

***I MINA 'TRENTAI KUATTRO NA LIHESLATURAN GUÅHAN***  
**Roundtable Hearings, Oversight Hearings, Informational Briefings**

REPORT	STANDING COMMITTEE / SENATOR	DATE	DATE FILED	NOTES
<b>Informational Briefing</b>	Committee on Housing, Utilities, Public Safety, and Homeland Security	1/26/17 5:30 p.m.	4/25/17 11:45 A.M.	Committee Report on Informational Briefings on the Guam Waterworks Authority: Increase of water and wastewater rates.
		2/6/17 5:30 p.m.		
		2/16/17 5:30 p.m.		
		3/22/17 5:30 p.m.		



# OFFICE OF SENATOR TELENA CRUZ NELSON

CHAIRPERSON OF THE COMMITTEE ON HOUSING, UTILITIES, PUBLIC SAFETY & HOMELAND SECURITY  
I MINA'TRENTAI KUÁTTRO NA LIHESLATURAN GUAHAN | 34th GUAM LEGISLATURE

April 21, 2017

**The Honorable Benjamin J.F. Cruz**  
Speaker  
*I Mina'trentai Kuáttro na Liheslaturan Guáhan*  
155 Hesler Place  
Hagátña, Guam 96910

VIA: **The Honorable Michael F.Q. San Nicolas**  
Chairperson, Committee on Rules

2017 APR 25 AM 11:45

**RE: Committee Report on Informational Briefings on the Guam Waterworks Authority:  
Increase of water and wastewater rates**

Dear Chairman San Nicolas:

Transmitted herewith is the Committee Report on the Informational Briefings on the Guam Waterworks Authority: Increase of water and wastewater rates held on **January 26, 2017, February 6, 2017, February 16, 2017 and March 22, 2017**, 5:30 p.m. in the Public Hearing Room of the former Guam Legislature Building and Guam Congress Building.

*Sensengamente,*

**Telena Cruz Nelson**  
Senator

COR  
**received** GCR  
4/21/17 5:00pm



# OFFICE OF SENATOR TELENA CRUZ NELSON

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CHAIRPERSON OF THE COMMITTEE ON HOUSING, UTILITIES, PUBLIC SAFETY & HOMELAND SECURITY  
I MINA'TRENTAI KUÁTTRO NA LIHESLATURAN GUAHAN | 34th GUAM LEGISLATURE

## Committee Report

### Informational Briefings on the Guam Waterworks Authority: Increase of water and wastewater rates



**First Notice of Informational Briefing: Monday, February 6, 2017, 5:30 P.M.**

Office of Senator Telena C. Nelson <senatortcnelson@gmail.com> Fri, Jan 27, 2017 at 3:03 PM  
Bcc: phnotice@guamlegislature.org, mis@guamlegislature.org, protocol@guamlegislature.org, Joseph Duenas <jtduenas@hotmail.com>, Bernadette Lou Sablan <l.sablan@gpagwa.com>, Miguel C Bordallo <mcbordallo@guamwaterworks.org>, annborja@guamwaterworks.org, kathyb@guamwaterworks.org, heidi@guamwaterworks.org, Thomas Cruz <thomas@guamwaterworks.org>

January 27, 2017

**MEMORANDUM**

To: All Senators, Media, and Stakeholders  
  
From: Senator Telena Cruz Nelson, *Chairperson*  
  
Subject: **First Notice of Informational Briefing: Monday, February 6, 2017, 5:30 P.M.**

Please be advised that the Committee on Housing, Utilities, Public Safety & Homeland Security will be conducting an Informational Briefing on **Monday, February 6, 2017**. This meeting will take place in the Public Hearing Room of *I Libeslaturan Guahan*. The agenda is as follows:

**5:30 P.M. Informational Briefing**

- **Guam Waterworks Authority: Increase of water and wastewater rates**

In compliance with the Americans with Disabilities Act, individuals requiring special accommodations or services or for more information on this briefing, please contact the Office of Senator Telena Cruz Nelson via email [senatortcnelson@gmail.com](mailto:senatortcnelson@gmail.com) or call **989-7696** or **969-7679**.

**2017.01.27\_TCN First Notice of Informational Briefing 2017.02.06.pdf**



# OFFICE OF SENATOR TELENA CRUZ NELSON

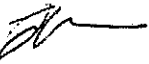
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CHAIRPERSON OF THE COMMITTEE ON HOUSING, UTILITIES, PUBLIC SAFETY & HOMELAND SECURITY  
I MINA'TRENTAI KUÂTRO NA LIHESLATURAN GUAHAN | 34th GUAM LEGISLATURE

January 27, 2017

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**Second Notice of Informational Briefing: Monday, February 6, 2017, 5:30 P.M.**

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Office of Senator Telena C. Nelson <senatortcnelson@gmail.com>

Wed, Feb 1, 2017 at 2:47 PM

To: phnotice@guamlegislature.org

Bcc: protocol@guamlegislature.org, Joseph Duenas <jtduenas@hotmail.com>, Bernadette Lou Sablan <l.sablan@gpagwa.com>, Miguel C Bordallo <mcbordallo@guamwaterworks.org>, annborja@guamwaterworks.org, kathyb@guamwaterworks.org, heidi@guamwaterworks.org, Thomas Cruz <thomas@guamwaterworks.org>, mis@guamlegislature.org

February 1, 2017

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**2017.02.01\_TCN Second Notice of GWA Informational Briefing 2017.02.06.pdf**  
582K



# OFFICE OF SENATOR TELENA CRUZ NELSON

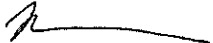
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CHAIRPERSON OF THE COMMITTEE ON HOUSING, UTILITIES, PUBLIC SAFETY & HOMELAND SECURITY  
I MINA'TRENTAI KUÁTRO NA LIHESLATURAN GUAHAN | 34th GUAM LEGISLATURE

February 1, 2017

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From: Senator Telena Cruz Nelson, *Chairperson* 

Subject: **Second Notice of Informational Briefing: Monday, February 6, 2017, 5:30 P.M.**

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**Invitation to Informational Briefing- Monday, February 6, 2017, 5:30 P.M.**

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Office of Senator Telena C. Nelson <senatortcnelson@gmail.com>

Mon, Jan 30, 2017 at 4:34 PM

To: Miguel C Bordallo <mcbordallo@guamwaterworks.org>

Cc: Thomas Cruz <thomas@guamwaterworks.org>, gpcruz@guamwaterworks.org, koclark@guamwaterworks.org, heidi@guamwaterworks.org

Bcc: Jennifer Louise Dulla <jennifer.lj.dulla@gmail.com>

January 30, 2017

**VIA E-MAIL:**

*mcbordallo@guamwaterworks.org*

Mr. Miguel C. Bordallo, P.E.

General Manager

Guam Waterworks Authority

578 North Marine Corps Drive

Tamuning, Guam 96913

**Subject: Invitation to Informational Briefing- Monday, February 6, 2017, 5:30 P.M.**

Dear Mr. Bordallo:

*Håfa Adai!* Please be advised that the Committee on Housing, Utilities, Public Safety, and Homeland Security will be conducting the following on **Monday, February 6, 2017** at the Guam Legislature's Public Hearing Room:

**5:30 P.M Informational Briefing.**

- Guam Waterworks Authority: Increase of water and wastewater rates

I invite you to appear before this Committee to participate in the Informational Briefing. If you are unable to attend, you may send representative(s) on your behalf. Please feel free to extend this invitation to other interested members of our community. Information requested from this Committee for the Information Briefing is forthcoming.

Please do not hesitate to contact me, should you have any questions or concerns. I look forward to your attendance and participation. *Si Yu'os Ma'ase!*

*Senseramente.*


**Telena Cruz Nelson**

Senator

*I Mina'Trentai Kuâtro Na Libeslaturan Guâhan*

cc: *Mr. Thomas F. Cruz, P.E. Chief Engineer, GWA*  
*Mr. Greg P. Cruz, Chief Financial Officer, GWA*  
*Mr. Kelly Clark, Legal Division, GWA*  
*Ms. Heidi Ballendorf, Public Information Officer, GWA*

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 **2017.01.30\_TCN Invitation Letter for GWA Informational Briefing 2017.02.06\_Bordallo.pdf**  
546K



# OFFICE OF SENATOR TELENA CRUZ NELSON

CHAIRPERSON OF THE COMMITTEE ON HOUSING, UTILITIES, PUBLIC SAFETY & HOMELAND SECURITY  
I MINA'TRENTAI KUÁTRO NA LIHESLATURAN GUAHAN | 34th GUAM LEGISLATURE

January 30, 2017

**VIA E-MAIL:**

[m.bordallo@guamwaterworks.org](mailto:m.bordallo@guamwaterworks.org)

Mr. Miguel C. Bordallo, P.E.  
General Manager  
Guam Waterworks Authority  
578 North Marine Corps Drive  
Tamuning, Guam 96913

**Subject: Invitation to Informational Briefing- Monday, February 6, 2017, 5:30 P.M.**

Dear Mr. Bordallo:

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Please do not hesitate to contact me, should you have any questions or concerns. I look forward to your attendance and participation. *Si Yu'os Ma'ase!*

*Sincerely,*

**Telena Cruz Nelson**

Senator

*I Mina'Trentai Kuátro Na Libeslaturan Guahan*

cc: Mr. Thomas F. Cruz, P.E. Chief Engineer, GWA  
Mr. Greg P. Cruz, Chief Financial Officer, GWA  
Mr. Kelly Clark, Legal Division, GWA  
Ms. Heidi Ballendorf, Public Information Officer, GWA

155 Hesler Place Suite 302 Hagatña, Guam 96910 \* (671) 989-7696  
[senatorcnelson@guamlegislature.org](mailto:senatorcnelson@guamlegislature.org)



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**Invitation to Informational Briefing- Monday, February 6, 2017, 5:30 P.M.**

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Office of Senator Telena C. Nelson <senatortcnelson@gmail.com>

Mon, Jan 30, 2017 at 4:42 PM

To: Joseph Duenas <jtduenas@hotmail.com>

Cc: georgebamba@hotmail.com, fesantos57@gmail.com, fsantos@gpagwa.com, gbamba@gpagwa.com, gdcmgr@guamdrycleaners.com, judithguthertz@gmail.com, Bernadette Lou Sablan <l.sablan@gpagwa.com>

January 30, 2017

VIA E-MAIL:

*jtduenas@hotmail.com*

Mr. Joseph T. Duenas

Chairman

Consolidated Commission on Utilities

578 North Marine Corps Drive

Tamuning, Guam 96913

Subject: Invitation to Informational Briefing- Monday, February 6, 2017, 5:30 P.M.

Dear Mr. Duenas:

*Håfa Adai!* Please be advised that the Committee on Housing, Utilities, Public Safety, and Homeland Security will be conducting the following on **Monday, February 6, 2017** at the Guam Legislature's Public Hearing Room:

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- **Guam Waterworks Authority: Increase of water and wastewater rates**

I invite you to appear before this committee to participate in the informational briefing. Please feel free to extend this invitation to the CCU members and other interested members of our community.

Please do not hesitate to contact me, should you have any questions or concerns. I look forward to your attendance and participation. *Si Yw'os Ma'ase!*

*Senseramente,*

**Telena Cruz Nelson**

Senator

*I Mina' Trentai Kuatro Na Libeslaturan Guåban*

cc: *All CCU Members*

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 **2017.01.30\_TCN Invitation Letter to GWA Informational Briefing 2017.02.06\_Duenas.pdf**  
721K



# OFFICE OF SENATOR TELENA CRUZ NELSON

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CHAIRPERSON OF THE COMMITTEE ON HOUSING, UTILITIES, PUBLIC SAFETY & HOMELAND SECURITY  
I MINA'TRENTAI KUÁTRO NA LIHESLATURAN GUAHAN | 34th GUAM LEGISLATURE

January 30, 2017

**VIA E-MAIL:**

[jduenas@hotmail.com](mailto:jduenas@hotmail.com)

Mr. Joseph T. Duenas  
Chairman  
Consolidated Commission on Utilities  
578 North Marine Corps Drive  
Tamuning, Guam 96913

**Subject: Invitation to Informational Briefing- Monday, February 6, 2017, 5:30 P.M.**

Dear Mr. Duenas:

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Please do not hesitate to contact me, should you have any questions or concerns. I look forward to your attendance and participation. *Si Yu'os Ma'ase!*

*Senseramente,*

**Telena Cruz Nelson**

Senator

*I Mina' Trentai Kuatro Na Libeslaturan Guåhan*

cc: *All CCU Members*



**Letter regarding Informational Briefing- Monday, February 6, 2017, 5:30 P.M.**

Office of Senator Telena C. Nelson <senatortcnelson@gmail.com> Wed, Feb 1, 2017 at 3:19 PM  
To: Joseph Duenas <jtduenas@hotmail.com>, Miguel C Bordallo <mcbordallo@guamwaterworks.org>  
Cc: Thomas Cruz <thomas@guamwaterworks.org>, gpcruz@guamwaterworks.org, koclark@guamwaterworks.org, heidi@guamwaterworks.org, Bernadette Lou Sablan <l.sablan@gpagwa.com>, annborja@guamwaterworks.org, kathyb@guamwaterworks.org  
Bcc: senatortcnelson@guamlegislature.org, pmesa@guamlegislature.org, Darryl Taggerty <darryl@guamtech.com>, Jennifer Louise Dulla <jennifer.lj.dulla@gmail.com>, Ramon Salas <rsimisalas@gmail.com>

February 1, 2017

Mr. Joseph T. Duenas, Chairman, Consolidated Commission on Utilities  
Mr. Miguel C. Bordallo, P.E., General Manager, Guam Waterworks Authority  
578 North Marine Corps Drive  
Tamuning, Guam 96913

**VIA E-MAIL:**

[jtduenas@hotmail.com](mailto:jtduenas@hotmail.com)  
[mcbordallo@guamwaterworks.org](mailto:mcbordallo@guamwaterworks.org)

**Subject: Informational Briefing- Monday, February 6, 2017, 5:30 P.M.**

Dear Chairman Duenas and Mr. Bordallo:

*Håfa Adai!* Thank you for your patience as the Committee on Housing, Utilities, Public Safety, and Homeland Security continues the series of informational briefings on the Guam Waterworks Authority's increase of water and wastewater rates. The briefing of January 26 and the information provided in response to my request were very helpful.

In our next scheduled briefing on Monday, February 6, at 5:30 p.m., I would like for you to begin with the same presentation you made in San Francisco last week to Fitch Ratings and to present a report on your discussions with USEPA. The Committee will allocate time for a round of questioning on matters covered in your presentation before moving on to other subjects, time permitting.

In the briefing of January 26, it was not entirely clear that GWA knew the components of the unaccounted for water. Because I'm very concerned with the cost of effort and funding to produce water relative to its eventual availability, please present a thorough public explanation of your plan to fix or reduce the leaks.

Please provide the following information:

- 1) Details on the ongoing line replacement project including completed phases;
- 2) The system pressure zone re-alignment program;
- 3) GWA's plans for dedicated transmission line construction, if different from the line replacement project;
- 4) The time frame for the completion of your SCADA system;
- 5) GWA's rate plan for the period that includes Fiscal Years 2019-2024;
- 6) The financial report of GWA over the last 12 months;
- 7) The monthly manpower reports for the last 12 months; and
- 8) I have learned that GWA is proposing around 53-60 full-time employees. Please provide information on this to the extent it has been formally proposed or justified in Fiscal Year 2017-2018 projections.

We will probably not have enough time to discuss the requested information on February 6 beyond the first two items but we would like to prepare for subsequent briefings. We are particularly interested in their impact on your annual operating budget and debt service budget.

Please do not hesitate contact my Office should you need further assistance. I look forward to your participation. *Si Yu'os Ma'ase!*

*Senseramente.*

**Telena Cruz Nelson**

Senator

*I Mina'Trentai Kuãtro Na Libeslaturan Guãban*




*Attachments: 1/20/2017 Email Correspondence from Mr. Joseph T. Duenas, Chairman, CCU to Senator Telena Cruz Nelson  
1/25/2017 Letter from Senator Telena Cruz Nelson to Mr. Joseph T. Duenas, Chairman. CCU*

*cc: Mr. Thomas F. Cruz, P.E. Chief Engineer, GWA  
Mr. Greg P. Cruz, Chief Financial Officer, GWA  
Mr. Kelly Clark, Legal Division, GWA  
Ms. Heidi Ballendorf, Public Information Officer, GWA*

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**3 attachments**

 **2017.02.01\_TCN Letter to CCU and GWA re GWA Informational Briefing 2017.02.06\_Duenas and Bordallo.pdf**  
705K

 **2017.01.20\_JTD Gmail - Invitation to Informational Briefing- Thursday, January 26, 2017, 5:30 P.M..pdf**  
95K

 **2017.01.25\_TCN Response Letter to CCU Chair re Information Briefing 2017.01.26\_Duenas.pdf**  
818K



# OFFICE OF SENATOR TELENA CRUZ NELSON

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CHAIRPERSON OF THE COMMITTEE ON HOUSING, UTILITIES, PUBLIC SAFETY & HOMELAND SECURITY  
I MINA'TRENTAI KUÄTRO NA LIHESLATURAN GUAHAN | 34th GUAM LEGISLATURE

February 1, 2017

Mr. Joseph T. Duenas, Chairman, Consolidated Commission on Utilities  
Mr. Miguel C. Bordallo, P.E., General Manager, Guam Waterworks Authority  
578 North Marine Corps Drive  
Tamuning, Guam 96913

**VIA E-MAIL:**

[jdacnas@hotmail.com](mailto:jdacnas@hotmail.com)

[mbordallo@guamwaterworks.org](mailto:mbordallo@guamwaterworks.org)

**Subject: Informational Briefing- Monday, February 6, 2017, 5:30 P.M.**

Dear Chairman Duenas and Mr. Bordallo:

*Hafa Adai!* Thank you for your patience as the Committee on Housing, Utilities, Public Safety, and Homeland Security continues the series of informational briefings on the Guam Waterworks Authority's increase of water and wastewater rates. The briefing of January 26 and the information provided in response to my request were very helpful.

