\$	562,111	\$	383,889	\$	384,252
Wastewater Collection System Repl/Rehab	\$	6,500,000	\$	780.000	377.153	264.595	\$	641.748	\$	138.253	\$	402,847
Baza Gardens STP Replacement	Ψ.	0,000,000	\$	3,114,883	889,234	111,803		1,001,038		2,113,846		2,225,649
Facilities Plan/Design for Umatac-Merizo WWTP						,						
•			\$	473,000	334,627	37,072	\$	371,699	\$	101,301	\$	138,373
Agat/Santa Rita STP Replacement	\$	19,000,000	\$	67,200,000	23,074,410	43,816,191	\$	66,890,601	\$	309,399	\$	44,125,590
Agana WWTP Interim Measures			\$	673,000	547,981	125,019	\$	673,000	\$	(0)	Ф	125,019
Umatac Merizo Replacement	\$	2,000,000	\$	073,000	347,961	125,019	\$	073,000	\$		\$	123,019
Omatac Menzo Replacement	Ψ	2,000,000	\$	_			Ψ		Ψ		Ψ	
Wastewater Pump Station Electrical Upgrade	\$	620,000	\$	620,000	91,274	8,587	\$	99,861	\$	520,139	\$	528,726
Electrical Upgrade - Water Wells	\$	1,500,000	\$	1,500,000	1,480,583	19,417	\$	1,500,000	\$		\$	19,417
Electrical Upgrade - Water Booster	\$	325,000	\$	2,000	,,	- '	\$	-	\$	2,000	\$	2,000
Electrical Upgrade -Water Booster	\$	350,000	\$	200,000	977	-	\$	977	\$	199,023	\$	199,023
Electrical Upgrade - Other Water	\$	250,000	\$	150,000	60,700	-	\$	60,700	\$		\$	89,300
SCADA Improvements – Phase 3	\$	1,850,000	\$	923,000	411,024	311,335	\$	722,359	\$	200,641	\$	511,976
SCADA Improvements – Phase 4	\$	500,000	\$	-			\$	-	\$	-	\$	-
	•	4 500 655	\$		4 0 40 :	100	•				\$	
Laboratory Modernization	\$	1,500,000	\$	1,173,000	1,043,177	128,288	\$	1,171,465		1,535	\$	129,823
Land Survey	\$ \$	2,000,000	\$	2,000	1,038	15	\$	1,053	\$		\$ \$	963
General Plant Improvements / Water Allowance for COI	Ф	2,000,000	\$	2,600,000	1,265,043	1,176,695	Ф	2,441,737	Ф	158,263	Φ	1,334,957 275,005
Interest Earned											Ф \$	153.194
interest Larieu											Ψ	150,154
Total Construction Fund (2013 Series Revenue Bond)	\$	139,325,000	\$	139,325,000	\$ 55,862,346	\$ 54,188,500	\$	110,050,846	\$	29,274,154	\$	83,890,854