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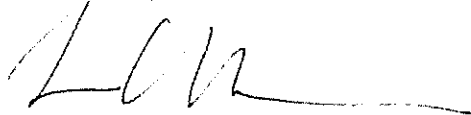
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**Telena Cruz Nelson**

Senator

*I Mina Trentai Kuätro Na Libeslaturan Guåhan*

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1/25/2017 Letter from Senator Telena Cruz Nelson to Mr. Joseph T. Duenas, Chairman, CCU*

*cc: Mr. Thomas F. Cruz, P.E. Chief Engineer, GWA  
Mr. Greg P. Cruz, Chief Financial Officer, GWA  
Mr. Kelly Clark, Legal Division, GWA  
Ms. Heidi Ballendorf, Public Information Officer, GWA*



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CHAIRPERSON OF THE COMMITTEE ON HOUSING, UTILITIES, PUBLIC SAFETY & HOMELAND SECURITY  
*I MINA'TRENTAI KUÁTRO NA LIHESLATURAN GUAHAN* | 34th GUAM LEGISLATURE

**Committee on Housing, Utilities, Public Safety and Homeland Security**  
**Informational Briefing**  
**5:30 p.m., Monday, February 06, 2017**

## AGENDA

- Informational Briefing from Guam Waterworks Authority: Increase of water and wastewater rates

I Mina'trentai Kuáttro Na Lihelaturan Guáhan  
 Committee on Housing, Utilities, Public Safety, and Homeland Security  
 Office of Senator Telena Cruz Nelson  
 Informational Briefing Sign-in Sheet

Monday, February 06, 2017 • 5:30 p.m. • Public Hearing Room

Informational Briefing, **Guam Waterworks Authority: The system pressure zone re-alignment program**

NAME	AGENCY OR ORGANIZATION (IF ANY)	CONTACT NUMBER	EMAIL ADDRESS
Kelby Clark	GWA	300-6853	kclark@guamwaterworks.org
Paul J. Kemp	GWA	300-6885	paulkemp@guamwaterworks.org
Joseph T. Duenas	CCU	486-1512	jtduenas@hotmail.com
GREG CRUZ	GWA	300-2860	gpcruz@guamwaterworks.org
Gilda Mafias	GWA	300-6862	gildam@guamwaterworks.org
J. GEORGE BAMBIA	CCU	777-1951	georgebambia@hotmail.com
FRANCIS SWA	CCU	482-9385	frswa@ccu.guam.gov
Vangie Lynn	GWA	300-4887	vangie@guamwaterworks.org
SIMON SANCHEZ	CCU	488-1010	gdcmgr@gmndrycleaner.com

I Mina'trentai Kuáttro Na Liheslaturan Guáhan  
 Committee on Housing, Utilities, Public Safety, and Homeland Security  
 Office of Senator Telena Cruz Nelson  
 Informational Briefing Sign-in Sheet

Monday, February 06, 2017 • 5:30 p.m. • Public Hearing Room

Informational Briefing, **Guam Waterworks Authority: Presentation made in San Francisco to Fitch Ratings**

NAME	AGENCY OR ORGANIZATION (IF ANY)	CONTACT NUMBER	EMAIL ADDRESS
Kelly Clary	GWA	300-6855	
Paul J Kemp	GWA	300-6885	
Joseph + Duenas	GWA	686-1512	
Greg Cruz	GWA	300-6860	
Gilda Mafias	GWA	300-6862	
ERENT WATSON	Sen. Regine Bischoff	472-3455	
Bill Chang	B&C	477-0975	
George Watson	B+C	477-0975	gwatson@brownald.com
Tom Cruz	GWA	300-0036	thomas@guamwaterworks.org
Bella Fago + a	DPHCS	478-5409	isabellafago@gmail.com

I Mina'trentai Kuáttro Na Liheslaturan Guåhan  
Committee on Housing, Utilities, Public Safety, and Homeland Security  
Office of Senator Telena Cruz Nelson  
Informational Briefing Sign-in Sheet

Monday, February 06, 2017 • 5:30 p.m. • Public Hearing Room

Informational Briefing, **Guam Waterworks Authority: Public Explanation of plan to fix or reduce the leaks**

NAME	AGENCY OR ORGANIZATION (IF ANY)	CONTACT NUMBER	EMAIL ADDRESS
Kelly Clark	Gwa	300-6855	
Paul S Kemp	Gwa	300-6885	
Joseph + Deanna	Gwa	680-1512	
Greg Cruz	Gwa	300-6860	
Gilda mafnas	Gwa	300-6862	

*I Mina'trentai Kuáttro Na Liheslaturan Guåhan*  
 Committee on Housing, Utilities, Public Safety, and Homeland Security  
 Office of Senator Telena Cruz Nelson  
 Informational Briefing Sign-in Sheet

Monday, February 06, 2017 • 5:30 p.m. • Public Hearing Room

Informational Briefing, **Guam Waterworks Authority: Details on the ongoing line replacement project including completed phases**

NAME	AGENCY OR ORGANIZATION (IF ANY)	CONTACT NUMBER	EMAIL ADDRESS
Kelly Clark	GWA		
Paul Kemp	GWA		
Joseph Duenas	CCU		
Ange Duenas Cruz	GWA		
Gilda Magras	GWA		



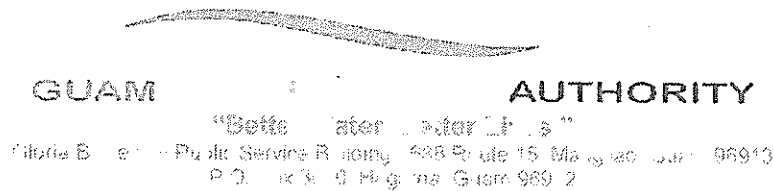
I Mina'trentai Kuáttro Na Liheslaturan Guáhan  
 Committee on Housing, Utilities, Public Safety, and Homeland Security  
 Office of Senator Telena Cruz Nelson  
 Informational Briefing Sign-in Sheet

Monday, February 06, 2017 • 5:30 p.m. • Public Hearing Room

Informational Briefing, **Guam Waterworks Authority: Report on discussions with USEPA**

NAME	AGENCY OR ORGANIZATION (IF ANY)	CONTACT NUMBER	EMAIL ADDRESS
Kelly Clark	GWA	300-6855	
Paul Kemp	GWA	300-6895	
Joseph Dueñas	CEU	686-1512	
Greg Cruz	GWA	300-6860	
Grilda Madras	GWA	300-6862	
Ti George Bamba			
Francis Santos			
Vangie Lujan			
Simon Sanchez			





February 6, 2017

**VIA HAND DELIVERY**

Honorable Telena Cruz Nelson  
Senator 34<sup>th</sup> Guam Legislature  
155 Hesler Place Suite 302  
Hatgatna, GU 96910

Subject: Continuation of Information Briefing on the Guam Waterworks Authority Increase of Water and Wastewater Rates

Hafa Adai Senator Nelson:

The written testimony herein is intended to provide you with additional information relative to the subject of Increases of Water and Wastewater Rates in accordance with your request of February 1, 2017. In addition to the following, formal written responses to questions raised by Legislative Committee members at the Information Briefing on January 26<sup>th</sup> are included as Attachment 1.

In order to establish clearly what GWA and the water industry use to define and establish non-revenue water, I attach as Exhibit A, an excerpt from Manual M-36 of the American Water Works Association (AWWA). The components of water production, usage and losses are clearly illustrated in the exhibit, and correspond to the calculations provided in the internal GWA memorandum submitted on January 26<sup>th</sup> as Exhibit 3 to GWA testimony.

GWA appreciates your concern regarding the effort and cost to produce water. In response to this concern, GWA emphasizes that the reduction of non-revenue water is a "process" and not a "project," and involves both (1) continuous programs for leak detection, leak repair, system control, and process improvement, and (2) systematic execution of capital improvement projects (planning, design, and construction) to address identified problem areas. The details of the process GWA is undertaking are presented in Attachment -1.

As requested in item (1) of your letter of February 1<sup>st</sup>, additional information on GWA's line replacement program is provided below:

**PHASE I (completed)**

Start Date:	May 21, 2012
Completion Date:	May 16, 2013
Project Amount:	\$913,034.80

PHASE II (completed)

Start Date: June 16, 2014  
Completion Date: June 16, 2016  
Project Amount: \$958,508.00

PHASE III (completed)

Start Date: March 25, 2015  
Completion Date: March 25, 2016  
Project Amount: \$753,537.00

PHASE IV (On-going)

Start Date: February 14, 2016  
Completion Date: February 6, 2018  
Project Amount: \$7,887,046.50

Detailed information for each Phase of the Line Replacement Program is included as Exhibit B for your additional information. Phases will be added continuously as funding permits, and based on specific prioritization criteria established based on data garnered through leak detection, leak repair, GIS system data, and analysis/evaluation completed by engineering and operations personnel.

As requested in item (2) of your letter, information on GWA's pressure zone re-alignment project is presented below. As previously mentioned, the project involves matching existing infrastructure and new system components, to create properly configured water distribution zones, reservoirs and pressure control valves to correctly balance system pressures to avoid conditions which lead to leaks and breaks. Highlights of this on-going project include:

- Initial Pressure Zone Realignment Report was completed by GWA's Program Manager, Brown and Caldwell (B&C) on 12/21/15
- Pressure Zone Realignment Report currently being updated to reflect additional system information and for inclusion in GWA's Water Resource Master Plan (WRMP) Update, and integration into GWA's Water System Hydraulic Model.
- Selected zone realignment included in Yigo-Astumbo Tank project:
  - installation of new water line and PRV between Yigo and Astumbo zones
  - construction of Yigo pump station to allow Yigo Tanks to support Santa Rosa Zone
- Selected zone realignment design work added to tank design projects by change order:
  - Nissan (Tumon #2) Tank design includes
    - repair of PRVs, addition of master metering, and piping changes near St. Johns on Rte. 1 at Hamburger Rd
    - repair of PRVs on San Vitores Road serving Tumon
  - Hyundai Tank design includes
    - construction of new pump station and major piping upgrades and reconfiguration to serve new zone

- Rehabilitation of the pump station located at Barrigada tank site (serves Hyundai tank)
  - Chaot #2 Tank design includes
    - Repair of PRV on Dero Rd
  - Airport (Tumon #1) Tank design includes
    - Upgrade of pipeline on Rte 10A (in lieu of PRV installation) to allow proper zone boundary between upstream/downstream of tank
  - Mannengon Tank design includes
    - Rehabilitation of Access pump station
  - Inarajan Tank design includes
    - Construction of two pump stations to serve high areas
  - Santa Rosa Tank design includes
    - Rehabilitation of the pump station serving the upper Santa Rosa Zone
    - Zone realignment between the Yigo and Santa Rita Zones
  - Santa Rita Tank design includes
    - Zone realignment and PRV rehabilitation/repair/replacement in Santa Rita
- Future Zone realignment to be included in scope for up-coming tank design projects (scope expected Feb). Intent is to address the remaining tank and zone realignment needs.

With respect to item (3) of your letter, GWA does not currently have another dedicated transmission line project designed or in construction. Distribution system planning efforts are part of the WRMP update, and recommendations for such projects may be forthcoming with the completion of the WRMP later this year.

In accordance with item (4) of your letter, information on GWA's SCADA system is presented below:

- In April 2014, GWA completed a SCADA Master Plan that provides a road map for planning, developing and delivering a complete SCADA system for GWA. The SCADA Master Plan is structured to allow for the implementation of a SCADA System for GWA in phases.
- The initial SCADA Phase A-1 is scheduled to be completed by March 2018. It consists of SCADA Central System, communications network and an initial thirty-eight (38) water and wastewater facilities to be upgraded and integrated into the SCADA Central System. About seventeen (17) other water facilities will be completed and integrated to the SCADA Central System by December 2018.
- In GWA's approved CIP Plan, GWA includes several projects to install instrumentation at various water and wastewater facilities. These instrumented facilities will be upgraded with SCADA equipment and integrated to the SCADA Central system by 2020 under SCADA Phase A-2.
- The upgrades and integration of remaining water and wastewater facilities to the SCADA Central System is estimated to be completed by 2025.

In response to item (5) of your letter, GWA's rate plan for FY2019 and beyond is still in the planning stages. To a large extent, future CIP needs will drive the rate plan, and GWA is currently undertaking an update to its WRMP, which is slated for completion in calendar year 2017. Meaningful projections cannot be completed without the information being generated in this master plan. The rate plan will be shared with your office upon its development after the finalization of the WRMP Update.

To address item (6) in your letter, the Audited 2016 Financial Statements/Report is included as Exhibit C to this document.

Attached as Exhibit D is a twelve-month manpower report, as requested in item (7) of your letter.

With regard to item (8) relative to information on additional full-time employees requested in the approved FY2017 budget, the following table summarizes the number of employee positions requested for operational categories within GWA. The positions were requested to fill losses due to retirement and attrition, and to augment leak detection and leak repair crews in the water operations division, as well as to enhance maintenance activities for improved asset management.

Category	FTEs Approved
Operations - Water	27
Operations - Wastewater	11
Compliance & Safety	2
CS/Lab/IT/Engineering	19
<b>Total</b>	<b>59</b>

Should you have any additional questions, GWA would be happy to respond with any needed information. Thank you for the opportunity to provide this testimony and the additional information attached.

Regards,



Miguel C. Bordallo, P.E.  
General Manager

Enclosures

- cc: Mr. Kelly O. Clark, GWA General Counsel  
Mr. Paul S. Kemp, Assistant General Manager of Compliance and Safety  
Mr. Thomas F. Cruz, P.E., Chief Engineer  
Mr. Greg P. Cruz, GWA CFO

**Guam Waterworks Authority**  
Annual Update



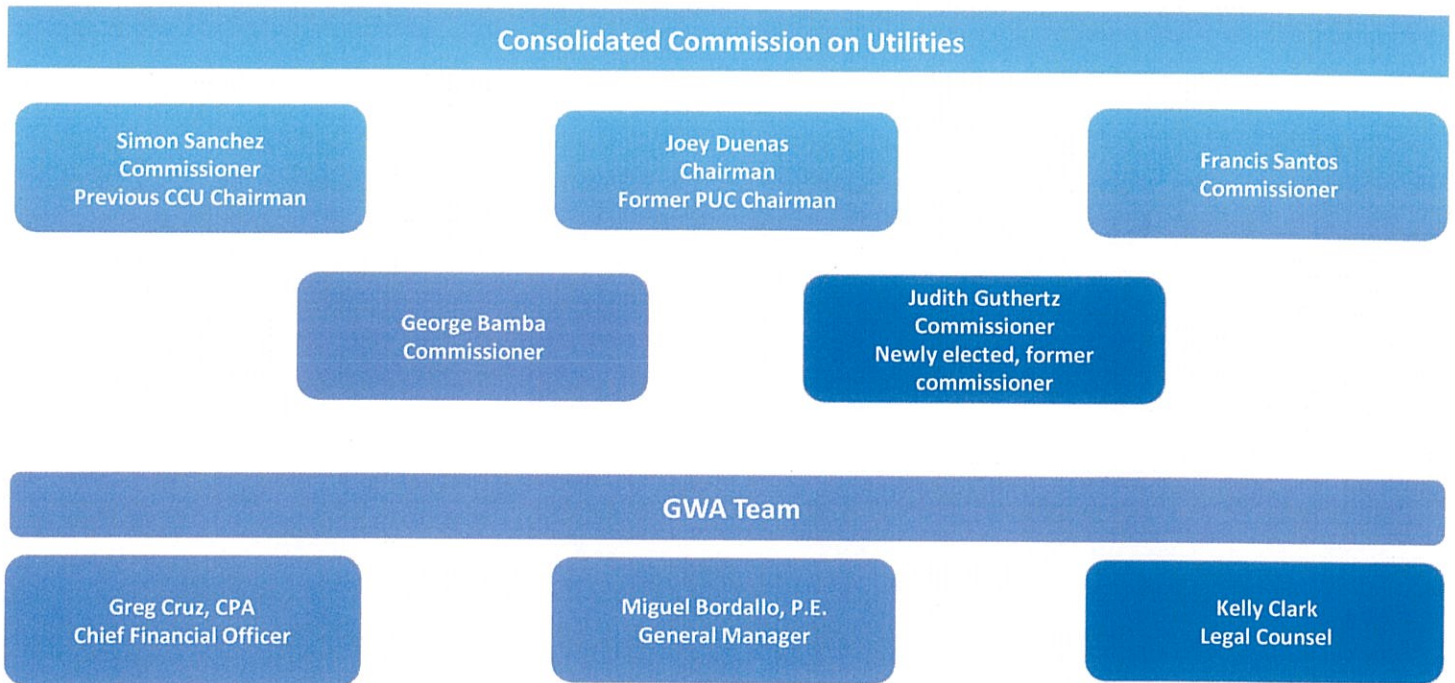
GUAM WATERWORKS AUTHORITY

January 26, 2017

**Fitch**Ratings

## Update on Management Profile

GWA is led by a team of experienced professionals which includes the addition of two new members to the management team





## GWA Annual Update

GWA's FY2016 financial results show continued growth in operating revenues and prudent management of expenses

### Strengthened Operating Revenues

- Growth in operating revenues of 13% from FY2015
- Water revenues up 12.5%
- Wastewater revenues up 15%

### Expense Control

- 1.5% decrease in operating expense from FY2015
- Operating expenses have only grown 1.8% since 2012 (excluding depreciation)
- 20% reduction in power purchase expenses

### Improved Operating Income

- \$13 million increase in operating income
- Over 30% increase year-over-year
- Outpaced 16.5% FY2016 non-lifeline rate increase
- FY2016 debt service coverage of 2.36x – well above the 1.75x PUC requirement
- Continued growth in internal reserve funds which now have an aggregate balance of \$24 million

### Operations

- GWA is still on progress to meet all major court ordered deadlines
- One Guam initiative underway with the GWA operation of the Navy-owned Tumon Maui Well
- Computerized Maintenance Management System (CMMS) on-line; preventative maintenance program continues to expand with new assets being integrated into the system
- Re-organization in progress, along with recruitment of additional staff to enhance production and distribution operations and improve water leak detection and repair
- Formal training program staffed and continues to expand

## Current Five-Year Rate Plan

The PUC approved GWA's 5-year rate plan in 2013 which was driven by the 2008 Master Plan and structured to support GWA's capital program

- The rate plan is subject to annual review and true-up
- As a result of GWA's strengthened financials, GWA lowered its requested non-lifeline and lifeline rate increases for FY2017 to 3.5% which was approved by the PUC
- GWA is currently working on a new Master Plan which will identify near term capital improvements and help to determine rates over the next three to five years
- The CCU & GWA will undertake prudent measures to ensure coverage stays at or above the 1.75x PUC coverage policy

GWA's Five Year Rate Plan	FY2014	FY2015	FY2016	FY2017	FY2018 <sup>1</sup>	Total
<b>Proposed Basic &amp; Non-Lifeline Increase</b>	15.00%	14.50% <sup>2</sup>	16.50%	7.00%	4.00%	57.00%
<b>Actual Basic &amp; Non-Lifeline Increase</b>	15.00%	14.50% <sup>2</sup>	16.50%	3.50%	4.00%	53.50%
<b>Lifeline Increase</b>	0.00%	0.00%	0.00%	3.50%	0.00%	3.50%
<b>Legislative Surcharge</b>	3.90%	3.70%	3.25%	2.79%	2.66%	-

(1) Subject to annual review

(2) Actual FY2015 increase; on a compressed calculation basis, rate equates to 17.40%

## GWA Financial Results

GWA's FY2016 financial results reflect ongoing system improvements, continued focus on controlling operating expenses, and growth in internal reserve funds

### Historical Operating Results Pursuant to the Bond Indenture <sup>(1)</sup>

Fiscal Year Ending September 30 (\$000s)	2012	2013	2014	2015	2016
<b>Operating Revenues</b>					
Water Sales - Management's Current Rate Schedule <sup>(2)</sup>	\$42,922	\$47,502	\$52,450	\$58,947	\$66,299
Wastewater Sales - Management's Current Rate Schedule <sup>(2)</sup>	23,935	25,828	28,065	33,276	38,168
Other Revenues	701	462	574	707	520
<b>Total Operating Revenues</b>	<b>\$67,558</b>	<b>\$73,791</b>	<b>\$81,089</b>	<b>\$92,930</b>	<b>\$104,987</b>
<b>Operating Expenses</b>					
Water Purchases	\$5,263	\$4,571	\$5,179	\$5,099	\$6,374
Power Purchases	17,016	17,508	16,426	14,026	11,226
Salaries and Wages	18,891	20,059	19,176	19,720	18,486
Contractual <sup>(3)</sup>	3,069	3,734	2,681	2,793	4,117
Retiree and Healthcare	1,958	2,098	1,995	2,907	2,764
Administrative and General <sup>(4)</sup>	5,423	6,960	7,729	8,827	9,608
<b>Total Operating Expenses</b>	<b>\$51,619</b>	<b>\$54,930</b>	<b>\$53,186</b>	<b>\$53,373</b>	<b>\$52,576</b>
<b>Amounts Available for Debt Service</b>					
Net Operating Revenues	\$15,939	\$18,861	\$27,903	\$39,557	\$52,411
Other Income (Expense) <sup>(5)</sup>	10	11	6	11	38
<b>Balance Available for Debt Service</b>	<b>\$15,949</b>	<b>\$18,872</b>	<b>\$27,909</b>	<b>\$39,569</b>	<b>\$52,450</b>
<b>Total Senior Lien Debt Service <sup>(6)</sup></b>	<b>\$7,708</b>	<b>\$7,704</b>	<b>\$12,592</b>	<b>\$13,971</b>	<b>\$22,225</b>
<b>Coverage of Senior Lien Debt Service by Balance</b>					
<b>Available for Debt Service <sup>(7)</sup></b>	<b>2.07x</b>	<b>2.45x</b>	<b>2.22x</b>	<b>2.83x</b>	<b>2.36x</b>

1. Historical numbers for 2012-2015 are based on the DAC Reported provided by GWA.

2. Represents amount billed as Revenue pursuant to the Indenture. Amounts not collected are included in Administrative and General Operating Expenses as bad debt. Amounts shown include amounts collected for certain past retirement benefits. Not included are 1) surcharges to pay amounts owed to GPA and Navy and 2) System Development Charges.

3. Includes contractual labor, materials, equipment rental, legal services, testing, and miscellaneous.

4. Includes bad debt expense.

5. Includes interest earnings on the Debt Service Reserve funds.

6. Amounts are shown net of capitalized interest.

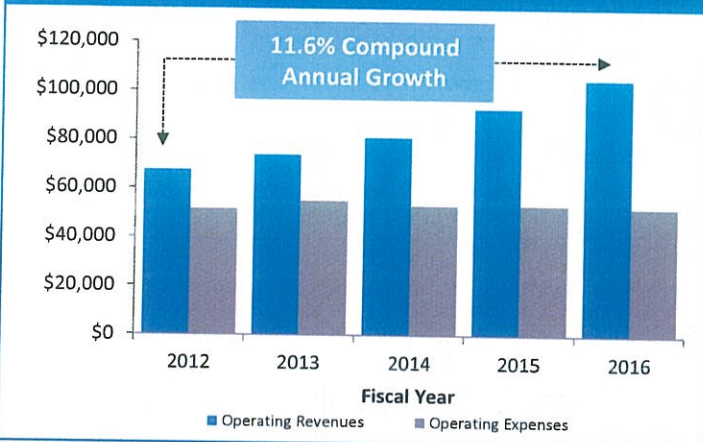
7. Calculated based on Balance Available for Debt Service divided by Total Debt Service.



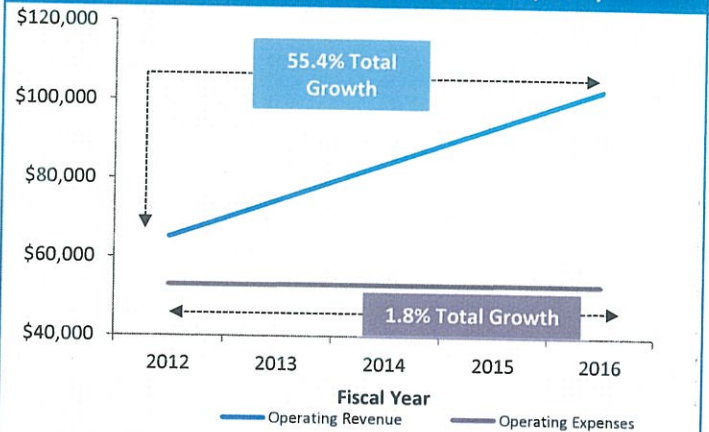
## Significant Revenue Growth with Minimal Expenditure Increases

Since 2012, GWA has managed to keep operating expenditure growth flat while operating revenues have grown more than 50%

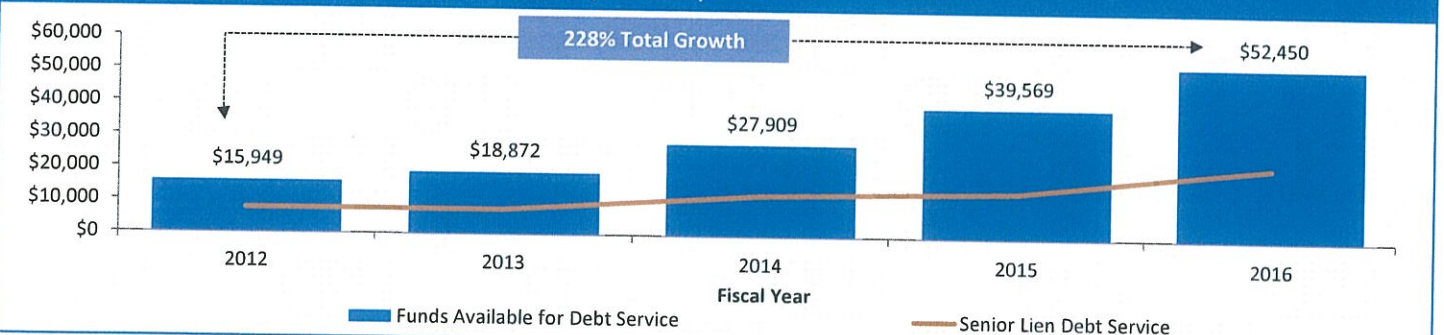
System Revenues and Operating Expenses (\$000s)



System Revenues and Operating Expenses Trendline (\$000s)



Funds Available for Debt Service (\$000s) (Per Indenture Requirements)

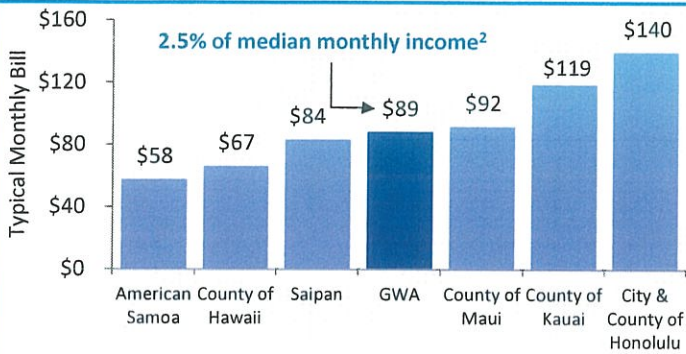


Source: GWA DAC Continuing Disclosure Reports

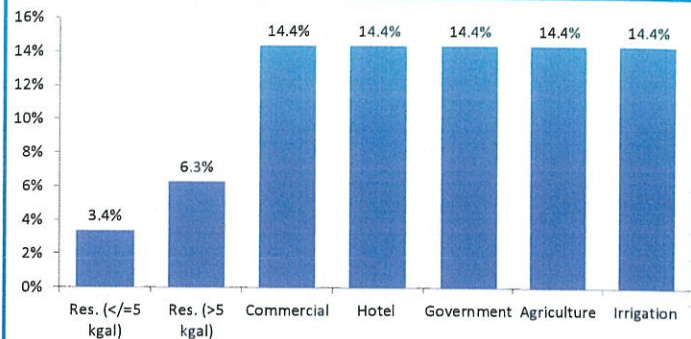
## Residential Rates Remain Affordable and Collection Rates are High

While GWA has implemented the necessary rate increases to support its capital program, the average residential monthly water and wastewater bill is in line with other comparable island utilities

**Typical Combined Monthly Water and Wastewater Bills for Residential Customers as of 2016<sup>1</sup>**



**Average Annual Percentage Change in GWA Customer Bills by Customer Class (2013–2016)**



- Over the past seven years, GWA has averaged a cash collection ratio of 95% and expects a continuation of high collection levels into the future
  - In 2016, GWA had a 98% collection ratio of total revenues billed versus cash collected
- The majority of rate increases since 2013 have been borne by commercial customers with minimal impact on residential customers
- Approximately 50% of residential customers use 5,000 gallons or less per month
  - Average 2016 monthly bill of \$63 or 1.77% of median household income

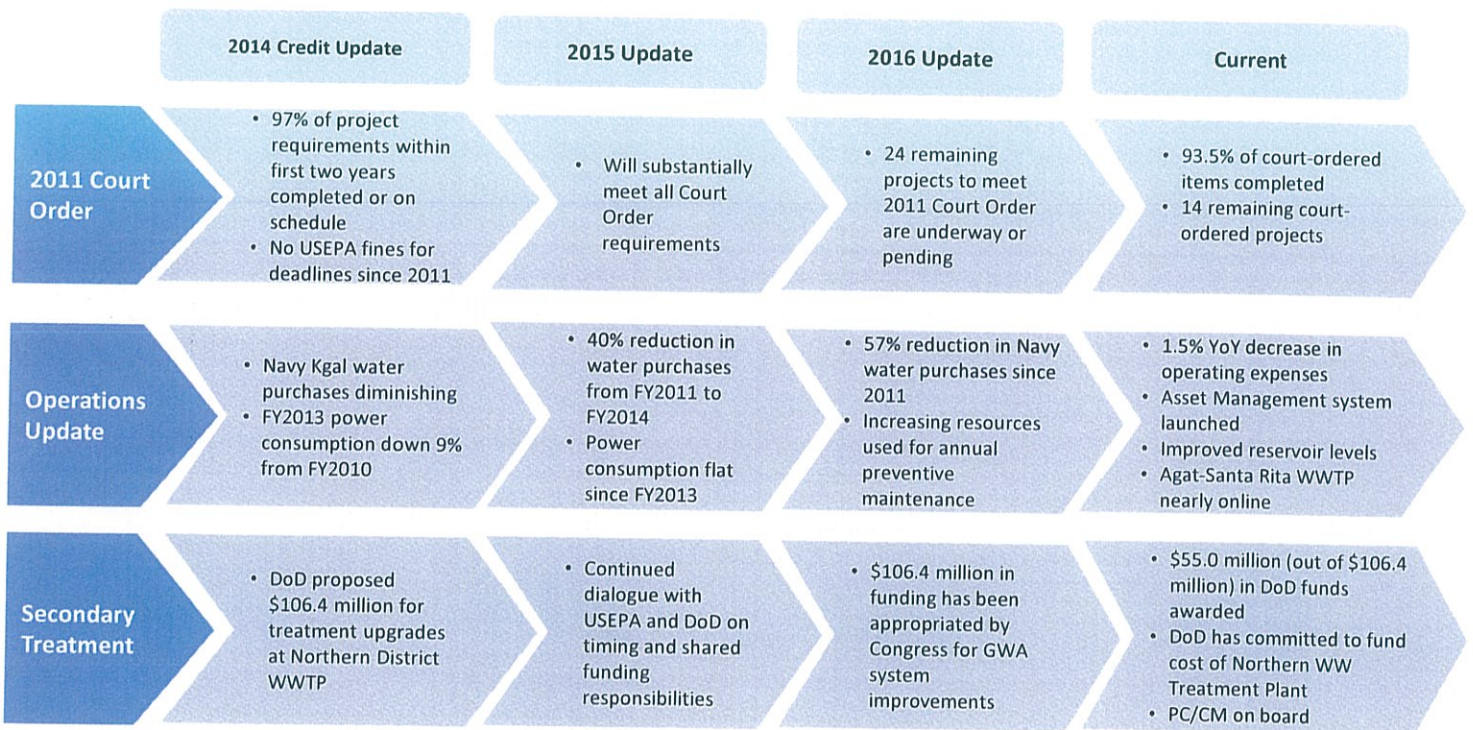
(1) Average 2016 residential rates based on 7,500 gallons of usage

(2) Based on USEPA Affordability Index of 4% of median household income for combined water and sewer bills; assumes 2015 Guam median household income of \$42,429

Source: GWA and Brown & Caldwell

## GWA Operations Status Update

GWA continues to make needed capital investments, improve operational performance of the water and wastewater system and meet USEPA deadlines



## Update on Capital Improvement Program

GWA has funded the majority of its current Capital Improvement Program and continues to prioritize the necessary projects to addresses required improvements and enhance System assets

- Current \$404 million CIP is approximately 80% funded
- Upcoming capital projects will focus on water system production and storage
- Approximately \$70 million in current CIP left to be funded from future bond proceeds (expected in FY2018)
- Current CIP does not include any potential future Secondary Treatment Plant requirements or improvements related to the military relocation
  - Congress has released \$106.4 million for funding various improvements to GWA which may include costs related to upgrade the Northern District Wastewater Treatment Plant to secondary treatment
  - GWA intends to seek delayed implementation schedule for secondary treatment (20+ years)
- Marine Relocation is not expected to impact GWA's current CIP or materially affect GWA's future capital requirements
- GWA is in the process of updating its Master Plan to help determine future capital needs

### Capital Improvement Program (2016-2020)

Projects	2016	2017	2018	2019	2020	Total
Potable Water	\$44,421	\$36,490	\$55,518	\$28,250	\$10,000	\$174,679
Wastewater	12,335	63,179	12,246	-	-	87,760
Electrical Engineering	3,911	3,150	2,914	-	-	9,975
Miscellaneous	3,200	4,045	1,200	1,200	-	9,645
<b>Total</b>	<b>\$63,867</b>	<b>\$106,864</b>	<b>\$71,878</b>	<b>\$29,450</b>	<b>\$10,000</b>	<b>\$282,058</b>







Sources of Funding	2016	2017	2018	2019	2020	Total
Bond Proceeds	\$51,145	\$64,369	\$52,378	\$28,250	\$10,000	\$206,142
State Revolving Fund (SRF)	3,475	17,000	8,000	-	-	28,475
System Development Charge (SDC)	3,300	5,994	500	-	-	9,794
Grants	948	-	-	-	-	948
Internally Funded CIP	5,000	19,501	11,000	1,200	-	36,700
<b>Total</b>	<b>\$63,867</b>	<b>\$106,864</b>	<b>\$71,878</b>	<b>\$29,450</b>	<b>\$10,000</b>	<b>\$282,058</b>

## Concluding Thoughts & Looking Forward

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Through its strong management team, GWA continues to improve its operating and financial results, build internal reserves and invest in improvements to and maintenance of its assets

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-  GWA has continued to meet all critical benchmarks and milestones mandated by the Court Order and is on progress for all major deadlines
-  Ongoing debt service coverage consistently surpasses the 1.75x PUC Requirement
  - Fiscal Year 2016 debt service coverage of 2.36x
  - Fiscal discipline has resulted in minimal increases in operating expenses over the last five years
-  The PUC and CCU have continued to support GWA's CIP with necessary rate increases with a large portion of the rate increase paid for by the tourism industry, helping to maintain affordable rates for residential ratepayers
-  GWA's residential rates remain affordable with the average customer bill equal to 2.50% of median income and nearly 50% of residential customers paying 1.77% of median household income
-  Manageable remaining Capital Improvement Program with approximately \$70 million remaining to be borrowed in FY2018
-  Future refunding opportunity with the 2010 Bonds that GWA continues to monitor to generate optimal cash flow and present value savings



**Appendix**



**GUAM WATERWORKS AUTHORITY**

## Update on GWA's Customers

GWA serves over 42,000 water customers and more than 26,000 wastewater customers

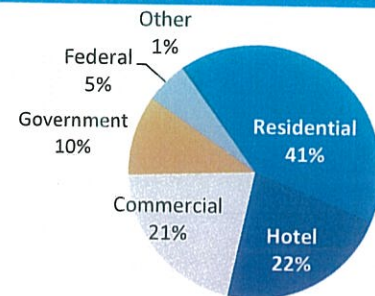
### GWA Select Customer Statistics for FY2016

Average Number of Water Customers	42,259
Average Number of Wastewater Customers	26,010
Annual Water Sales (million gallons)	6,034
Annual Wastewater Collection (million gallons)	4,340
2016 Water SDC Revenue	\$642,568
2016 Wastewater SDC Revenue	\$785,764

### Top Ten Water Customers (FY2016)

Rank	Company	Revenue	% Total Revenue
1	MDI Guam Corp/Leo Palace	\$1,222,035	1.84%
2	Pacific Islands Club	1,084,985	1.64%
3	Hotels of the Marianas Inc	1,026,983	1.55%
4	Pacific Star Resort & Spa	850,076	1.28%
5	Hyatt Regency Guam	794,407	1.20%
6	Sheraton Laguna Guam Resort	789,528	1.19%
7	Hotel Nikko Guam	778,380	1.17%
8	MDI Guam Corporation/Westin	644,931	0.97%
9	Outrigger Guam Resort	637,657	0.96%
10	Guam Reef Hotel Inc	583,729	0.88%
<b>Total</b>		<b>\$8,412,712</b>	<b>12.69%</b>

### GWA Total Revenues By Customer Class for FY2016



### Top Ten Wastewater Customers (FY2016)

Rank	Company	Revenue	% Total Revenue
1	Air Force DOD	\$4,043,806	10.59%
2	Navy DOD	2,261,098	5.92%
3	Hotels of the Marianas Inc	1,098,538	2.88%
4	Pacific Star Resort & Spa	908,545	2.38%
5	Hyatt Regency Guam	850,152	2.23%
6	Sheraton Laguna Guam Resort	844,912	2.21%
7	Hotel Nikko Guam	831,546	2.18%
8	MDI Guam Corporation/Westin	691,013	1.81%
9	Outrigger Guam Resort	681,806	1.79%
10	Guam Reef Hotel Inc	623,890	1.63%
<b>Total</b>		<b>\$12,835,306</b>	<b>33.63%</b>

**EXHIBIT "A"**  
**WATER LOSS AND USAGE TERMINOLOGY**

February 6, 2017 Legislative Informational Briefing.

# Water Balance

Water From Own Sources (corrected for known errors)	System Input Volume	Water Exported	Authorized Consumption	Billed Authorized Consumption	Billed Water Exported	Revenue Water
		Water Supplied			Billed Metered Consumption	
Water Losses	Unbilled Authorized Consumption		Unbilled Metered Consumption	Unbilled Unmetered Consumption		Unauthorized Consumption
		Real Losses			Apparent Losses	
Water Imported						
		Leakage on Transmission and Distribution Mains			Leakage and Overflows at Utility's Storage Tanks	

Note: All data in volume for the period of reference, typically one year.

## Definition of Terms

→ System Input Volume – The annual volume input to the water distribution system from the water supply. ←

→ Revenue Water – The components of System Input Volume that are billed and produce revenue.

Non-Revenue Water (NRW) – All water uses for which no revenue is received. In the performance of the Water Balance it is the sum of the Unbilled Authorized Consumption, Apparent Losses, and Real Losses.

Authorized Consumption – The annual volume of metered and/or unmetered water (operational uses) taken by registered customers, the water supplier, and others who are authorized to do so. ←

Water Losses – The difference between System Input Volume and Authorized Consumption, consisting of Apparent and Real Losses.