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

#### GUAM WATERWORKS AUTHORITY 2014 Series Refunded Bond Project Status As of June 30, 2017

SCHEDULE L

		ORIGINAL		ADJUSTED				EX	TOTAL (PENDITURES						Construction fund
PROJECT NAME		APPROVED PROJECT		PROJECT COST	EXPENDITURES AS OF 05/31/17		OUTSTANDING NCUMBRANCES	FN	AND CUMBRANCES		NOBLIGATED		20% PUC AS OF 06/30/17		balance AS OF 06/30/17
Agana Treatment Plant	\$	10,475,000	\$	11,065,512	11,065,512		-	\$	11,065,512		(0)			\$ \$	(0)
Agana Outfall	\$	5,030,000	\$	10,127,198	10,127,198	\$	-	\$	10,127,198	\$	0	\$	1,006,000	\$ \$	0 -
Northern District (Outfall)	\$	4,700,000	\$	10,251,423	10,251,423	\$	-	\$	10,251,423	\$	0	\$	940,000	\$ \$	0
Northern District WWTP Upgrade Northern Treatment Plant			\$	173,681	173,681			\$ \$	173,681	\$	- -			\$ \$	
Baza Gardens Wastewater Treatment Plant	\$	500,000	\$	297,177	297,177	\$	-	\$	297,177	\$	(0)	\$	100,000	\$	(0)
Interim Disinfection Facilities	\$	581,000	\$	3,437,311	3,408,599	\$	28,712	\$	3,437,311	\$	(0)	\$	116,200	\$ \$	28,712
Electrical Protection	\$	1,000,000	\$	1,512,483	1,512,483.3	\$	_	\$	1,512,483	\$	(0)	\$	200,000	\$	(0)
Well Vulnerability Reduction	\$	600,000	\$	185,522	185,522	\$	-	\$	185,522	\$	0	\$	120,000	\$	0
Old Agat Wastewater Collection (I/I Reduction	\$	2,155,000	\$	1,931,659	1,931,659	\$ \$	-	\$	1,931,659	\$ \$	(0)	\$	431,000	\$ \$	(0)
Chaot WW Pump Station/Collection System	\$	410,000	\$	399,120	399,120	\$	-	\$	399,120	\$	-	\$	82,000	\$	-
Lift Station Upgrades	\$	230,000	\$	149,895	149,895	\$	-	\$	149,895	\$	0	\$		\$	0
Collection Line Upgrades	\$	200,000	\$	62,755	62,755	\$	-	\$	62,755	\$	0	\$		\$	0
"A" Well Transmission Line	\$	2,413,000	\$	3,833,175	3,790,888	\$	42,287	\$	3,833,175	\$	(0)	\$		\$	42,287
Santa Rita Springs - Booster Pump Rehab.	\$	648,000	\$	306,841	306,841		-	\$	306,841	\$	(0)	\$		\$ \$	(0)
Fena Bypass Transmission line			\$	160,913	160,913	\$	_	\$	160,913	\$	(0)			\$	(0)
Storage Additions	\$	950,000	\$	-	100,010	۳		\$	-	\$	-	\$		\$	- (0)
Booster Station Upgrades	\$	390,000	\$	66,734	66,734	\$	_	\$	66,734	\$	_	\$		\$	-
Mangilao Tank Repair	\$	800,000	\$	398,367	397,933	\$	434	\$	398,367	\$	(0)			\$	434
Ugum Tank Replacement	\$	2,500,000	\$	-	,	•		\$	-	\$	- (-)	\$		\$	-
Ugum WTPlant Refurbishment (\$1.724,970E	PA		\$	6,588,473	6,531,525	\$	56,949	\$	6,588,473	\$	(0)		,	\$	56,948
Barrigada Tank Repair/Replacement	\$	3,000,000	\$	65,019	65,019		-	\$	65,019	\$	0	\$	600,000	\$ \$	0
Water Reservoir Condition Assessment			\$	1,250,000	1,207,250.62	\$	42,749	\$	1,250,000	\$	0	\$		\$	42,749
EarthTech Well Buyout	\$	5,000,000	\$	5,975,000	5,975,000	\$	72,170	\$	5,975,000	\$	-	\$		\$	-
Water Wastewater Master Plan	\$	4,900,000	\$	4,881,308	4,881,308	\$	_	\$	4,881,308	\$	0	\$		\$	0
Laboratory Modernization	\$	800,000	\$	135,055	135,055	\$	_	\$	135,055	\$	0	\$		\$	0
Land Survey	\$	800,000	\$	577,836	556,037		21,799	\$	577,836	\$	0	\$		\$	21,799
Ground Water Disinfection	Ψ	000,000	\$	577,030	330,037	Ψ	21,733	Ψ	377,030	Ψ	-	Ψ	100,000	\$	21,799
GWUDI Study			\$	262,234	260,430		1,804	\$	262,234	\$	-			\$	1,804
0 "	•	40.070.000	•			•		•		\$	-			\$	-
Contingency	\$	12,276,023	\$	154	-	\$	-	\$	-	\$	-			\$	732
										\$	-			\$	-
										\$	-			\$	-
										\$	-			\$	-
										\$	-			\$	-
	•		•			•	(050.005)	•		\$	-			\$	-
Vehicles	\$	1,100,000		1,280,000	2,130,305		(850,305)		1,280,000	\$		\$	220,000	\$	-
Generation Equipment	\$	700,000	\$	880,000	2,712		877,288	\$	880,000	\$	0			\$	27,033
Leak Detection/Line Replacement	\$	8,200,000	\$	5,988,494	5,988,494	\$	-	\$	5,988,494	\$	-	\$	1,640,000	\$	-
										\$	-			\$	-
Automated Meter Reading	\$	12,572,063	\$	17,468,359	16,870,522	\$	537,157	\$	17,468,359.32	\$ \$	- 0	\$	2,514,413	\$ \$	- 597,837
	•		•	00 744 0	00.004	•	750 070	•	00 744 5 :-		_	_	40.000.0:-	•	000.0
Total Construction Fund (2014 Series Refu			\$	89,711,698	88,891,990	\$	758,873.38	\$	89,711,543		1	\$	13,990,813	\$	820,336
Interest Earned	\$	6,781,612	\$	(0)						\$	(0)			\$	1,323
Total Project Cost Funding	\$	89,711,698	\$	89,711,698	88,891,990	\$	758,873.38	\$	89,711,543	\$	1	\$	13,990,813	\$	821,659