**EXHIBIT "B"**  
**GWA LINE REPLACEMENT PROJECT**

**PHASE I (completed)**

Start Date: May 21, 2012  
 Completion Date: May 16, 2013  
 Project Amount: \$913,034.80

No.	Project Area	Pipe Size	Actual Pipe Installed (LF)	Total Cost
1.	Sgt. Pedro Leon Guerrero Route 10, Mangilao	2" PVC	240	\$ 24,830.00
2.	Chalan Vicentico, Yigo	6" PVC	1,175	\$ 132,888.00
3.	Lizama Street, Barrigada	6" PVC	888	\$ 60,706.00
4.	Gregorio S. Borja St., Santa Rita	6" PVC	2,250	\$ 241,785.00
5.	Consolacion St., Asan	6" PVC	1,260	\$ 317,070.00
6.	Balaku St., Barrigada	6" PVC	355	\$ 32,850.00
7.	Tun Pedro Ada St., Tamuning	6" PVC	325	\$ 33,475.00
8	Chalan Kareta, NCS, Dededo	6" PVC	705	\$ 69,430.80
Total		6-inch	6933 LF	
Total		2-inch	240 LF	

**PHASE II (completed)**

Start Date: June 16, 2014  
 Completion Date: June 16, 2016  
 Project Amount: \$958,508.00

No.	Project Area	Pipe Size	Actual Pipe Installed (LF)	Total Cost
1.	Farenholt Avenue, Tamuning	6-inch	80	\$ 28,790.00
2.	Chalan Aguon (Ylig Bay), Yona	6-inch	1,730	\$ 146,740.00
	Archaeological Monitoring for Chalan Aguon	-		\$ 29,328.00
3.	Siguenza Street, Talofofo	6-inch	720	\$ 75,890.00
4.	Chalan Castro, Dededo	6-inch	840	\$ 80,520.00
5.	Chalan Enrique Rosario, Yigo	6-inch	700	\$ 69,740.00
6.	Route 5, Santa Rita (near Payless)	2-inch	770	\$ 46,060.00
7.	Maria Candelaria Road, Maina	6-inch	2,300	\$ 237,770.00
9.	Pale Ferdinand Way, Santa Rita	8-inch	2,000	\$ 243,670.00
Total		6-inch	9,140	
Total		8-inch	2,000	

**EXHIBIT "B"**  
**GWA LINE REPLACEMENT PROJECT**

**PHASE III (completed)**

Start Date: March 25, 2015  
 Completion Date: March 25, 2016  
 Project Amount: \$753,537.00

No.	Project Area	Pipe Size	Actual Pipe Installed (LF)	Total Cost
	GST St., Agat	2-inch service lateral	260	\$ 63,134.90
	Erskin Drive	valve repair		\$ 59,504.00
	Bishop Olano/Pale Duenas St.	valve repair		\$ 24,982.10
	GST St., Agat	valve repair		\$ 7,120.00
	Calle Delos Marteres/Route 2, Agat	valve repair		\$ 44,532.00
	Archaeological work at San Vicente /Calle Delos Marteres	-	-	\$ 48,537.00
	Tomas Mesa St., Agat	valve repair		\$ 58,004.00
	Calle Delos Marteres, Agat	valve repair		\$ 72,810.00
	Erskin Drive and Route 2, Agat	valve repair		\$ 126,386.00
	Sumay Road Entrance to SHS	valve repair		\$ 106,157.00
	San Vicente/Route 2 Intersection	valve repair		\$ 79,322.00
	Pagachao & Route 2 Intersection	valve repair		\$ 63,048.00
	Total	service line extension	260 LF	\$ 753,537.00

**EXHIBIT "B"**  
**GWA LINE REPLACEMENT PROJECT**

**PHASE IV (On-going)**

Start Date: February 14, 2016  
 Completion Date: February 6, 2018  
 Project Amount: \$7,887,046.50

No.	Project Area	Pipe Size	Length of Pipe(LF)	Total Cost
1.	Chalan Koda/Mataguac	6" PVC	33,600	\$ 2,319,400.00
2.	Agafa Gumás	6" PVC	11,150	\$ 951,150.00
3.	Santa Rosa Subdivision	6" & 8" PVC	3510 / 6650	\$ 1,813,380.00
4.	Assumption Drive	6" PVC	1,885	\$ 179,955.00
5.	Chalan Famha	6" PVC	11,650	\$ 757,050.00
6.	Hahasu	6" PVC	4,000	\$ 386,500.00
7.	Flores Pago, Latte Heights	6" PVC	820	\$ 98,140.00
8.	Enrique Rosario (continuation)	6" PVC	11,880	\$ 851,380.00
9.	Achu Mali (Areca Palms)	6" PVC	2,460	\$ 196,700.00
10.	Chalan Aguon (continuation)	6" PVC	2,300	\$ 178,550.00
11.	Nimitz Hill	6" PVC	2,000	\$ 154,841.50
	Total		91,905 LF	\$ 7,887,046.50



# ATTACHMENT – 1

RESPONSES: QUESTIONS FROM INFORMATIONAL BRIEFING – January 26, 2017

1. Plan on how to mitigate water loss and time frame to do so. Reducing non-revenue water is a process, and not a project. It involves correcting potential deficiencies in miles and miles of buried infrastructure, which cannot be seen, readily assessed, or easily estimated and scheduled. It is not an impossibility, but it is a process. Therefore, our goal is continuous improvement in reducing non-revenue water to an acceptable level under our current CIP and with improved operations, as measured by AWWA M36 water audit process conducted on an annual basis. GWA is and has been implementing a plan to address non-revenue water which involves the following:
  - a. Line replacement program: This program started in FY2012, and to date GWA has completed Phases 1 through 3, with Phase 4 on-going. To date, the program encompasses 21.1 miles of pipe (and corresponding valves), \$10.5M spent/encumbered, with three (3) projects completed. A portion of a projected \$10M/yr available for internally (revenue) funded CIP projects can be allocated for continuing the line replacement program on an on-going basis.
  - b. Reservoir replacement program: Seven (7) reservoirs replaced or rehabilitated, \$49.3M spent or encumbered, four(4) projects completed. \$104.8M allocated for future spending through 2020 to complete reservoir projects.
  - c. Staffing of leak detection program and leak repair programs: currently using leak detection crew to assist with leak repair; staffing during FY2017 will allow for a return to dedicated 'proactive' leak detection, with more robust, leak repair capability to handle daily corrective maintenance activities such as main-breaks and service line repairs. Recruitment FY2017; program execution - continuous
  - d. Pressure zone realignment / System meter project: Installation of PRVs, isolation valves, meters, and other improvements within the distribution system in order to improve pressure balancing and water delivery within and between zones. This reduces occurrence of pressure-related breaks and resulting losses; this also provides flow-monitoring tools within the system to observe flows, which when combined with usage data within a zone, can be used to identify anomalies which indicate leaks or losses. Plan completion: FY2017; Design and construction of improvements through FY 2021; Monitoring and performance improvement – continuous.
  - e. Hydrant repair/replacement program: This is a program to prioritize and execute the repair, replacement and maintenance of the entire inventory of over 3000 hydrants island-wide. The initial phase of 400 hydrants to address most problematic hydrants is underway. Design work is on-going, as is recruitment of budgeted staffing for this program. Initial phase FY2017 – 2018; recruitment for dedicated staff: FY2017; program execution – continuous
  - f. Water System Control Center / SCADA: The completion of a modern, fully-functioning System Control and Data Acquisition system is an integral component of effective overall management of GWA's water and wastewater systems. In relation to water loss,

such a system will allow for real-time data to be monitored to identify problems as they occur, and, in combination with data from system meters, locate and isolate such problems for more immediate repair. Over the last several years, GWA has been incorporating various elements of the complete system into its capital improvement projects and operations. The Water System Control Center (WSCC) is in place (for almost 2-years) and is staffed 24/7. They currently monitor system data which is gathered manually, analyze performance and control system adjustment under qualified and certified system operators. Individual water and wastewater facilities are being provided with monitoring and control components as they are rehabilitated or constructed, as the case may be, which will eventually be connected a back-bone network infrastructure allowing for secure and real-time transmission of operational data from each facility to the WSCC for monitoring, and control of system components from the WSCC if and when needed. Facility SCADA improvements – on-going; SCADA Network improvements (joint project with GPA) – on-going, slated for completion in FY2020; Complete system integration – continuous as new facilities are brought on-line, estimated FY2025; Operation – continuous.

2. What is the cost of the water “lost?” - GWA estimates the cost of non-revenue water on an annual basis is \$5.4M for FY2016. This represents approximately 13% of the cost of operating the water system.
3. Why are wastewater rates not “increased” to support the cost wastewater CIP? Why would water revenue go towards a wastewater project? Why should exclusively water customers be paying for sewer infrastructure upgrades? - GWA is a combined utility, handling both water and wastewater systems. The nature of our island environment, natural resources, and our history of infrastructure development, is such that the operation of one system, though separate, has had effects and consequences on the other. At one point in our history, the ability of our water system to provide safe and clean drinking water was inextricably tied to the proper operation of our wastewater system. Everyone receiving water has a vested interest in a properly constructed, maintained and operated wastewater system. GWA is in the middle an over \$523M Capital Improvement Program intended to rebuild our system after years of neglect and a lack of maintenance. The rate structure put in place by the PUC since 1998 for the P.U.A.G., has been maintained because it protected residential rates by allowing cross-subsidy by commercial/hotel rate classes as they are better able to handle increases. Our current rate structure is intended to provide the resources necessary to support the CIP to benefit these interrelated systems and the unique conditions from which they are emerging. In a perfect world, and with perfect systems, separation of revenues for capital improvements to separate systems may be possible and preferable, but under our current situation, the revenue and rate structure are necessary to complete the system enhancements mandated by the court-order.
4. Are private septic tank users being billed for sewer use? No, customers with individual wastewater disposal systems are not charged for sewer; however, it should be noted that their disposal systems have an impact on GWA’s treatment plants as the septage pumped out of septic tanks is treated at our facilities. Therefore, it is appropriate that there be some, albeit

indirect, charge for impacts to our wastewater system. Further, septic systems impact the environment, and if located over the NGLA, are more likely to affect the source water quality than customers connected to the sewer system.

5. How much does the water that is lost (beyond what is the normal AWWA acceptable losses) cost GWA to get out of the ground? See response to item 2 above.
6. What is the percentage of CIP projects underway that are related to leak prevention? Twenty-nine percent (29%) by value of bond funds for CIP projects underway or completed to date relate to the programs and projects identified above to address leak detection, prevention and reduction of losses. This figure does not include SCADA system improvements. In addition, GWA generates approximately \$10M annually for CIP projects, some of which can be used to address such issues.
7. What is the percentage of CIP projects in the planning stages that are related to leak prevention? Seventy-one (71%) by value of bond funds for CIP projects slated for future years relate to the programs and projects identified above to address leak detection, prevention, and reduction of losses. This figure does not include SCADA system improvements, and is composed primarily of reservoir replacement projects.
8. What is the % of bond funding that is dedicated to water projects? Under the current CIP, approximately 52% (by value) of bond funded projects are dedicated to water projects, 38% to wastewater projects, and 10% to miscellaneous projects, such as electrical, SCADA, etc.
9. How is GWA planning to determine the actual water loss and where those losses are coming from? - GWA is addressing the non-revenue water issue on an on-going basis, via the process described above. Continuous improvement in data collection for production meters, usage meters, and the development of system meters for flows through the distribution system will assist us in determining actual losses, and focus investigative / leak detection efforts. These measures are all already on-going. Further, augmenting our current, and deploying additional leak detection crews will assist us in identifying and pin-pointing leak locations.
10. What percentage water loss is acceptable in the industry? It appears that a generally acceptable range of non-revenue water as a percentage of production is between 10% and 20%. The latest Utility Benchmark Survey (2016) from the American Water Works Association (AWWA) depicts non-revenue water as a percentage by cost of operating the water system, ranges from 1.3% to 19.7%, with a median of 7.4% and a mean (average) of 14.7%.
11. There was a leak detection program completed for GWA by a contractor a few years ago. Did they identify where leaks were? What has been done to address these leaks? Will any of the current CIP projects reduce the water loss? In addition to the water leaks, does GWA know where the other non-revenue water goes? - A contractor did identify and repair leaks during that initial contract period. Over the course of the contract, the contractor was able to detect and repair leaks which resulted in estimated losses of approximately 5 million gallons/day.

Subsequent deployment saw similar results, leading management to the conclusion that such efforts needed to be part of on-going operations and the leak detection and repair issue could not be solved by contracting. See previous response to item 1 above regarding other CIP projects to reduce water loss and potential locations for such loss.

12. By eliminating the water leaks, will it reduce GWA's costs? Reductions in leaks and water loss will not have significant direct cost savings. However, marginal cost savings will result from reduction in costs for pumping (primarily power costs) and treatment (chemicals). Manpower / labor costs will not change appreciably, and may be offset initially by increases required for detection and repair. The major advantage will be in positive effects on the NGLA, and an increase in efficiency of operations.

**Manpower Assessment Last 12 Months**

Business Unit #	Business Unit Name	Jan-17	Dec-16	Nov-16	Oct-16	Sep-16	Aug-16	Jul-16	Jun-16	May-16	Apr-16	Mar-16	Feb-16	actual hours per division
6200	General Manager	596	857	728	928	952	1,040	800	988	860	868	932	845	10,394
6210	Human Resources	530	904	734	719	557	704	504	592	676	624	704	441	7,688
6220	Information Technology	1,153	1,771	1,576	1,738	1,600	1,593	1,520	1,188	1,607	1,553	1,738	1,644	18,680
6230	Procurement & Supply	1,134	1,752	1,533	1,796	1,928	1,895	1,516	1,699	1,598	1,593	1,338	1,243	19,023
6240	Compliance & Safety	470	681	628	701	732	752	680	704	779	608	792	748	8,275
6250	Laboratory	853	1,303	1,142	1,236	1,065	1,223	1,059	1,197	1,204	1,147	1,250	1,388	14,067
6270	Public Information Officer	104	144	112	168	160	156	116	160	156	124	159	152	1,711
6300	Finance	2,576	3,820	3,870	4,219	4,241	4,525	3,221	3,979	3,723	3,303	3,501	3,587	44,562
6400	Legal Counsel	200	278	257	312	324	344	280	200	128	320	335	316	3,294
6500	Engineering	1,519	2,086	1,960	2,282	2,411	2,977	2,610	2,520	2,124	2,377	2,431	2,299	27,593
6510	Planning & Permits	1,176	1,911	1,855	1,945	1,708	2,187	1,622	1,998	2,000	1,853	1,946	1,590	21,791
6600	AGMA - USA	1,075	1,805	1,839	1,814	1,847	2,168	1,781	2,155	2,075	1,890	2,191	2,274	22,912
6610	Customer Service	1,239	1,992	1,751	1,891	2,135	2,431	2,059	2,470	2,386	2,332	2,530	2,345	25,557
6620	Revenue Protection	305	463	583	510	517	605	504	818	623	716	792	786	7,219
6630	Collections	192	304	278	308	229	318	304	344	320	296	328	304	3,525
6641	Meters - 2" and greater	464	888	752	1,008	856	996	888	928	800	960	920	936	10,396
6642	Meters - Reading Unit	713	1,175	1,370	1,591	1,504	1,446	1,063	1,355	1,367	1,293	1,329	1,334	15,537
6643	Meter Calibration	104	97	152	169	330	312	296	369	336	432	456	432	3,485
6805	Administration	420	626	580	656	610	700	592	352	486	557	603	622	6,804
6810	Production	296	472	432	517	443	435	299	328	312	258	352	312	4,456
6811	Surface	1,024	1,560	1,480	1,591	1,503	1,496	1,029	960	1,099	1,168	1,180	1,104	15,194
6812	Ground - Deepwell	672	1,181	1,104	1,135	1,100	984	960	1,040	1,052	1,052	1,000	1,042	12,322
6820	Distribution	104	84	152	128	144	224	176	174	168	168	176	168	1,866
6822	Booster Pump Sta - Ops - North	496	872	896	1,152	1,104	1,144	864	1,092	1,080	1,055	1,115	992	11,862
6823	Booster Pump Sta - Ops - South	576	888	872	1,160	1,096	1,208	1,056	1,058	1,024	1,152	1,216	1,080	12,386
6830	Line & Leak Repairs	1,336	2,232	2,135	2,488	2,328	2,414	1,520	1,664	1,438	1,552	1,792	1,456	22,355
6834	Leak Detection	104	160	152	168	168	32	152	128	160	264	323	320	2,131
6841	Disinfection - Ugum	80	136	128	160	152	160	136	176	144	128	104	160	1,664
6842	Disinfection - Deepwell	704	1,064	984	1,072	1,092	1,056	635	728	776	768	788	808	10,475
6851	System Control Ctr (Dispatch)	1,309	2,108	1,904	2,087	1,932	1,980	1,784	1,800	1,888	1,960	1,864	1,878	22,494
6852	FMES - Transportation	1,207	1,605	1,741	1,855	1,976	2,292	2,061	2,206	2,060	2,216	2,348	2,142	23,708
6853	Electrical Group	864	1,368	1,352	1,472	1,408	1,512	1,073	1,336	1,200	1,504	1,544	1,416	16,049
6905	Administration	100	160	224	304	268	340	260	309	320	300	342	304	3,231
6910	Collection	104	160	96	240	312	432	352	176	168	168	176	168	2,552
6914	Sewer Pump Sta - Central	528	880	1,040	1,120	1,072	1,082	664	592	816	792	736	800	10,122
6915	Sewer Pump Sta - Northern	496	856	792	908	896	762	768	912	761	836	912	760	9,659
6916	Sewer Pump Sta - Southern	312	459	392	416	600	656	168	280	371	485	488	478	5,105
6917	CCTV - Cleaning	456	696	704	784	823	866	707	757	582	696	836	756	8,663
6918	CCTV - Inspections	560	935	864	992	1,000	808	424	504	387	480	504	472	7,930
6930	Maintenance	816	1,276	1,285	1,366	1,520	1,540	840	1,216	1,277	1,136	1,328	1,320	14,920
6940	Treatment	96	144	112	128	104	72	152	168	168	152	176	168	1,640
6941	Treatment - Central	568	864	801	1,200	1,152	1,368	1,056	1,184	1,020	1,008	1,104	1,032	12,357
6942	Treatment - Northern	748	1,130	1,046	1,182	1,254	1,602	1,062	451	441	336	400	1,218	10,870
6943	Treatment - Southern	616	840	840	920	912	1,040	568	432	396	512	528	488	8,092
	<b>gwa actual hours worked</b>	<b>28,994</b>	<b>44,984</b>	<b>43,225</b>	<b>48,535</b>	<b>48,064</b>	<b>51,876</b>	<b>40,179</b>	<b>43,684</b>	<b>42,353</b>	<b>42,990</b>	<b>45,605</b>	<b>44,126</b>	
	<b>total target hours</b>	<b>33,046</b>	<b>50,509</b>	<b>47,852</b>	<b>53,739</b>	<b>54,419</b>	<b>58,631</b>	<b>47,552</b>	<b>50,433</b>	<b>47,633</b>	<b>48,576</b>	<b>50,687</b>	<b>49,518</b>	

**GUAM WATERWORKS AUTHORITY  
(A COMPONENT UNIT OF THE  
GOVERNMENT OF GUAM)**

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**FINANCIAL STATEMENTS,  
ADDITIONAL INFORMATION AND  
INDEPENDENT AUDITORS' REPORT**

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**YEARS ENDED SEPTEMBER 30, 2016 AND 2015**

## **INDEPENDENT AUDITORS' REPORT**

Commissioners  
Consolidated Commission on Utilities:

### **Report on the Financial Statements**

We have audited the accompanying financial statements of Guam Waterworks Authority (GWA), a component unit of the Government of Guam, which comprise the statements of net position as of September 30, 2016 and 2015, and the related statements of revenues, expenses, and changes in net position and of cash flows for the years then ended, and the related notes to the financial statements.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditors' Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Guam Waterworks Authority as of September 30, 2016 and 2015, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## **Other Matters**

### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 10 as well as the Schedule of Proportional Share of the Net Pension Liability on page 40, and the Schedule of Pension Contributions on page 41, be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board (GASB) who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Management has omitted the Schedule of Funding Progress and Actuarial Accrued Liability – Post Employment Benefits Other Than Pension that accounting principles generally accepted in the United States of America require to be presented to supplement the financial statements. Such missing information, although not a part of the financial statements, is required by GASB who considers it to be an essential part of the financial reporting for placing the financial statements in an appropriate operational, economic or historical context. Our opinion on the financial statements is not affected by this missing information.

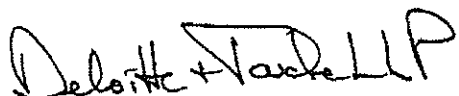
### *Other Financial Information*

Our audits were conducted for the purpose of forming an opinion on the financial statements as a whole. The Schedule of Certain Operating and Maintenance Expenses, the Schedule of Construction Work in Progress, the Schedule of Net Position, Revenue, Expenses and Changes in Net Position for the System Development Charge Fund, and the Schedule of Operating Revenues on pages 42 through 45 are presented for purposes of additional analysis and are not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, such additional information is fairly stated, in all material respects, in relation to the financial statements as a whole.

The Schedule of Employee and Other Data on page 46 has not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

### **Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated January 13, 2017, on our consideration of GWA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering GWA's internal control over financial reporting and compliance.



January 13, 2017



**GUAM WATERWORKS AUTHORITY**  
**(A Component Unit of the Government of Guam)**

Management's Discussion and Analysis  
September 30, 2016 and 2015

As management of the Guam Waterworks Authority (GWA), we offer readers of GWA's financial statements this narrative overview and analysis for the fiscal year ended September 30, 2016. We encourage readers to consider the information presented here and in our basic financial statements, which begins on page 11.

**Overview of the Financial Statements**

This discussion and analysis is intended to serve as an introduction to the GWA's basic financial statements. GWA's basic financial statements are for a single proprietary fund and include the financial statements, notes to those financial statements and other supplementary and statistical information.

**Proprietary Fund Financial Statements**

GWA's operations are accounted for as a single proprietary fund using the full accrual basis of accounting. In this regard, GWA operations are accounted for in a manner similar to a private enterprise. Within this one proprietary fund, GWA segregates revenues and expenses for various purposes such as operations, debt service and capital improvements, but that segregation does not create separate proprietary funds.

**Notes to the Financial Statements**

The notes provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes to the financial statements can be found beginning on page 16 of this report.

**Other Information**

In addition to the basic financial statements and accompanying notes, this report also presents supplementary and statistical information. Supplementary and statistical information can be found beginning on page 40 of this report.

**Financial Condition and Results**

The Authority's total net position increased by \$28.5 million during the fiscal year (see table below) primarily due to the \$37.9 million in operating income.

The net increase in current assets of about \$30.4 million is due to increases in restricted and unrestricted cash, materials and supplies inventory, and other receivables.

The net increase in property, plant and equipment of \$27.4 million is due primarily to on-going construction projects related to wastewater treatment plant replacement, transmission lines, reservoir replacements, booster pump upgrades, sewer line rehabilitation/replacements, deep well rehabilitations, acquisition of mechanical and electrical equipment and general plant improvements.

The Authority's net investment in capital assets represents 95.7% of total net position. The net amount invested in capital assets increased by \$5.3 million compared to prior year.

**GUAM WATERWORKS AUTHORITY**  
**(A Component Unit of the Government of Guam)**

Management's Discussion and Analysis  
September 30, 2016 and 2015

**Summary Statement of Net Position**

	September 30, 2016	September 30, 2015	September 30, 2014	2016 to 2015 Comparison	
				Increase/ (Decrease)	% Change
Current and other assets	\$ 402,532,025	\$ 248,055,723	\$ 264,751,640	\$ 154,476,302	62.27%
Property, plant and equipment, net	387,543,998	360,109,966	336,039,840	27,434,032	7.62%
Deferred outflows of resources	6,546,612	6,128,089	6,156,238	418,523	6.83%
Total assets and deferred outflows	<u>\$ 796,622,635</u>	<u>\$ 614,293,778</u>	<u>\$ 606,947,718</u>	<u>\$ 182,328,857</u>	29.68%
Current and other liabilities	\$ 60,331,039	\$ 56,371,599	\$ 61,451,578	\$ 3,959,440	7.02%
Long-term debt	542,555,913	389,165,861	396,569,482	153,390,052	39.42%
Deferred inflows of resources	-	3,568,590	2,303,348	(3,568,590)	-100.00%
Total liabilities and deferred inflows	<u>602,886,952</u>	<u>449,106,050</u>	<u>460,324,408</u>	<u>153,780,902</u>	34.24%
Net Position:					
Net investment in capital assets	185,367,498	180,072,079	180,655,378	5,295,419	2.94%
Restricted	18,917,644	15,898,661	12,934,743	3,018,983	18.99%
Unrestricted	(10,549,459)	(30,783,012)	(46,966,811)	20,233,553	-65.73%
Total net position	<u>193,735,683</u>	<u>165,187,728</u>	<u>146,623,310</u>	<u>28,547,955</u>	17.28%
Total liabilities, deferred inflows and net position	<u>\$ 796,622,635</u>	<u>\$ 614,293,778</u>	<u>\$ 606,947,718</u>	<u>\$ 182,328,857</u>	29.68%

Operating income increased 30.0% from the previous year, from \$29.2 million to \$37.9 million in FY2016. A combination of factors, as illustrated on page 13, contributed to the significant improvement but the increase was due largely to a 16.5% rate increase to non-lifeline water and wastewater rates in FY2016.

Much like in the previous fiscal years, operating revenues outpaced operating expenses in terms of the proportion of growth from the preceding year. GWA saw operating revenues improve from \$93.1 million to \$105.4 million in FY2016, or approximately 13.2%, while on the other hand, operating costs increased from \$64.0 million to \$67.5 million in FY2016, or a 5.5% increase from the previous year. The table below illustrates past trends dating back to FY2014.

Total operating revenues of \$105.4 million increased by \$12.2 million or 13.2% and operating expenses of \$67.5 million increased by \$3.5 million or 5.5% for the current year resulting in net operating income of \$37.9 million or 30.0% increase when compared to the prior year (see table below).

- Water revenues (total) increased by \$7.4 million or 12.5% over the prior fiscal year. Residential and commercial customers accounted for most of the increase in FY2016.
- Wastewater revenues also (total) increased by \$5.1 million or 15.0% over the prior fiscal year. Increases were observed in all customer classes except residential customers whose rates were not increased in FY2016.

Operating expenses are generally driven by power, water purchases and salaries expenses. Historically, these costs account for almost 2/3<sup>rd</sup> of O&M expenses. In FY2016, O&M expenses increased, going from \$64.0 million in FY2015 to \$67.5 million in FY2016. The table below illustrates the changes among major cost components.

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- Operating expenses increased by \$3.5 million or 5.5% over the prior fiscal year. The contributing factors were increases in depreciation, contractual expenses, water purchases, waste disposal fees and administrative & general expenses. Notably, contractual expenses related to IT maintenance costs, generator repair & maintenance charges, and equipment & building rental increased in FY16 over FY15. Also, Navy water purchases increased due to a combination of; (1) approximately 58.7 thousand additional kgals of water purchases and (2) a 14% increase in the tariff. The increase in waste disposal fees culminated in 1,223 tons more sludge disposed in FY16 over FY15.
- Net non-operating expenses increased by \$0.7 million. Interest expense increased by \$3.8 million but was largely offset by the \$3.1 million increase in non-operating revenues such as AFUDC and grants from the U.S. Government.
- Pension expense increased about \$3.1 million due to the increase in the net pension liability.

A comparative analysis of Revenues, Expenses and Changes in Net Position, FY2014 – FY2016, is illustrated in the Table below:

**Results of Operations/Statement of Revenues, Expenses and Changes in Net Position**

	September 30, 2016	September 30, 2015	September 30, 2014	2016 to 2015 Comparison	
				Increase/ (Decrease)	%
				(Decrease)	Change
<b>Revenues:</b>					
Water	\$ 66,941,486	\$ 59,518,287	\$ 53,241,495	\$ 7,423,199	12.47%
Wastewater	38,953,665	33,886,360	28,906,106	5,067,305	14.95%
Other	519,898	706,657	573,483	(186,759)	-26.43%
Bad debts	(1,034,310)	(980,243)	310	(54,067)	5.52%
Total operating revenue	<u>105,380,739</u>	<u>93,131,061</u>	<u>82,721,394</u>	<u>12,249,678</u>	13.15%
<b>Expenses:</b>					
Power purchases	11,225,884	14,026,448	16,426,402	(2,800,564)	-19.97%
Water purchases	6,374,035	5,098,872	5,179,240	1,275,163	25.01%
Sludge (waste) disposal fees	1,565,080	1,343,767	1,494,012	221,313	16.47%
Salaries, wages and benefits	18,486,407	16,168,167	17,991,125	2,318,240	14.34%
Depreciation	15,348,101	14,543,396	13,351,158	804,705	5.53%
Administrative and general	7,008,883	6,503,317	6,234,980	505,566	7.77%
Contractual	4,117,122	2,793,267	2,681,070	1,323,855	47.39%
Retiree healthcare costs and other benefits	3,348,262	3,491,101	2,518,851	(142,839)	-4.09%
Total operating expenses	<u>67,473,774</u>	<u>63,968,335</u>	<u>65,876,838</u>	<u>3,505,439</u>	5.48%
Net operating income	37,906,965	29,162,726	16,844,556	8,744,239	29.98%
Non-operating revenue (expenses)	9,793,775	6,680,260	(7,054,654)	3,113,515	46.61%
Less: Interest Expense	(24,641,647)	(20,865,205)	(20,031,506)	(3,776,442)	18.10%
Total non-operating revenues (expenses), net	<u>(14,847,872)</u>	<u>(14,184,945)</u>	<u>(27,086,160)</u>	<u>(662,927)</u>	4.67%
Income (loss) before capital contributions	23,059,093	14,977,781	(10,241,604)	8,081,312	53.96%
Capital contributions	5,488,862	3,586,637	3,559,505	1,902,225	53.04%
Change in net position	28,547,955	18,564,418	(6,682,099)	9,983,537	53.78%
Net position - beginning year	<u>165,187,728</u>	<u>146,623,310</u>	<u>153,305,409</u>	<u>18,564,418</u>	12.66%
Net position - end of year	<u>\$ 193,735,683</u>	<u>\$ 165,187,728</u>	<u>\$ 146,623,310</u>	<u>\$ 28,547,955</u>	17.28%

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As noted earlier, revenue improvements during this period are largely attributable to rate increases in each of the respective fiscal years. The tables below illustrates the distribution of revenues among major customer classes:

**Annual Water Revenues (Excluding System Development Charges)**

<u>Class Type</u>	<u>FY16</u>	<u>FY15</u>	<u>FY14</u>	<u>2016 to 2015 Comparison</u>	
				<u>Increase (Decrease)</u>	<u>% Change</u>
Agricultural	\$ 431,606	\$ 375,120	\$ 392,105	\$ 56,486	15.06%
Golf Course	97,990	84,844	55,369	13,146	15.49%
Commercial	13,736,890	12,529,070	10,581,895	1,207,820	9.64%
Federal	38,497	18,449	19,705	20,048	108.67%
Government	6,360,728	6,083,130	5,435,944	277,598	4.56%
Hotel	13,116,414	11,132,531	9,466,265	1,983,883	17.82%
Irrigation	59,481	18,425	38,822	41,056	222.83%
Residential	32,453,409	28,705,488	26,459,394	3,747,921	13.06%
<b>TOTAL</b>	<b>\$ 66,295,015</b>	<b>\$ 58,947,057</b>	<b>\$ 52,449,499</b>	<b>\$ 7,347,958</b>	<b>12.47%</b>

**Annual WasteWater Revenues (Excluding System Development Charges)**

<u>Class Type</u>	<u>FY16</u>	<u>FY15</u>	<u>FY14</u>	<u>2016 to 2015 Comparison</u>	
				<u>Increase/ (Decrease)</u>	<u>% Change</u>
Commercial	\$ 8,046,990	\$ 6,988,489	\$ 5,608,846	\$ 1,058,501	15.15%
Federal	6,580,018	4,926,563	4,171,820	1,653,455	33.56%
Government	3,375,762	3,325,856	2,309,397	49,906	1.50%
Hotel	11,698,441	9,266,983	7,548,103	2,431,458	26.24%
Residential	8,456,522	8,768,445	8,427,181	(311,923)	-3.56%
<b>TOTAL</b>	<b>\$ 38,157,733</b>	<b>\$ 33,276,336</b>	<b>\$ 28,065,347</b>	<b>\$ 4,881,397</b>	<b>14.67%</b>

As reported on the Statements of Net Position, the Authority's total net position increased by \$28.5 million during the fiscal year due to increase in unrestricted assets.

Management's Discussion and Analysis for the year ended September 30, 2015 is set forth in GWA's report on the audit of financial statements which is dated January 22, 2016. That Discussion and Analysis explains in more detail major factors impacting the 2015 financial statements. A copy of that report can be obtained by contacting the CFO.

**Capital Assets**

The Authority had \$387.5 million (net of accumulated depreciation) invested in a broad range of utility capital assets as of September 30, 2016. The investment in capital assets includes buildings, improvements, water treatment plants, filter plants, water transmission and distribution mains, water storage facilities, pump stations, wastewater treatment facilities, machinery and equipment (see Table below).

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In the current fiscal year 2016, capital assets increased by \$27.4 million (net) or 7.6% over the prior fiscal year. The increase is attributable to ongoing major capital improvement projects associated with a 2011 Federal Court Order and GWA's five-year (FY15 to FY19) Capital Improvement Plan.

The Authority's revenue, long-term debt, and grant-in-aid are used to finance capital investments. This year's major capital additions included:

WASTE WATER

Southern District Wastewater	\$ 31,000
Central District Wastewater	872,000
Others	<u>193,000</u>
	<u>\$ 1,096,000</u>

WATER

Water Booster Pump Station	\$ 558,000
General Plant Improvements	110,000
Line Replacement/Leak Repair Program	2,573,000
Mechanical/Electrical Equipment	229,000
Meter Programs	325,000
Ugum Water Treatment Plant Intake	176,000
Deepwell Rehabilitation	770,000
Tank Repair & Replacement Program	<u>7,397,000</u>
	<u>\$ 12,138,000</u>

**Capital Assets, Net of Accumulated Depreciation**

	September 30, 2016	September 30, 2015	As Restated September 30, 2014	2016 to 2015 Comparison Increase (Decrease)	% Change
Plant, buildings and equipment, net	\$ 305,412,149	\$ 307,154,511	\$ 280,801,599	\$ (1,742,362)	-0.57%
Land	254,288	64,288	64,288	190,000	295.55%
Construction in progress	81,877,561	52,891,167	55,173,953	28,986,394	54.80%
Total	<u>\$ 387,543,998</u>	<u>\$ 360,109,966</u>	<u>\$ 336,039,840</u>	<u>\$ 27,434,032</u>	<u>7.62%</u>

For additional information concerning capital assets, please refer to Note 5 to the financial statements.

**Debt**

As of September 30, 2016, the Authority had total long-term debt outstanding of \$523.0 million, which is an increase of \$133.8 million or 25.6% over the prior year. On February 9, 2016, the Authority issued \$143.3 million Water and Wastewater System Revenue Bonds to fund capital improvement projects in connection with the financing of its 5 year Capital Improvement Plan.

The Authority is required by bond covenants to maintain principal, interest, and reserve funds for the bond issue outstanding. In addition, the Authority is required to set rates and charges to yield revenues equal to at least 125% of the current annual debt service requirements of the outstanding 2010, 2013, 2014 and 2016 revenue bond series. The Public Utilities Commission set the requirement at 175%.

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Moody's Investor Services, Fitch Rating and Standard & Poor's assigned a rating of Baa2, BBB- and A- respectively to GWA's Water and Wastewater Revenue Bonds Series 2016. The ratings are important benchmarks of issuer's ability to meet its financial obligation. Each rating agency incorporates a rating scale indicating credit quality of the issuer. The scales are comprised of alphabetical symbols such as "AAA", "AA", "A", "BBB", "BB", "B" etc. For example, categorical ratings in the "AAA", "AA" and "A" range denote high credit quality meaning the issuer has a high capacity to meet its financial commitments whereas categorical rating in the "BBB", "BB" and "B" range denote average credit quality. The lower the number of alpha characters assigned indicates the issuer is more susceptible to adverse effects or changes in circumstances and economic conditions than those with a higher number of alpha characters.

**Long-Term Debt**

	September 30, 2016	September 30, 2015	September 30, 2014	2016 to 2015 Comparison	
				Increase (Decrease)	% Change
2010 Bond Series	\$ 116,180,000	\$ 117,770,000	\$ 118,825,000	\$ (1,590,000)	-1.35%
2013 Bond Series	172,630,000	172,630,000	172,630,000	-	0.00%
2014 Refunding Bond Series	79,380,000	82,700,000	85,600,000	(3,320,000)	-4.01%
2016 Bond Series	143,310,000	-	-	143,310,000	100.00%
Bank Notes	11,452,191	14,197,776	17,511,563	(2,745,585)	-19.34%
<b>Total</b>	<b>\$ 522,952,191</b>	<b>\$ 387,297,776</b>	<b>\$ 394,566,563</b>	<b>\$ 135,654,415</b>	<b>-35.03%</b>

For more information concerning debt, please refer to Note 6 to the financial statements.

**Looking Forward**

Outlook, Challenges, and Opportunities

GWA 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, much like previous years, for water supply reliability, water quality, leak detection, line repair, as well as improvements needed to accommodate growth in the island's population centers and normal renewals and replacement. Complying with requirements of the 2011 Federal Court Order will continue to be one of GWA's principal focus in 2017 and ensuing years.

Another equally important focal point in the coming years is a major upgrade to GWA's preventive maintenance program and asset management system. The need for a stepped-up program is at its highest point in light of major investments of more than \$500 million that GWA has put into to replacing, rehabilitating and repairing its assets. With the assistance of its Federal partner, U.S. EPA, GWA successfully completed an inventory and condition assessment of major system assets and the acquisition of a computerized asset management and maintenance that will be the foundation for GWA transitioning from a reactive to a preventive maintenance mode and help the Authority focus its efforts and resources on assets needing the most attention, and build on the capacity to perform timely routine maintenance, inspections of equipment and facilities before they fail or develop into major costly repairs.