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#### GUAM WATERWORKS AUTHORITY 2016 Series Bond Project Status As of June 30, 2017

#### SCHEDULE M

	ORIGINAL					TOTAL EXPENDITURES		Construction fund
PROJECT NAME	APPROVED	Adj	usted Project	EXPENDITURES	OUTSTANDING	AND	UNOBLIGATED	balance
	PROJECT COST	•	Cost	AS OF 06/30/17	<b>ENCUMBRANCES</b>	ENCUMBRANCES	PROJECT COST	AS OF 06/30/17
Water Booster Pump Station	\$ 4,139,000	\$	4,139,000			\$ -	\$ 4,139,000	\$ 4,139,000
Meter Replacement Program	\$ 4,501,000	\$	4,501,000		150,000.00	\$ 150,000	\$ 4,351,000	\$ 4,501,000
Barrigada Tank Repair/Replacement	\$ 1,013,000	\$	1,013,000			\$ -	\$ 1,013,000	\$ 1,013,000
Leak Detection	\$ 1,180,000	\$	1,180,000			\$ -	\$ 1,180,000	\$ 1,180,000
Potable Water System Planning	\$ 2,276,000	\$	2,276,000	77,999	398,295.15	\$ 476,294	\$ 1,799,706	\$ 2,198,001
Deep Well Rehabilitation	\$ 250,000	\$	250,000			\$ -	\$ 250,000	\$ 250,000
New Deep Wells at Down Hard	\$ 1,190,000	\$	1,190,000			\$ -	\$ 1,190,000	\$ 1,190,000
Master Meters	\$ 3,616,000	\$	3,616,000		151,539.00	\$ 151,539	\$ 3,464,461	\$ 3,616,000
Ugum Water Treatment Plant Intake	\$ 18,000	\$	18,000			\$ -	\$ 18,000	\$ 18,000
Water Wells	\$ 2,500,000	\$	2,500,000			\$ -	\$ 2,500,000	\$ 2,500,000
Water Distribution System	\$ 2,049,000	\$	49,000			\$ -	\$ 49,000	\$ 49,000
Pressure Zone Realignment /	\$ 1,141,000	\$	1,141,000			-	\$ 1,141,000	\$ 1,141,000
Mechanical/Electrical Equipment	\$ 100,000	\$	100,000			-	\$ 100,000	\$ 100,000
Water Reservoir Internal/External	\$ 800,000	\$	800,000	455.000	4 000 040 00	\$ -	\$ 800,000	\$ 800,000
Water System Reservoirs 2005 Improvements	\$ 42,350,000	\$	28,350,000	455,360	1,893,343.00	\$ 2,348,703	\$ 26,001,297	\$ 27,894,640
Ugum Water Treatment Plant Reservoir	\$ 6,410,000	<b>5</b>	4 000 000			5 -	\$ -	5 -
Water Audit Program & Water Loss Control Plan	\$ 1,000,000	<b>D</b>	1,000,000			•	\$ 1,000,000	\$ 1,000,000
Agana Heights & Chaot Tanks	\$ 1,220,000	\$	1,220,000				\$ 1,220,000	\$ 1,220,000
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	\$ 1,895,000	Ď,	1,895,000		1 000 100 00	\$ 1,822,133	\$ 1,895,000 \$ 5,587,697	\$ 1,895,000 \$ 7.409.830
Tank Major Repair Yigo#1 Mangilao#2 Agat#2	\$ 10,500,000 \$ 2,000,000	\$ \$	7,409,830 2,000,000		1,822,132.80	1,822,133		
Fire Hydrant Replacement Program	\$ 2,000,000	Ф	2,000,000			Φ -	\$ 2,000,000 \$ -	\$ 2,000,000
Wastewater System Planning	\$ 349,000	\$	349,000	15,054	297,928.76	\$ 312,983	\$ 36,017	\$ 333,946
Lift Station Upgrades	\$ 2,404,000	\$	2,404,000	17,800	200,000.00	\$ 217,800	\$ 2,186,200	\$ 2,386,200
Wastewater Collection System Repl/Rehab	\$ 2,920,000	\$	2,920,000	,	,		\$ 2,920,000	\$ 2,920,000
Baza Gardens STP Replacement	\$ 16,700,000	\$	29,400,170	2,299,992	27,100,177.99	\$ 29,400,170		
Facilities Plan/Design for Umatac-Merizo WWTP	\$ 527,000	\$	527,000	93,989	157,438.78	\$ 251,428		
Agat/Santa Rita STP Replacement	\$ 3,000,000	\$	3,000,000	165,646	281,604.29	\$ 447,250	\$ 2,552,750	\$ 2,834,354
Agana WWTP Interim Measures	\$ 827,000	\$	827,000			\$ -	\$ 827,000	\$ 827,000
Umatac Merizo Replacement	\$ 8,000,000	\$	20,800,000	21,192	19,347,234.76	\$ 19,368,427	\$ 1,431,573	\$ 20,778,808
							\$ -	
Wastewater Pump Station Electrical Upgrade	\$ 100,000	\$	100,000			\$ -	\$ 100,000	\$ 100,000
Electrical Upgrade - Water Wells	\$ 650,000	\$	650,000			\$ -	\$ 650,000	\$ 650,000
Electrical Upgrade - Water Booster	\$ 323,000	\$	323,000			\$ -	\$ 323,000	\$ 323,000
SCADA Improvements – Phase 3	\$ 1,177,000	\$	1,177,000		432,705.00	\$ 432,705	\$ 744,295	\$ 1.177.000
SCADA Improvements – Phase 4	\$ 6,500,000	\$	6,500,000		,	\$ -		\$ 6,500,000
Laborate Malacet age	¢ 4407.000	¢	1 107 000	700 700	404 070 05	¢ 1.107.000	\$ -	¢ 404.077
Laboratory Modernization	\$ 1,127,000	<b>\$</b>	1,127,000	702,723	424,276.85	\$ 1,127,000	\$ 1 001 000	\$ 424,277
Land Survey	\$ 1,998,000	\$	1,998,000		107,000.00	\$ 107,000	\$ 1,891,000	\$ 1,998,000
General Plant Improvements / Water	\$ 2,769,463	φ 9	2,769,463	244.060	1,357,138.23	\$ 1,357,138 \$ 244,068	\$ 1,412,325	\$ 2,769,463
Information Technology Integration Improvements	\$ 500,000	Φ	500,000	244,068	-	φ 244,068	\$ 255,932	\$ 255,932
Interest Earned		Þ	-					\$ 179,148
		\$						
Total Construction Fund (2016 Series Revenue Bond)	\$ 140,019,463	\$	140,019,463	\$ 4,093,822	\$ 54,120,815	\$ 58,214,637	\$ 81,804,826	\$ 136,104,788

#### GUAM WATERWORKS AUTHORITY Schedule of Series 2010, 2013, 2014 Refunding and 2016 Bond Bank Accounts As of June 30, 2017