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GWA anticipates a considerably increased outlay for O&M in FY2017, influenced for the most part by the escalated preventive maintenance effort noted earlier. Significant increases are projected to come from contractual and A&G expenses to account for: (1) an increased supplies and materials inventory for critical parts and preventive maintenance supplies; (2) an expanded vehicle maintenance and replacement program in response to increased demands for working vehicles; (3) the recruitment of skill sets to perform timely inspections and maintenance of assets and lastly the marginal cost associated with an interim plan to outsource certain routine operational functions to improve efficiency until such time GWA develops and acquires the resources to carry out the activity.

Debt service costs will continue to constitute a significant and major element of GWA's expenses in FY2017. Approximately \$523.0 million is outstanding in long term debt. Debt service is approximately \$22.2 million per year, net of capitalized interest. The financings were undertaken by and large to comply with a 2011 Federal Court Order and to replace and or rehabilitate, old aging infrastructure. There will be continued impetus in 2017 and beyond to fund certain capital expenditures by way of revenue funds to help reduce the need to borrow for projects. This is pursuant to GWA's approved 2016-2020 rate plan which embarked on a goal of generating approximately \$48 million during the five (5) year rate plan period.

Discussions on the build-up from the planned relocation of the U.S. military personnel from Japan to Guam continues to make progress. The U.S. Department of Defense (DoD) and GWA entered into a MOU whereas DoD will be responsible for all direct and indirect impacts resulting from the build-up.

The buildup is seen as directly impacting the Northern District Wastewater Treatment Plant. The plant is required to upgrade to secondary treatment by U.S, EPA. Discussions with U.S. EPA are on-going relative to scheduling. As of this writing, nothing significant has developed however DoD has offered to provide up to \$170 million to assist with the upgrade. Approximately \$105 of the \$170 million has already been appropriated and authorized to DoD and in August 2016, GWA was awarded three construction award grants totaling \$55.3 million for (1) the GWA Interceptor Sewer Refurbishment; (2) Upgrade of the Northern District Wastewater Treatment Plant; and (3) the Northern Guam Lens Aquifer Monitoring System Expansion and Rehabilitation.

GWA and DoD have also been in discussions regarding a One Guam framework that would give the Authority control over Navy water system assets. Implementing this plan will take time, but, GWA has already taken the first step towards the integration. In March 2016, DoD and GWA entered into three operating agreements: (1) to operate and maintain the Tumon Maui Well for the extraction of water up to 800 gpm which will increase capacity of water production (2) to operate and maintain Well No. 5 for the production of water intended to service Agafa Gumas and other northern parts of the island and (3) to install a waterline at Tarague Beach to provide water connection to landlocked property owners of Jinapsan beach. The integration also presents an opportunity for the Authority to assess its Water System capital needs in light of potential Navy assets that could improve System reliability and performance.

Plans for 2017 also includes continued funding of a Debt Service and Working Capital reserve to help achieve debt coverage requirements and help smooth the need for rate increases in the future. Since adoption of the reserve policies in May 2014, over \$15 million has been deposited into the reserves.

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**Request for Information**

This financial report is to provide interested parties with a general overview of GWA's finances. If you have any questions about this report or need additional information, you may submit a request in writing to: Chief Financial Officer (CFO), Guam Waterworks Authority, 578 N. Marine Corp Drive, Tamuning, GU 96913, or telephone (671) 300-6860.



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Statements of Net Position  
September 30, 2016 and 2015

<u>ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</u>	<u>2016</u>	<u>2015</u>
Current assets:		
Cash and cash equivalents:		
Unrestricted	\$ 9,777,260	\$ 5,504,949
Restricted	87,845,979	61,371,738
Receivables, net	16,709,227	17,548,957
Materials and supplies inventory, net of an allowance for obsolescence of \$457,370 at September 30, 2016 and 2015	2,269,775	1,777,241
Prepaid expenses	<u>652,000</u>	<u>646,748</u>
Total current assets	<u>117,254,241</u>	<u>86,849,633</u>
Property, plant and equipment:		
Utility plant in service:		
Water system	306,262,568	294,780,104
Wastewater system	259,512,407	258,799,236
Non-utility property	<u>22,474,787</u>	<u>21,612,653</u>
	588,249,762	575,191,993
Less accumulated depreciation	<u>(282,837,613)</u>	<u>(268,037,482)</u>
	305,412,149	307,154,511
Land	254,288	64,288
Construction work in progress	<u>81,877,561</u>	<u>52,891,167</u>
Property, plant and equipment, net	<u>387,543,998</u>	<u>360,109,966</u>
Other noncurrent assets:		
Restricted cash and cash equivalents	<u>285,277,784</u>	<u>161,206,090</u>
Total assets	<u>790,076,023</u>	<u>608,165,689</u>
Deferred outflows of resources:		
Debt defeasance loss on refunding	1,878,602	2,112,398
Deferred outflows from pension	<u>4,668,010</u>	<u>4,015,691</u>
Total deferred outflows of resources	<u>6,546,612</u>	<u>6,128,089</u>
Total assets and deferred outflows of resources	<u>\$ 796,622,635</u>	<u>\$ 614,293,778</u>

See accompanying notes to financial statements.

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Statements of Net Position, Continued  
September 30, 2016 and 2015

<u>LIABILITIES, DEFERRED INFLOWS OF RESOURCES</u> <u>AND NET POSITION</u>	<u>2016</u>	<u>2015</u>
Current liabilities:		
Current maturities of long-term debt:		
Revenue bonds payable	\$ 5,040,000	\$ 4,910,000
Note payable	2,873,988	2,737,804
Accounts payable:		
Guam Power Authority	1,164,722	933,386
Trade	2,224,191	3,180,040
Accrued interest	6,748,638	4,957,551
Accrued payroll and employee benefits	1,692,622	1,151,332
Current portion of employee annual leave	548,845	511,267
Payable to contractors	3,436,908	6,518,638
Customer deposits	2,228,235	1,997,941
Other liabilities	1,562,359	640,502
Total current liabilities	<u>27,520,508</u>	<u>27,538,461</u>
Long-term debt, less current maturities:		
Revenue bonds payable	526,063,722	370,058,085
Note payable	8,578,203	11,459,972
Employee annual leave, less current portion	887,084	892,695
DCRS sick leave liability	1,641,497	1,540,507
Net pension liability	38,195,938	34,047,740
Total liabilities	<u>602,886,952</u>	<u>445,537,460</u>
Deferred inflows of resources:		
Deferred inflows from pension	-	3,568,590
Commitments and contingencies		
Net position:		
Net investment in capital assets	185,367,498	180,072,079
Restricted	18,917,644	15,898,661
Unrestricted	<u>(10,549,459)</u>	<u>(30,783,012)</u>
Total net position	<u>193,735,683</u>	<u>165,187,728</u>
Total liabilities, deferred inflows of resources and net position	<u>\$ 796,622,635</u>	<u>\$ 614,293,778</u>

See accompanying notes to financial statements.

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Statements of Revenues, Expenses and Changes in Net Position  
Years Ended September 30, 2016 and 2015

	2016	2015
Operating revenues:		
Water:		
Private	\$ 58,162,503	\$ 50,917,880
Government	6,177,211	5,828,186
Legislative surcharge	1,959,204	2,200,991
System development charge	642,568	571,230
	66,941,486	59,518,287
Wastewater:		
Private	27,570,392	24,674,981
Government	9,658,388	8,004,316
Legislative surcharge	939,121	597,039
System development charge	785,764	610,024
	38,953,665	33,886,360
Other	519,898	706,657
Bad debts expense	(1,034,310)	(980,243)
Total operating revenues	105,380,739	93,131,061
Operating and maintenance expenses:		
Power purchases	11,225,884	14,026,448
Water purchases	6,374,035	5,098,872
Waste disposal fees	1,565,080	1,343,767
	19,164,999	20,469,087
Salaries, wages and benefits	18,486,407	16,168,167
Depreciation	15,348,101	14,543,396
Administrative and general	7,008,883	6,503,317
Contractual	4,117,122	2,793,267
Retiree healthcare costs and other benefits	3,348,262	3,491,101
	67,473,774	63,968,335
Total operating and maintenance expenses	67,473,774	63,968,335
Operating income	37,906,965	29,162,726
Nonoperating revenues (expenses):		
Allowance for funds used during construction	13,708,441	9,791,856
Interest income	63,115	23,490
Interest expense	(24,641,647)	(20,865,205)
Loss on property, plant and equipment disposals	(49,796)	(222,012)
Federal expenditures	(1,058,262)	(2,691,636)
Others, net	(2,869,723)	(221,438)
	(14,847,872)	(14,184,945)
Total nonoperating expenses, net	(14,847,872)	(14,184,945)
Income before capital contributions	23,059,093	14,977,781
Capital contributions:		
Grants from the U.S. Government	5,488,862	3,586,637
Change in net position	28,547,955	18,564,418
Net position at beginning of year	165,187,728	146,623,310
Net position at end of year	\$ 193,735,683	\$ 165,187,728

See accompanying notes to financial statements.

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Statements of Cash Flows  
Years Ended September 30, 2016 and 2015

	2016	2015
Cash flows from operating activities:		
Cash received from customers	\$ 107,244,584	\$ 91,084,696
Cash payments to suppliers for goods and services	(30,591,445)	(32,541,897)
Cash payments to employees for services	(17,884,871)	(19,375,443)
Cash payments for retiree healthcare costs	(3,348,262)	(3,491,101)
Net cash provided by operating activities	55,420,006	35,676,255
Cash flows from noncapital financing activities:		
Principal repayment of bank loan	-	(874,453)
Interest paid on bank loan	-	(28,377)
Net cash used for noncapital financing activities	-	(902,830)
Cash flows from capital and related financing activities:		
Federal grants received	3,636,780	723,181
Acquisition of property, plant and equipment	(32,205,217)	(27,479,943)
Proceeds from bond issuance	162,874,896	-
Principal paid on revenue bond maturities	(4,910,000)	(3,955,000)
Interest paid on revenue bonds	(26,606,602)	(19,418,723)
Principal repayment of bank loan	(2,745,585)	(2,439,334)
Interest paid on bank loan	(709,147)	(1,119,060)
Net cash provided by (used for) capital and related financing activities	99,335,125	(53,688,879)
Cash flows from investing activities:		
Net change in restricted cash and cash equivalents	(150,545,935)	21,841,777
Interest income received	63,115	23,490
Net cash (used for) provided by investing activities	(150,482,820)	21,865,267
Net change in unrestricted cash and cash equivalents	4,272,311	2,949,813
Unrestricted cash and cash equivalents at beginning of year	5,504,949	2,555,136
Unrestricted cash and cash equivalents at end of year	\$ 9,777,260	\$ 5,504,949
Supplemental information on noncash activities:		
Noncash increase in property, plant and equipment	\$ 13,708,441	\$ 9,791,856
Capitalized interest	(13,708,441)	(9,791,856)
	\$ -	\$ -
Noncash federal expenditures	\$ 1,058,262	\$ 2,691,636
Noncash grants from U.S. Government	(1,058,262)	(2,691,636)
	\$ -	\$ -

See accompanying notes to financial statements.

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Statements of Cash Flows, Continued  
Years Ended September 30, 2016 and 2015

	2016	2015
Reconciliation of operating income to net cash provided by operating activities:		
Operating income	\$ 37,906,965	\$ 29,162,726
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation	15,348,101	14,543,396
Bad debts expense	1,034,310	980,243
Recovery of provision for inventory obsolescence	-	(2,046,666)
Non-cash pension costs	(72,711)	(3,551,525)
(Increase) decrease in assets:		
Accounts receivable	599,241	(2,964,001)
Materials and supplies inventory	(492,533)	1,982,164
Prepaid expenses	(5,252)	24,033
Increase (decrease) in liabilities:		
Accounts payable	(724,514)	(3,313,760)
Accrued payroll and employee benefits	541,290	(25,818)
Employee annual leave	31,967	85,140
Customer deposits	230,294	(62,607)
Other liabilities	921,858	578,003
DCRS sick leave liability	100,990	284,927
Net cash provided by operating activities	\$ 55,420,006	\$ 35,676,255

See accompanying notes to financial statements.

**GUAM WATERWORKS AUTHORITY**  
**(A Component Unit of the Government of Guam)**

Notes to Financial Statements  
September 30, 2016 and 2015

(1) Reporting Entity

The Guam Waterworks Authority (GWA) is a component unit of the Government of Guam (GovGuam). GWA is subject to the regulations of the Public Utility Commission of Guam (PUC). GWA became an autonomous agency in 1996 under Public Law 23-119 and derives its revenues mainly from its water and wastewater system. The water system is engaged in the production, treatment, and distribution of water to villages and communities of Guam. The wastewater system is engaged in the collection and treatment of wastewater from residences and industries in the villages of Guam. GWA is governed by a five-member elected Consolidated Commission on Utilities (CCU). PUC determines such matters as rates and charges for services.

(2) Summary of Significant Accounting Policies

Basis of Accounting

GWA utilizes the flow of economic resources measurement focus. The financial statements are prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) as applied to governmental units using the accrual basis of accounting. Revenues are recognized when earned and expenses are recognized when incurred. The Governmental Accounting Standards Board (GASB) is the accepted standard-setting body for establishing governmental accounting and financial reporting principles.

Net Position

Net position represents the residual interest in GWA's assets after liabilities are deducted and consists of the following categories:

Net investment in capital assets - include capital assets, restricted and unrestricted, net of accumulated depreciation, reduced by outstanding debt, net of debt service reserve.

Restricted nonexpendable - net position subject to externally imposed stipulations that require GWA to maintain them permanently.

Restricted expendable - net position whose use is subject to externally imposed stipulations that can be fulfilled by actions of GWA pursuant to those stipulations or that expire with the passage of time.

Unrestricted - net position that is not subject to externally imposed stipulations. Unrestricted net position may be designated for specific purposes by action by management or the CCU or may otherwise be limited by contractual agreements with outside parties.

At September 30, 2016 and 2015, restricted net position consists of the following:

	<u>2016</u>	<u>2015</u>
System Development Fund	\$ 9,064,792	\$ 7,852,884
Revenue Fund	8,778,223	7,035,771
Bid Escrow Fund	845,734	648,433
Sewer Hook-up Revolving Fund	62,132	84,684
PUC surcharge	<u>166,763</u>	<u>276,889</u>
	<u>\$ 18,917,644</u>	<u>\$ 15,898,661</u>

All of GWA's restricted net position is expendable.

**GUAM WATERWORKS AUTHORITY**  
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Notes to Financial Statements  
September 30, 2016 and 2015

(2) Summary of Significant Accounting Policies, Continued

Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and deferred outflows of resources, liabilities and deferred inflows of resources, and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Risk Management

GWA is exposed to various risks of loss; theft of, damage to, and destruction of assets; operation liability; errors and omissions; employee injuries and illnesses; natural disasters and employee health, dental and accident benefits. There is commercial insurance coverage obtained to provide for claims arising from most of these matters. No material losses have been sustained as a result of GWA's risk management practices during the past three years.

Allowance for Doubtful Accounts

The allowance for doubtful accounts is stated at an amount which management believes will be adequate to absorb possible losses on accounts receivable that may become uncollectible based on evaluations of the collectability of these accounts and prior collection experience. The allowance is established through a provision for bad debts charged to expense. Bad debts are written off against the allowance based on the specific identification method.

Materials and Supplies Inventory

Materials and supplies inventory is stated at the lower of cost or market with cost determined by the first-in, first-out method.

Property, Plant and Equipment

Plant in service of \$324,988,118 is stated at estimated historical cost as determined by an independent engineering consultant at September 30, 1998. Plant in service acquired subsequent to that date is stated at cost. Non-utility property and equipment are stated at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the respective assets. Current policy is to capitalize items over \$5,000.

Noncurrent Restricted Cash and Cash Equivalents

The purpose of noncurrent restricted cash and cash equivalents is for long-term capital improvements and bond related activities.

Deferred Outflows of Resources

In addition to assets, the statements of net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources represents a consumption of net position that applies to a future period and so will not be recognized as an outflow of resources (deduction of net position) until then. GWA has determined the loss on defeasance of the 2014 series refunding bonds, the differences between expected and actual experience with regard to economic or demographic factors in the measurement of the total pension liability and pension contributions made subsequent to the measurement date qualify for reporting in this category.

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Notes to Financial Statements  
September 30, 2016 and 2015

(2) Summary of Significant Accounting Policies, Continued

Deferred Inflows of Resources

In addition to liabilities, the statements of net position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (additions to net position) until then. GWA has determined the differences between projected and actual earnings on pension plan investments and changes in proportion and differences between GWA pension contributions and proportionate share of contributions qualify for reporting in this category.

Compensated Absences

Compensated absences are accrued and reported as a liability in the period earned. Annual leave expected to be paid out within the next fiscal year is accrued and is included in current liabilities. Employees are credited with vacation leave at rates of 104, 156 or 208 hours per fiscal year, depending upon their service time with GWA. Accumulation of such vacation credits is normally limited to 480 hours at fiscal year-end; however, management has exercised its authority in certain conditions to allow accumulation of up to 720 hours. All such vacation credit is convertible to pay upon termination of employment.

During the year ended September 30, 2003, Public Law 27-05 was implemented, reducing the amount of leave employees can earn in a fiscal year (either 104 or 156 hours) and the maximum accumulation amount of annual leave to 320 hours. Any annual leave earned in excess of 320 hours, but not to exceed 100 hours as of February 28, 2003 shall be credited to the employees' sick leave. Public Law 27-106 does not allow lump sum compensation or retirement credit for annual leave in excess of three hundred twenty (320) hours.

Pensions

Pensions are required to be recognized and disclosed using the accrual basis of accounting. GWA recognizes a net pension liability for the pension plan in which it participates, which represents GWA's proportional share of excess total pension liability over the pension plan assets – actuarially calculated – of a single employer plan, measured as of the fiscal year-end. Changes in the net pension liability during the period are recorded as pension expense, or as deferred inflows of resources or deferred outflows of resources depending on the nature of the change, in the period incurred. Those changes in net pension liability that are recorded as deferred inflows of resources or deferred outflows of resources that arise from changes in actuarial assumptions or other inputs and differences between expected or actual experience are amortized over the weighted average remaining service life of all participants in the qualified pension plan and recorded as a component of pension expense beginning with the period in which they are incurred. Projected earnings on qualified pension plan investments are recognized as a component of pension expense. Differences between projected and actual investment earnings are reported as deferred inflows of resources or deferred outflows of resources and amortized as a component of pension expense on a closed basis over a five-year period beginning with the period in which the difference occurred.

Bond Premiums and Discounts

Bond premiums and discounts are amortized using the straight-line method, which approximates the effective yield method, over the life of the related bond issue.



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Notes to Financial Statements  
September 30, 2016 and 2015

(2) Summary of Significant Accounting Policies, Continued

Revenue Recognition

Customer water meters are read on a cyclical basis throughout a monthly period based on the route schedules of GWA. Revenue is recognized in the period that meters are read. Wastewater treatment is billed at a flat rate of \$26.61 per month for residential accounts and 80% of current water consumption for commercial and government accounts. At the end of each month, unbilled revenues are accrued for each cycle based on the most recent cycle billing. Unbilled receivables at September 30, 2016 and 2015 are \$2,700,451 and \$2,724,515, respectively, and are included as receivables in the accompanying financial statements.

Cash and Cash Equivalents

For purposes of the statements of net position and the statements of cash flows, cash and cash equivalents is defined as cash deposits in banks, time certificates of deposit, and short-term investments in U.S. Treasury obligations with initial maturities of three months or less.

For purposes of the statements of cash flows, cash and cash equivalents do not include restricted cash and cash equivalents.

Capitalization of Interest

GWA capitalizes interest on construction in progress based on the weighted average interest rate. During the years ended September 30, 2016 and 2015, interest of \$13,708,441 and \$9,791,856, respectively, was capitalized.

Capitalized Labor Costs

GWA capitalizes related labor costs incurred on construction in progress. During the years ended September 30, 2016 and 2015, labor costs of \$2,980,358 and \$2,344,682, respectively, were capitalized.

Operating and Non-Operating Revenue and Expenses

Operating revenues and expenses generally result directly from the operation and maintenance of GWA. Non-operating revenues and expenses result from capital and financing activities, costs and related recoveries from natural disasters, and certain other non-recurring income and expenses.

Grants and Contributions

Grants and contributions consist of government mandated and voluntary nonexchange transactions. Approved capital grants not yet received approximated \$21,013,647 and \$4,106,732 at September 30, 2016 and 2015, respectively.

Income Taxes

As an instrumentality of GovGuam, GWA and all property acquired by or for GWA, and all revenues and income therefrom are exempt from taxation by GovGuam or by any political subdivision or public corporation thereof and from all taxes imposed under the authority of the Guam Legislature, or with respect to which the Guam Legislature is authorized to grant exemption.

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Notes to Financial Statements  
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(2) Summary of Significant Accounting Policies, Continued

New Accounting Standards

During the year ended September 30, 2016, GWA implemented the following pronouncements:

- GASB Statement No. 72, *Fair Value Measurement and Application*, which addresses accounting and financial reporting issues related to fair value measurements and requires entities to expand their fair value disclosures by determining major categories of debt and equity securities within the fair value hierarchy on the basis of the nature and risk of the investment.
- GASB Statement No. 76, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments*, which eliminates two of the four categories of authoritative GAAP that exist under the existing hierarchy prescribed by Statement No. 55. The two categories that will remain under the new standard are (1) GASB Statements and (2) GASB technical bulletins and implementation guides in addition to AICPA guidance that the GASB clears.
- GASB Statement No. 79, *Certain External Investment Pools and Pool Participants*, addresses for certain external investment pools and their participants the accounting and financial reporting implications that result from changes in the regulatory provisions referenced by previous accounting and financial reporting standards. Those provisions were based on the Investment Company Act of 1940, Rule 2a7. Rule 2a7 contains the Securities and Exchange Commission's regulations that apply to money market funds and were significantly amended in 2014.

The implementation of these statements did not have a material effect on the accompanying financial statements.

In June 2015, GASB issued Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not Within the Scope of GASB Statement No. 68, and Amendments to Certain Provisions of GASB Statements No. 67 and No. 68*, which aligns the reporting requirements for pensions and pension plans not covered in GASB Statements No. 67 and No. 68 with the reporting requirements in Statement No. 68. The provisions in Statement No. 73 are effective for fiscal years beginning after June 15, 2016. Management has yet to determine whether the implementation of this statement will have a material effect on the financial statements.

In June 2015, GASB issued Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, which replaces Statements No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, as amended, and No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans*, and addresses financial reporting requirements for governments whose employees are provided with postemployment benefits other than pensions (other postemployment benefits or OPEB). The provisions in Statement No. 74 are effective for fiscal years beginning after June 15, 2016. Management has yet to determine whether the implementation of this statement will have a material effect on the financial statements.

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Notes to Financial Statements  
September 30, 2016 and 2015

(2) Summary of Significant Accounting Policies, Continued

New Accounting Standards, Continued

In June 2015, GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, which replaces the requirements of Statements No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, as amended, and No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans*, and provides guidance on reporting by governments that provide OPEB to their employees and for governments that finance OPEB for employees of other governments. The provisions in Statement No. 75 are effective for fiscal years beginning after June 15, 2017. Management has yet to determine whether the implementation of this statement will have a material effect on the financial statements.

In August 2015, GASB issued Statement No. 77, *Tax Abatement Disclosures*, which requires governments that enter into tax abatement agreements to disclose certain information about the agreements. The provisions in Statement No. 77 are effective for fiscal years beginning after December 15, 2015. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

In December 2015, GASB issued Statement No. 78, *Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans*, which addresses a practice issue regarding the scope and applicability of Statement No. 68, *Accounting and Financial Reporting for Pensions*. The provisions in Statement No. 78 are effective for fiscal years beginning after December 15, 2015. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

In January 2016, GASB issued Statement No. 80, *Blending Requirements for Certain Component Units - an amendment of GASB Statement No. 14*, which improves financial reporting by clarifying the financial statement presentation requirements for certain component units. The provisions in Statement No. 80 are effective for fiscal years beginning after June 15, 2016. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

In March 2016, GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*, which improves accounting and financial reporting for irrevocable split-interest agreements by providing recognition and measurement guidance for situations in which a government is a beneficiary of the agreement. The provisions in Statement No. 81 are effective for fiscal years beginning after December 15, 2016. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

In March 2016, GASB issued Statement No. 82, *Pension Issues - an amendment of GASB Statements No. 67, No. 68, and No. 73*, which addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. The provisions in Statement No. 82 are effective for fiscal years beginning after June 15, 2016. Management does not believe that the implementation of this statement will have a material effect on the financial statements.

Reclassifications

Certain balances in the 2015 presentation have been reclassified to conform to the 2016 presentation.

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Notes to Financial Statements  
September 30, 2016 and 2015

(3) Cash and Cash Equivalents

The bond indenture agreements for the 2010, 2013, 2014, and 2016 series revenue bonds require the establishment of special funds to be held and administered by trustees and by GWA. In addition, proceeds from borrowings to fund capital improvements are maintained by GWA in construction accounts. Funds in these accounts are required by loan agreement or public law to be used to fund capital improvements.

The deposits and investment policies of GWA are governed by 15 GCA 21, *Investments and Deposits*, in conjunction with applicable bond indentures. Authorized investments include obligations issued or guaranteed by the U.S. government or agencies of the U.S. government; bonds, notes or other indebtedness rated in the highest rating by Moody's Investors Service (Moody's) or Standard & Poor's Corporation (S&P); obligations issued by the Federal National Mortgage Association or the Federal Home Loan Mortgage Corporation with remaining maturities of not more than three years; any bonds or other obligations of any state of the U.S. or any agency, instrumentality or local government unit of such state which are rated in the highest rating category of either Moody's or S&P; demand and time deposits in or certificates of deposit or bankers acceptances with U.S. domestic banks which have a rating of their short term certificates of deposit of A-1 or better by S&P and P-1 by Moody's and mature no more than 360 days after purchase; commercial paper which is rating in the highest classification by S&P and Moody's; and money market funds rated AAA or better by S&P.

Custodial credit risk is the risk that in the event of a bank failure, GWA's deposits may not be returned to it. Such deposits are not covered by depository insurance and are either uncollateralized, or collateralized with securities held by the pledging financial institution or held by the pledging financial institution but not in the depositor-government's name. GWA does not have a deposit policy for custodial credit risk.

As of September 30, 2016 and 2015, the carrying amount of GWA's total cash and cash equivalents was \$382,901,023 and \$228,082,777, respectively, and the corresponding bank balances were \$385,219,466 and \$230,096,692, respectively. Of the bank balance amount, \$22,383,354 and \$16,217,638, respectively, is maintained in financial institutions subject to Federal Deposit Insurance Corporation (FDIC) insurance. The remaining amount of \$362,836,112 and \$213,879,054, respectively, represents short-term investments held and administered by GWA's trustees in GWA's name in accordance with various trust agreements and bond indentures. As of September 30, 2016 and 2015, bank deposits in the amount of \$620,067 and \$524,836, respectively, were FDIC insured. GWA does not require collateralization of its cash deposits; therefore, deposit levels in excess of FDIC insurance coverage are uncollateralized. At September 30, 2016 and 2015, \$21,763,287 and \$15,692,802, respectively, of cash and cash equivalents are subject to custodial credit risk.

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Notes to Financial Statements  
September 30, 2016 and 2015

(3) Cash and Cash Equivalents, Continued

Restricted cash and cash equivalents consists of cash received for specific capital projects and for bond indenture related accounts. The composition of current and noncurrent restricted cash and cash equivalents is as follows:

	<u>2016</u>	<u>2015</u>
Current restricted:		
Operation and maintenance	\$ 6,114	\$ 6,107
PUC surcharge	166,763	276,889
Bid Escrow Fund	845,734	648,433
Sewer Hook-up Revolving Fund	62,132	84,684
Revenue Fund	8,778,223	7,035,771
Capital Improvement Fund	10,730,729	4,919,915
Operations and Maintenance Fund	7,133,801	4,833,482
Debt Service Fund	46,983,343	32,751,938
Reserve Fund	4,124,348	2,956,181
Moratorium project	-	5,455
System Development Fund	<u>9,064,792</u>	<u>7,852,884</u>
	<u>87,845,979</u>	<u>61,371,738</u>
Noncurrent restricted:		
2010 Bond Indenture Funds:		
Construction Fund	11,725,749	17,726,953
2013 Bond Indenture Funds:		
Construction Fund	107,622,618	125,495,988
Capitalized Interest Fund	-	2,334,792
2014 Bond Indenture Funds:		
Operations, Maintenance, Renewal and Replacement Reserve Fund	17,423,213	14,753,392
Construction Fund	820,529	894,965
2016 Bond Indenture Funds:		
Construction Fund	138,748,131	-
Capitalized Interest Fund	<u>8,937,544</u>	<u>-</u>
	<u>285,277,784</u>	<u>161,206,090</u>
Total restricted cash and cash equivalents	<u>\$ 373,123,763</u>	<u>\$ 222,577,828</u>

(4) Receivables

Receivables at September 30, 2016 and 2015 are as follows:

	<u>2016</u>	<u>2015</u>
Customers:		
Private	\$ 22,040,481	\$ 22,136,853
Government	<u>3,161,512</u>	<u>4,411,987</u>
	25,201,993	26,548,840
Federal grants receivable	967,641	173,820
Guam Power Authority	1,081,164	344,766
Other	<u>761,009</u>	<u>749,763</u>
	<u>28,011,807</u>	<u>27,817,189</u>
Less allowance for doubtful accounts:		
Private	(10,555,280)	(9,520,932)
Government	<u>(747,300)</u>	<u>(747,300)</u>
	<u>(11,302,580)</u>	<u>(10,268,232)</u>
	<u>\$ 16,709,227</u>	<u>\$ 17,548,957</u>

**GUAM WATERWORKS AUTHORITY**  
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Notes to Financial Statements  
September 30, 2016 and 2015

(4) Receivables, Continued

Substantially all customer receivables are from individuals, businesses and government agencies located on Guam.

(5) Property, Plant and Equipment

Capital asset activities for the year ended September 30, 2016 are as follows:

	Estimated Useful Lives in <u>Years</u>	Beginning Balance October 1, <u>2015</u>	Transfers and <u>Additions</u>	Transfers and <u>Deletions</u>	Ending Balance September 30, <u>2016</u>
<u>Depreciable:</u>					
Utility Plant in Service					
- Water	10-50	\$ 294,780,104	\$ 12,185,819	\$ (703,355)	\$ 306,262,568
Utility Plant in Service					
- Wastewater	25-50	258,799,236	713,171	-	259,512,407
General Fixed Assets	5-10	<u>21,612,653</u>	<u>929,969</u>	<u>(67,835)</u>	<u>22,474,787</u>
		575,191,993	13,828,959	(771,190)	588,249,762
Accumulated Depreciation		<u>(268,037,482)</u>	<u>(15,348,101)</u>	<u>547,970</u>	<u>(282,837,613)</u>
		307,154,511	(1,519,142)	(223,220)	305,412,149
<u>Non-depreciable:</u>					
Land		64,288	190,000	-	254,288
Construction Work in Progress		<u>52,891,167</u>	<u>42,221,096</u>	<u>(13,234,702)</u>	<u>81,877,561</u>
		\$ <u>360,109,966</u>	\$ <u>40,891,954</u>	\$ <u>(13,457,922)</u>	\$ <u>387,543,998</u>

Capital asset activities for the year ended September 30, 2015 are as follows:

	Estimated Useful Lives in <u>Years</u>	Beginning Balance October 1, <u>2014</u>	Transfers and <u>Additions</u>	Transfers and <u>Deletions</u>	Ending Balance September 30, <u>2015</u>
<u>Depreciable:</u>					
Utility Plant in Service					
- Water	10-50	\$ 271,403,753	\$ 23,956,654	\$ (580,303)	\$ 294,780,104
Utility Plant in Service					
- Wastewater	25-50	245,042,975	14,032,751	(276,490)	258,799,236
General Fixed Assets	5-10	<u>18,935,114</u>	<u>3,131,292</u>	<u>(453,753)</u>	<u>21,612,653</u>
		535,381,842	41,120,697	(1,310,546)	575,191,993
Accumulated Depreciation		<u>(254,580,243)</u>	<u>(14,543,396)</u>	<u>1,086,157</u>	<u>(268,037,482)</u>
		280,801,599	26,577,301	(224,389)	307,154,511
<u>Non-depreciable:</u>					
Land		64,288	-	-	64,288
Construction Work in Progress		<u>55,173,953</u>	<u>38,835,533</u>	<u>(41,118,319)</u>	<u>52,891,167</u>
		\$ <u>336,039,840</u>	\$ <u>65,412,834</u>	\$ <u>(41,342,708)</u>	\$ <u>360,109,966</u>

**GUAM WATERWORKS AUTHORITY**  
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Notes to Financial Statements  
September 30, 2016 and 2015

(6) Long-Term Debt

Long-term debt at September 30, 2016 and 2015 is as follows:

	<u>2016</u>	<u>2015</u>
<u>Revenue Bonds:</u>		
2010 Series revenue bonds, initial face value of \$118,825,000, interest at varying rates from 4% to 5.5% per annum, payable semiannually in January and July, principal and mandatory sinking fund payments in varying annual installments commencing with a payment of \$1,055,000 in July 2015, increasing to \$14,460,000 in July 2040.	\$ 116,180,000	\$ 117,770,000
2013 Series revenue bonds, initial face value of \$172,630,000, interest at varying rates from 5% to 5.5% per annum, payable semiannually in January and July, principal and mandatory sinking fund payments in varying annual installments commencing with a payment of \$2,695,000 in July 2020, increasing to \$25,880,000 in July 2043.	172,630,000	172,630,000
2014 Series refunding bonds, initial face value of \$85,600,000, interest at varying rates from 5% to 6% per annum, payable semiannually in January and July, principal and mandatory sinking fund payments in varying annual installments commencing with a payment of \$2,900,000 in July 2015, maturity date in July 2035.	79,380,000	82,700,000
2016 Series revenue bonds, initial face value of \$143,310,000, interest at 5% per annum, payable semiannually in January and July, principal and mandatory sinking fund payments in varying annual installments commencing with a payment of \$420,000 in July 2020, maturity date in January 2046.	<u>143,310,000</u>	<u>-</u>
Total revenue bonds payable	511,500,000	373,100,000
Less current maturities	<u>(5,040,000)</u>	<u>(4,910,000)</u>
	506,460,000	368,190,000
Bond premium – 2016 series bonds	17,870,470	-
Bond premium – 2014 series bonds, net	5,071,307	5,337,921
Bond discount – 2013 series bonds	(1,389,850)	(1,440,950)
Bond discount – 2010 series bonds	<u>(1,948,205)</u>	<u>(2,028,886)</u>
	<u>\$ 526,063,722</u>	<u>\$ 370,058,085</u>

**GUAM WATERWORKS AUTHORITY**  
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Notes to Financial Statements  
September 30, 2016 and 2015

(6) Long-Term Debt, Continued

Revenue Bonds, Continued:

Annual debt service requirements to maturity for principal and interest are as follows:

<u>Year ending September 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2017	\$ 5,040,000	\$ 26,687,801	\$ 31,727,801
2018	5,200,000	26,532,297	31,732,297
2019	5,420,000	26,348,302	31,768,302
2020	8,770,000	26,114,825	34,884,825
2021	9,215,000	25,669,588	34,884,588
2022 through 2026	53,680,000	120,750,275	174,430,275
2027 through 2031	68,930,000	105,502,675	174,432,675
2032 through 2036	88,840,000	85,590,188	174,430,188
2037 through 2041	115,725,000	58,707,875	174,432,875
2042 through 2046	<u>150,680,000</u>	<u>22,918,325</u>	<u>173,598,325</u>
	\$ <u>511,500,000</u>	\$ <u>524,822,151</u>	\$ <u>1,036,322,151</u>

Note Payable:

	<u>2016</u>	<u>2015</u>
Note payable to a bank in the original amount of \$25,000,000, interest at 7.75% per annum, due in monthly installments of principal and interest of \$300,027 through June 2015; refinanced principal balance of \$14,856,080, interest at 5.25% per annum, due in monthly installments of principal and interest of \$285,000 through June 2020.	\$ 11,452,191	\$ 14,197,776
Less current maturities	<u>(2,873,988)</u>	<u>(2,737,804)</u>
	\$ <u>8,578,203</u>	\$ <u>11,459,972</u>

Annual debt service requirements to maturity for principal and interest are as follows:

<u>Year ending September 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2017	\$ 2,873,988	\$ 546,012	\$ 3,420,000
2018	3,042,383	377,617	3,420,000
2019	3,206,007	213,993	3,420,000
2020	<u>2,329,813</u>	<u>48,013</u>	<u>2,377,826</u>
	\$ <u>11,452,191</u>	\$ <u>1,185,635</u>	\$ <u>12,637,826</u>



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Notes to Financial Statements  
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(6) Long-Term Debt, Continued

2010 Series Revenue Bonds

On November 1, 2010, GWA entered into a supplemental indenture agreement for the issuance of \$118,825,000 Water and Wastewater System Revenue Bonds, Series 2010, to finance various water and wastewater capital improvement projects. The 2010 bonds are limited obligations of GWA payable solely from and secured by a pledge of revenues as defined in the indenture. The bonds are subject to mandatory, optional and special redemption prior to maturity.

Total bond proceeds were \$116,404,591, net of a bond discount of \$2,420,409 and GWA incurred closing costs of \$2,805,108. The bond discount has been deferred and amortized on a straight line basis over the average remaining life of the 2010 bonds.

Proceeds of the 2010 series bonds are to be used for the purpose of funding capital improvements of water and wastewater systems, meeting certain requirements of the U.S. Environmental Protection Agency, to paying capitalized interest, to fund a deposit to the Bond Reserve Fund, and paying related issuance costs.

All gross revenues, except System Development Charge (SDC) revenues, of GWA have been pledged to repay the 2010 series bonds principal and interest. The debt service for the 2010 series bonds were \$8,065,600 and \$7,571,400 for each of the years ended September 30, 2016 and 2015 or approximately 8%, respectively, of pledged gross revenues.