As of June 30, 2017	SCHEDULE N
	6/30/2017
BANK OF GUAM	
BOG - Revenue Account	\$ 2,047,233
BOG - Operations and Maintenance Reserve	8,209,375
BOG - Operations, Maintenance, Renewal and Replacement Reserve Fund	17,423,213
BOG - Capital Improvement Fund	4,500
BOG - O & M Reserve	13,016,998
BOG - Debt Service Reserve	11,200,917
BOG - CAPEX Reserve Total BOG Bank Account Balance	11,625,416
Total BOG Balik Account Balance	63,527,652
Series 2010 Bond:	
BOG - Construction Account	9,751,028
USB - Debt Service Fund	4,861,923
USB - Debt Service Reserve Fund	7,566,460
Total Series 2010 Bond Bank Balance	22,179,411
Series 2013 Bond:	
BOG - Construction Fund	83,890,854
BOG - Capitalized Interest Fund	· · · -
USB - Debt Service Fund	4,667,445
USB - Debt Service Reserve Fund	12,031,688
Total Series 2013 Bond Bank Balance	100,589,987
Series 2014 Refunding Bond:	
BOG - Construction Fund	821,659
USB - Debt Service Fund	5,276,869
USB - Debt Service Reserve Fund	7,719,609
Total Series 2014 Refunding Bond Bank Balance	13,818,137
Series 2016 Bond: BOG - Construction Account	136,104,788
BOG - Constitution Account  BOG - Capitalized Interest Fund	1,779,121
BOG - Cost of Issuance Fund	1,113,121
USB - Debt Service Fund	3,582,750
USB - Debt Service Reserve Fund	7,586,059
Total Series 2016 Bond Bank Balance	\$ 149,052,718



# GWA WASTEWATER TREATMENT O&M REPORT June, 2017

#### **General Utility Improvements & Significant Events:**

#### HAGÅTÑA WWTP

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

#### NORTHERN DISTRICT WWTP

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

#### **AGAT WWTP**

The plants monthly flow average continues to be excessive and over design capacity. Construction of new facility is underway, phase 1 completed including clarifier, oxidation ditch and UV disinfection.

#### **BAZA GARDENS WWTP**

Design completed and bidding process completed to eliminate this facility and replace with a series of pump stations to divert flow to the new Agat Santa Rita Treatment Plant. Scheduled completion expected April 2018.

#### **UMATAC WWTP**

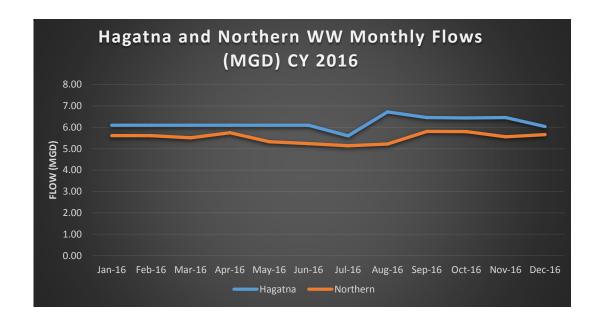
Normal operations

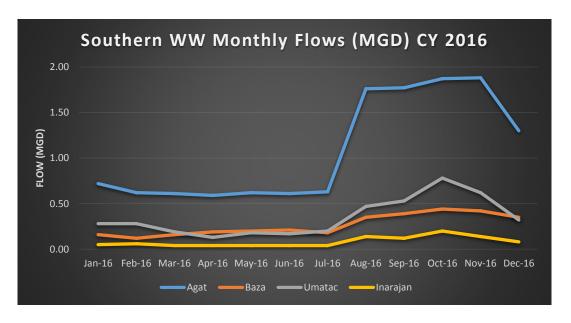
Design/build upgrade of system processes underway to include flow equalization basin, new pump stations, renovation of overland flow system, and UV disinfection.

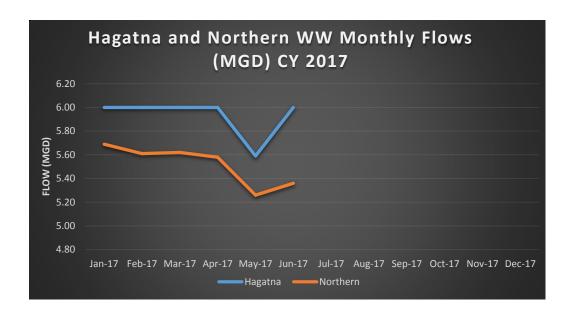
#### Wastewater Treatment Plant Average Monthy Flows Million Gallons Per Day

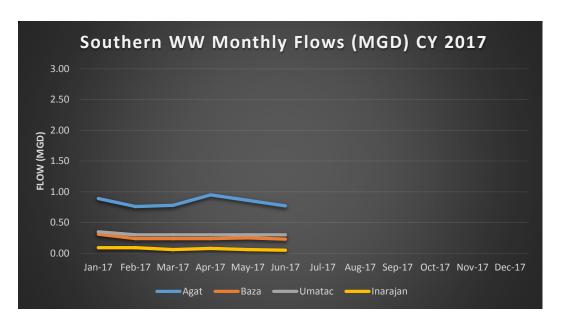
2016	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-16	6.10	5.61	0.72	0.16	0.28	0.05
Feb-16	6.10	5.61	0.62	0.12	0.28	0.06
Mar-16	6.10	5.51	0.61	0.16	0.19	0.04
Apr-16	6.10	5.75	0.59	0.19	0.13	0.04
May-16	6.10	5.33	0.62	0.20	0.18	0.04
Jun-16	6.10	5.24	0.61	0.21	0.17	0.04
Jul-16	5.60	5.14	0.63	0.18	0.20	0.04
Aug-16	6.72	5.22	1.76	0.35	0.47	0.14
Sep-16	6.46	5.81	1.77	0.39	0.53	0.12
Oct-16	6.44	5.80	1.87	0.44	0.78	0.20
Nov-16	6.46	5.56	1.88	0.42	0.62	0.14
Dec-16	6.04	5.66	1.30	0.35	0.32	0.08
2016 Average MGD	6.19	5.52	1.08	0.26	0.35	0.08
2016 Total MGY	2,261	2,015	395	96	126	30

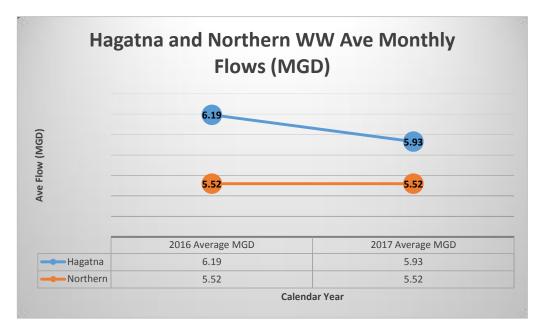
2017	Hagatna	Northern	Agat	Baza	Umatac	Inarajan
Jan-17	6.00	5.69	0.89	0.31	0.35	0.09
Feb-17	6.00	5.61	0.76	0.24	0.30	0.09
Mar-17	6.00	5.62	0.78	0.24	0.30	0.06
Apr-17	6.00	5.58	0.95	0.24	0.30	0.08
May-17	5.59	5.26	0.86	0.25	0.30	0.06
Jun-17	6.00	5.36	0.77	0.23	0.30	0.05
Jul-17						
Aug-17						
Sep-17						
Oct-17						
Nov-17						
Dec-17						
2017 Average MGD	5.93	5.52	0.84	0.25	0.31	0.07
2017 Total MGY	2,165	2,015	305	92	113	26

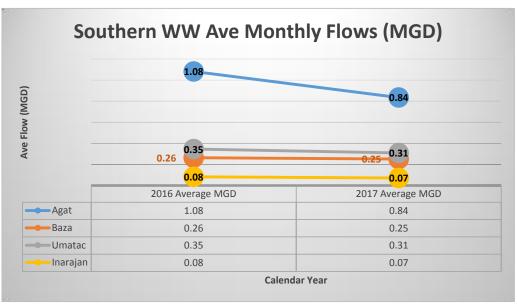


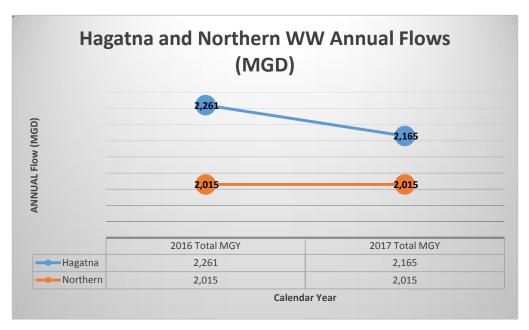


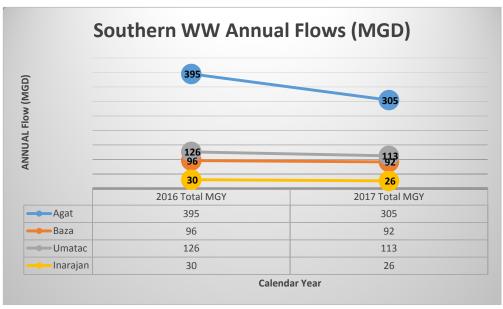






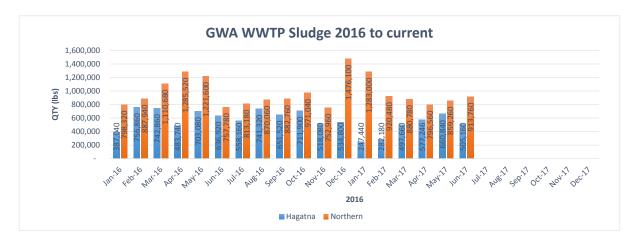


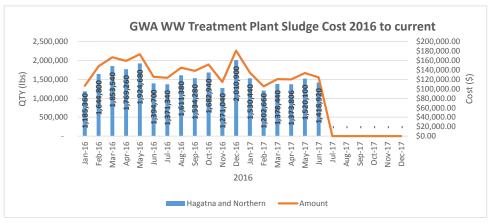




	Ha	gatna	No	rthern	Hagatna an	d N	orthern
2016	Qty	Amount	Qty	Amount	Qty		Amount
Month- Yr	lbs	\$	lbs	\$	lbs		\$
Jan-16	387,040	\$34,833.60	798,320	\$71,848.80	1,185,360		\$106,682.40
Feb-16	756,860	\$68,117.40	887,940	\$79,914.60	1,644,800		\$148,032.00
Mar-16	742,860	\$66,857.40	1,110,680	\$99,961.20	1,853,540		\$166,818.60
Apr-16	483,740	\$43,536.60	1,285,520	\$115,696.80	1,769,260		\$159,233.40
May-16	703,080	\$63,277.20	1,221,600	\$109,944.00	1,924,680		\$173,221.20
Jun-16	636,920	\$57,322.80	757,780	\$68,200.20	1,394,700		\$125,523.00
Jul-16	558,160	\$50,234.40	813,180	\$73,186.20	1,371,340		\$123,420.60
Aug-16	741,320	\$66,718.80	870,060	\$78,305.40	1,611,380		\$145,024.20
Sep-16	651,520	\$58,636.80	882,760	\$79,448.40	1,534,280		\$138,085.20
Oct-16	711,900	\$64,071.00	971,040	\$87,393.60	1,682,940		\$151,464.60
Nov-16	518,080	\$46,627.20	752,960	\$67,766.40	1,271,040		\$114,393.60
Dec-16	534,800	\$48,132.00	1,476,100	\$132,849.00	2,010,900		\$180,981.00
Grand Total	7,426,280	\$ 668,365.20	11,827,940	\$ 1,064,514.60	19,254,220	\$	1,732,879.80

	Hag	atna	Norti	hern	Hagatna and	Northern
2017	Qty	Amount	Qty	Amount	Qty	Amount
Month- Yr	lbs	\$	lbs	\$	lbs	\$
Jan-17	247,440	\$21,669.94	1,283,000	\$112,371.53	1,530,440	\$134,041.47
Feb-17	282,180	\$24,709.93	920,480	\$80,620.27	1,202,660	\$105,330.20
Mar-17	497,660	\$43,587.57	880,780	\$77,143.14	1,378,440	\$120,730.71
Apr-17	577,246	\$50,226.47	796,560	\$69,736.83	1,373,806	\$119,963.30
May-17	660,840	\$58,154.00	859,260	\$75,261.61	1,520,100	\$133,415.61
Jun-17	505,160	\$44,239.74	913,760	\$80,031.65	1,418,920	\$124,271.39
Jul-17		\$0.00		\$0.00	-	\$0.00
Aug-17		\$0.00		\$0.00	-	\$0.00
Sep-17		\$0.00		\$0.00	-	\$0.00
Oct-17		\$0.00		\$0.00	-	\$0.00
Nov-17		\$0.00		\$0.00	-	\$0.00
Dec-17		\$0.00		\$0.00	-	\$0.00
Grand Total	2770526	\$242,587.65	5653840	\$495,165.04	8424366	\$737,752.68





Guam Waterwork	s Authority	Date: / Time:	7/14/2017
	RE	VIEWS	
TOTAL PUMPS INSTALLED	51	OVERAL AVERAGE	92%
TOTAL PUMPS OPERATIONAL	47	% OF OPERATING PUMPS	92%
TOTAL BOOSTER PUMP STATIONS	25		



Northern Distr	ict											
NO: FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL, STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	PUMP AND MOTOR INVENTORY
1 Gayinero	20	2	2	100%	OP	A						
2 Mataguac	25	2	2	100%	OP	A						
3 Santa Rosa	15	2	2	100%	OP	A						
4 Hyundai	40	2	1	50%	OP	А	Pump # 1 requires pump and motor. Station to undergo renovation during reservoir project.					
5 Access	60	2	2	100%	OP	A						
6 Chin. Palauan	5	2	2	100%	N/A							
7 Nimitz Hill	7.5	2	2	100%	N/A							
8 Adawag	1.5	2	2	100%	N/A							
9 Pale Kiren	1	1	1	100%	N/A							
10 Ulloa/Untalan	1	2	2	100%	OP	A						
11 Latte Heights	15	2	2	100%	OP	A						
TOTAL = 11		21	20	95%	·							
pump availability =no o	of operational pumps/n	o of pumps*100%										

Central District												
NO: FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES
1 Pago	150 / 100	3	2	67%	0P	A	Pump 3 removed for repairs. Pump 2 leaking at seal, pump operational, pending materials.					
2 Brigade	60	3	3	100%	OP	A						
3 Windward Hills	200 / 75	3	2	67%	OP	A	Pump 1 leaking at seal, at vendor for repairs.					
4 Santa Rita Spring	40	2	2	100%	OP	A	Spare pump available.					
5 Santa Ana (Lower)	25	2	1	50%	N/A		Pump # 2 requires a new pump and motor. Pump arrived and at the warehouse. 11-23-16		Control valve repairs to be completed. Parts arrived 11-23-16. Pending installation.		CIP required for new unit and electrical for generator	
6 Camacho	1	1	1	100%	N/A						CIP required for new unit and electrical for generator	
7 Tenorio	1.5	1	1	100%	N/A						CIP required for new unit and electrical for generator	
Total=7		15	12	80%								
pump availability =no of or	erational pumps/n	o of pumps*100%										

Sc	uthern District													
NO	FACILITY	PUMP HORSEPOWER	NO OF INSTALLED PUMPS	NO OF OPERATIONAL PUMPS	PUMP AVAILABILITY	GENERATOR OPERATIONAL FAULT	ATS MANUAL/AUTO	PUMP UNIT REMARKS	WORK ORDER NO:	VALVES, ELECTRICAL,STRUCTURAL REMARKS	WORK ORDER NO:	ESTIMATED REPAIR DATE	UPDATES	
1	Malojloj Line	125 / 50	3	3	100%	OP	A							
2	Geus	25	2	2	100%	OP	A							
3	Pigua	7.5	2	2	100%	N/A								
4	Toguan	25	2	2	100%	OP	A							
5	WBP-2	25	2	2	100%	OP	A							
6	WBP-1	5	2	2	100%	OP	A							
7	Malojloj Elevated	15	2	2	100%	OP	A							
	Total=7		15	15	100%									
pun	p availability =no of op	erational pumps/n	o of pumps*100%											