2013 Series Revenue Bonds

On December 12, 2013, the Guam Waterworks Authority issued \$172,630,000 Water and Wastewater System Revenue Bonds, Series 2013, to fund capital improvement projects in connection with the financing of its 5 year Capital Improvement Plan. A portion of the bond proceeds was used to fund certain bond reserves, pay for capitalized interest and costs in connection with the issue but, for the most part, the proceeds will be used to pay for capital projects.

Total bond proceeds were \$171,097,017, net of a bond discount of \$1,492,049 and GWA incurred closing costs of \$2,961,409. The bond discount has been deferred and amortized on a straight line basis over the average remaining life of the 2013 bonds.

The 2013 Bonds are limited obligations of GWA and are payable solely from, and secured solely by a lien on and pledge of, revenues to secure the payment of principal and interest on the Bonds. Revenues consist primarily of all gross income and revenue received by GWA from the ownership or operation of the System, subject to the provisions of the Indenture and exclusive of certain surcharges.

The debt service for the 2013 series bonds were \$9,331,688 and \$9,331,688 for the years ended September 30, 2016 and 2015 or approximately 9% and 10%, respectively, of pledged gross revenues.

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(6) Long-Term Debt, Continued

2014 Series Refunding Bonds

On August 7, 2014, GWA issued the 2014 Bonds to refund all of GWA's outstanding Guam Waterworks Authority Water and Wastewater Revenue Bonds, Series 2005, and to pay costs of issuing the 2014 Bonds. The proceeds for the refunding were transferred to an escrow agent who used the proceeds to purchase U.S. Treasury Securities which are to be held by the escrow agent in an irrevocable trust to pay the redemption price of the 2005 bonds and interest thereon to become due on or prior to July 1, 2015 (redemption date). The advance refunding met the requirements of an in-substance defeasance and the 2005 bonds were removed from the accompanying financial statements. The advance refunding resulted in a loss on defeasance of \$2,468,670 representing the difference between the reacquisition price and the carrying amount of the 2005 bonds. Although the advance refunding resulted in the recognition of an accounting loss, GWA in effect reduced its aggregate debt service payments by almost \$13,873,732 over the next twenty years and obtained an economic gain (difference between the present values of the old debt and the new debt service payments) of \$8,352,503.

The Bonds are limited obligations of GWA and are payable solely from, and secured solely by a lien on and pledge of, revenues to secure the payment of principal and interest on the Bonds. Revenues consist primarily of all gross income and revenue received by GWA from the ownership or operation of the System, subject to the provisions of the Indenture and exclusive of certain surcharges.

Total bond proceeds were \$92,533,037, including net bond premium of \$5,619,665 and funds from deposit in 2005 Bond Fund and Bond Reserve Fund of \$1,284,068. GWA incurred closing costs of \$1,536,177. The net bond premium has been deferred and is being amortized on a straight line basis over the average remaining life of the 2014 bonds.

The debt service for the 2014 series bonds commenced on January 1, 2015. The debt service for the 2014 series bonds was \$7,165,014 and \$6,399,425 for the years ended September 30, 2016 and 2015 or approximately 7% and 7%, respectively, of pledged gross revenues.

2016 Series Revenue Bonds

On February 9, 2016, the Guam Waterworks Authority issued \$143,310,000 Water and Wastewater System Revenue Bonds, Series 2016, to fund capital improvement projects in connection with the financing of its 5 year Capital Improvement Plan. A portion of the bond proceeds was used to fund certain bond reserves, pay for capitalized interest and costs in connection with the issue but, for the most part, the proceeds will be used to pay for capital projects.

Total bond proceeds were \$160,364,808, including net bond premium of \$17,054,808. GWA incurred closing costs of \$2,467,854. The bond premium has been deferred and amortized on a straight line basis over the average remaining life of the 2016 bonds.

The 2016 Bonds are limited obligations of GWA and are payable solely from, and secured solely by a lien on and pledge of, revenues to secure the payment of principal and interest on the Bonds. Revenues consist primarily of all gross income and revenue received by GWA from the ownership or operation of the System, subject to the provisions of the Indenture and exclusive of certain surcharges.

The debt service for the 2016 series bonds was \$7,165,500 for the year ended September 30, 2016 or approximately 7% of pledged gross revenues.

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(6) Long-Term Debt, Continued

Bank Loan

On June 15, 2010, GWA entered into a \$25 million bank loan for the purpose of funding a portion of the cost of a moratorium project. Pursuant to the loan, GWA pledged all revenues but subject first, to a consent decree, and second, to the prior pledge and lien and other provisions of the bond indenture agreements for the 2005 series revenue bonds refunded through 2014 series revenue bonds in 2014.

Prior-Year Defeasance of Debt

In prior years, GWA defeased certain revenue bonds by placing the proceeds of new bonds in an irrevocable trust to provide for all future debt service payouts on the old bonds. Accordingly, the trust account assets and the liabilities for the defeased bonds are not included in GWA's financial statements. At September 30, 2016 and 2015, bonds outstanding of \$81,065,000 and \$83,350,000, respectively, are considered defeased.

(7) Change in Long-Term Liabilities

The following summarizes changes in GWA's long-term liabilities for the years ended September 30, 2016 and 2015:

	Outstanding October 1, 2015	Increases	Decreases	Outstanding September 30, 2016	Current
Long-term debt:					
2010 series A bonds	\$ 117,770,000	\$ -	\$ (1,590,000)	\$ 116,180,000	\$ 1,655,000
2013 series A bonds	172,630,000	-	-	172,630,000	-
2014 series A and B bonds	82,700,000	-	(3,320,000)	79,380,000	3,385,000
2016 series A bonds	-	143,310,000	-	143,310,000	-
Notes payable	14,197,776	-	(2,745,585)	11,452,191	2,873,988
Deferred amount:					
Unamortized discount on 2010 bonds issued	(2,028,886)	-	80,681	(1,948,205)	-
Unamortized discount on 2013 bonds issued	(1,440,950)	-	51,100	(1,389,850)	-
Unamortized premium on 2014 bonds issued	5,349,921	-	(269,744)	5,080,177	-
Unamortized discount on 2014 bonds issued	(12,000)	-	3,130	(8,870)	-
Unamortized premium on 2016 bonds issued	-	17,870,470	-	17,870,470	-
	<u>389,165,861</u>	<u>161,180,470</u>	<u>(7,790,418)</u>	<u>542,555,913</u>	<u>7,913,988</u>
Other:					
Employee annual leave	1,403,962	31,967	-	1,435,929	548,845
DCRS sick leave liability	1,540,507	100,990	-	1,641,497	-
Net pension liability	<u>34,047,740</u>	<u>4,148,198</u>	<u>-</u>	<u>38,195,938</u>	<u>-</u>
	<u>\$ 426,158,070</u>	<u>\$ 165,461,625</u>	<u>\$ (7,790,418)</u>	<u>\$ 583,829,277</u>	<u>\$ 8,462,833</u>

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(7) Change in Long-Term Liabilities, Continued

	Outstanding October 1, 2014	Increases	Decreases	Outstanding September 30, 2015	Current
Long-term debt:					
2010 series A bonds	\$ 118,825,000	\$ -	\$ (1,055,000)	\$ 117,770,000	\$ 1,590,000
2013 series A bonds	172,630,000	-	-	172,630,000	-
2014 series A and B bonds	85,600,000	-	(2,900,000)	82,700,000	3,320,000
Notes payable	17,511,563	-	(3,313,787)	14,197,776	2,737,804
Deferred amount:					
Unamortized discount on 2010 bonds issued	(2,109,566)	-	80,680	(2,028,886)	-
Unamortized discount on 2013 bonds issued	(1,492,049)	-	51,099	(1,440,950)	-
Unamortized premium on 2014 bonds issued	5,619,665	-	(269,744)	5,349,921	-
Unamortized discount on 2014 bonds issued	<u>(15,131)</u>	<u>-</u>	<u>3,131</u>	<u>(12,000)</u>	<u>-</u>
	396,569,482	-	(7,403,621)	389,165,861	7,647,804
Other:					
Employee annual leave	1,318,822	89,746	(4,606)	1,403,962	511,267
DCRS sick leave liability	1,255,580	284,927	-	1,540,507	-
Advances for construction	169,299	-	(169,299)	-	-
Net pension liability	<u>38,536,384</u>	<u>615,475</u>	<u>(5,104,119)</u>	<u>34,047,740</u>	<u>-</u>
	<u>\$ 437,849,567</u>	<u>\$ 990,148</u>	<u>\$ (12,681,645)</u>	<u>\$ 426,158,070</u>	<u>\$ 8,159,071</u>

(8) Employees' Retirement Plan

Defined Benefit Plan

A. General Information About the Pension Plan:

*Plan Description:* GWA participates in the GovGuam Defined Benefit (DB) Plan, a single-employer defined benefit pension plan administered by the GovGuam Retirement Fund (GGRF). The DB Plan provides retirement, disability, and survivor benefits to plan members who enrolled in the plan prior to October 1, 1995. Article 1 of 4 GCA 8, Section 8105, requires that all employees of GovGuam, regardless of age or length of service, become members of the DB Plan prior to the operative date. Employees of a public corporation of GovGuam, which includes GWA, have the option of becoming members of the DB Plan prior to the operative date. All employees of GovGuam, including employees of GovGuam public corporations, whose employment commences on or after October 1, 1995, are required to participate in the Defined Contribution Retirement System (DCRS). Hence, the DB Plan became a closed group.

A single actuarial valuation is performed annually covering all plan members and the same contribution rate applies to each employer. GGRF issues a publicly available financial report that includes financial statements and required supplementary information for the DB Plan. That report may be obtained by writing to the Government of Guam Retirement Fund, 424 A Route 8, Maite, Guam 96910, or by visiting GGRF's website - [www.ggrf.com](http://www.ggrf.com).

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(8) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

A. General Information About the Pension Plan, Continued:

*Plan Membership:* As of September 30, 2016, the date of the most recent valuation, plan membership consisted of the following:

Retirees and beneficiaries currently receiving benefits	7,197
Terminated employees entitled to benefits but not yet receiving	4,701
Current members	<u>2,460</u>
	<u>14,358</u>

*Benefits Provided:* The DB Plan provides pension benefits to retired employees generally based on age and/or years of credited service and an average of the three highest annual salaries received by a member during years of credited service, or \$6,000, whichever is greater. Cost-of-living adjustments and other supplemental annuity benefits are provided to members and beneficiaries at the discretion of the Guam Legislature.

Members who joined the DB Plan prior to October 1, 1981 may retire with 10 years of service at age 60 (age 55 for uniformed personnel); or 20 to 24 years of service regardless of age with a reduced benefit if the member is under age 60; or completion of 25 years of service at any age.

Members who joined the DB Plan on or after October 1, 1981 and prior to August 22, 1984 may retire with 15 years of service at age 60 (age 55 for uniformed personnel); or 25 to 29 years of service regardless of age with a reduced benefit if the member is under age 60; or completion of 30 years of service at any age.

Members who joined the DB Plan after August 22, 1984 and prior to October 1, 1995 may retire with 15 years of service at age 65 (age 60 for uniformed personnel); or 25 to 29 years of service regardless of age with a reduced benefit if the member is under age 65; or completion of 30 years of service at any age.

Upon termination of employment before attaining at least 25 years of total service, a member is entitled to receive a refund of total contributions including interest. A member who terminates after completing at least 5 years of service has the option of leaving contributions in the GGRF and receiving a service retirement benefit upon attainment of the age of 60 years. In the event of disability during employment, members under the age of 65 with six or more years of credited service who are not entitled to receive disability payments from the United States Government are eligible to receive sixty six and two-thirds of the average of their three highest annual salaries received during years of credited service. The DB Plan also provides death benefits.

*Contributions and Funding Policy:* Contribution requirements of participating employers and active members are determined in accordance with Guam law. Employer contributions are actuarially determined under the One-Year Lag Methodology. Under this methodology, the actuarial valuation date is used for calculating the employer contributions for the second following fiscal year. For example the September 30, 2014 actuarial valuation was used for determining the year ended September 30, 2016 statutory contributions. Member contributions are required at 9.5% of base pay.

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Notes to Financial Statements  
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(8) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

A. General Information About the Pension Plan, Continued:

As a result of actuarial valuations performed as of September 30, 2014, 2013, and 2012, contribution rates required to fully fund the Retirement Fund liability, as required by Guam law, for the years ended September 30, 2016, 2015 and 2014, respectively, have been determined as follows:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Normal costs (% of DB Plan payroll)	15.86%	15.92%	16.61%
Employee contributions (DB Plan employees)	<u>9.54%</u>	<u>9.55%</u>	<u>9.50%</u>
Employer portion of normal costs (% of DB Plan payroll)	<u>6.32%</u>	<u>6.37%</u>	<u>7.11%</u>
Employer portion of normal costs (% of total payroll)	1.94%	2.05%	2.39%
Unfunded liability cost (% of total payroll)	<u>22.42%</u>	<u>24.09%</u>	<u>24.01%</u>
Government contribution as a % of total payroll	<u>24.36%</u>	<u>26.14%</u>	<u>26.40%</u>
Statutory contribution rates as a % of DB Plan payroll:			
Employer	<u>28.16%</u>	<u>29.85%</u>	<u>30.03%</u>
Employee	<u>9.54%</u>	<u>9.55%</u>	<u>9.50%</u>

GWA's contributions to the DB Plan for the years ended September 30, 2016, 2015 and 2014 were \$846,186, \$1,096,069, and \$1,191,600, respectively, which were equal to the required contributions for the respective years then ended.

*Actuarial Assumptions:* Actuarially determined contribution rates are calculated as of September 30, two years prior to the end of the fiscal year in which contributions are reported. The methods and assumptions used to determine contribution rates are as follows:

Valuation Date:	September 30, 2015
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level percentage of payroll, closed
Remaining Amortization Period:	15.58 years
Asset Valuation Method:	3-year smoothed market value
Inflation:	2.75%
Total payroll growth:	3.00% per year
Salary Increases:	4.50% to 7.50%
Expected Rate of Return:	7.00%
Discount Rate:	7.00%

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Notes to Financial Statements  
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(8) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

A. General Information About the Pension Plan, Continued:

Retirement age:	40% are assumed to retire upon first eligibility for unreduced retirement. Thereafter, the probabilities of retirement are 15% until age 65, 20% from 65-69, and 100% at age 70.
Mortality:	RP-2000 healthy mortality table set forward by 4 years for males and 1 year for females. Mortality for disabled lives is the RP 2000 disability mortality table with no set forwards.
Other information:	Actuarial assumptions are based upon periodic experience studies. The last experience study reviewed experience from 2007-2011, and was first reflected in the actuarial valuation as of September 30, 2012.

*Discount Rate:* The total pension liability is calculated using a discount rate of 7.0% that is a blend of the expected investment rate of return and a high quality bond index rate. There was no change in the discount rate since the previous year. The expected investment rate of return applies for as long as the plan assets (including future contributions) are projected to be sufficient to make the projected benefit payments. If plan assets are projected to be depleted at some point in the future, the rate of return of a high quality bond index is used for the period after the depletion date.

*Discount Rate Sensitivity Analysis:* The following schedule shows the impact of the Net Pension Liability if the discount rate used was 1% less than and 1% greater than the discount rate that was used (7%) in measuring the 2015 Net Pension Liability.

	1% Decrease in Discount Rate <u>6.0%</u>	Current Discount Rate <u>7.0%</u>	1% Increase in Discount Rate <u>8.0%</u>
Net Pension Liability	\$ <u>46,410,540</u>	\$ <u>38,195,938</u>	\$ <u>31,129,778</u>

B. Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions:

*Pension Liability:* At September 30, 2016 and 2015, GWA reported a liability of \$38,195,938 and \$34,047,740, respectively, for its proportionate share of the net pension liability. GWA's proportion of the net pension liability was based on projection of GWA's long-term share of contributions to the pension plan relative to the projected contributions of GovGuam and GovGuam's component units, actuarially determined. At September 30, 2016 and 2015, GWA's proportion was 2.7877% and 2.7319%, respectively.

*Pension Expense:* For the years ended September 30, 2016 and 2015, GWA recognized pension expense of \$3,458,827 and \$362,873, respectively.

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Notes to Financial Statements  
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(8) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

B. Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions, Continued:

*Deferred Outflows and Inflows of Resources:* At September 30, 2016 and 2015, GWA reported total deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<u>2016</u>		<u>2015</u>	
	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Difference between expected and actual experience	\$ 479,024	\$ -	\$ 252,600	\$ -
Net difference between projected and actual earnings on pension plan investments	431,628	-	-	2,591,420
Contributions subsequent to the measurement date	3,545,111	-	3,763,091	-
Changes in proportion and difference between GWA contributions and proportionate share of contributions	<u>212,247</u>	<u>-</u>	<u>-</u>	<u>977,170</u>
	<u>\$ 4,668,010</u>	<u>\$ -</u>	<u>\$ 4,015,691</u>	<u>\$ 3,568,590</u>

Deferred outflows resulting from contributions subsequent to measurement date will be recognized as a reduction of the net pension liability in the following year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions at September 30, 2016 will be recognized in pension expense as follows:

Year Ended  
September 30

2017	\$ 464,254
2018	\$ (277,019)
2019	\$ 340,878
2020	\$ 594,786

Defined Contribution Plan

Contributions into the Defined Contribution Retirement System (DCRS) 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 investment account within the DCRS. Employees are afforded the opportunity to select from different investment accounts available under the DCRS.

Statutory employer contributions into the DCRS plan for the years ended September 30, 2016 and 2015 are determined using the same rates as the DB Plan. Of the amount contributed by the employer, only 5% of the member's regular pay is deposited into the member's individual investment account. The remaining amount is contributed towards the unfunded liability of the defined benefit plan.

Members of the DCRS plan, who have completed five years of government service, have a vested balance of 100% of both member and employer contributions plus any earnings thereon.



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(8) Employees' Retirement Plan, Continued

Defined Contribution Plan, Continued

GWA's contributions to the DCRS Plan for the years ended September 30, 2016, 2015 and 2014 were \$3,271,914, \$3,199,900 and \$2,994,520, respectively, which were equal to the required contributions for the respective years then ended. Of these amounts, \$2,698,925, \$2,667,022 and \$2,495,968 were contributed toward the unfunded liability of the DB Plan for the years ended September 30, 2016, 2015 and 2014, respectively.

Public Law 26-86 allows members of the DCRS to receive a lump sum payment of one-half of their accumulated sick leave upon retirement. GWA has accrued an estimated liability of \$1,641,497 and \$1,540,507 at September 30, 2016 and 2015, respectively, for potential future sick leave payments as a result of this law. However, this amount is an estimate and the actual payout may be materially different than estimated.

Other Post Employment Benefits

GovGuam, through its substantive commitment to provide other post-employment benefits (OPEB), maintains a single-employer defined benefit plan to provide certain postretirement healthcare benefits to retirees who are members of the GovGuam Retirement Fund. Under the Plan, known as the GovGuam Group Health Insurance Program, GovGuam provides medical, dental, and life insurance coverage. The retiree medical and dental plans are fully-insured products provided through insurance companies. GovGuam shares in the cost of these plans, with GovGuam's contribution amount set each year at renewal. Current statutes prohibit active and retired employees from contributing different amounts for the same coverage. As such, GovGuam contributes substantially more to the cost of retiree healthcare than to active healthcare. For the life insurance plan, GovGuam provides retirees with \$10,000 of life insurance coverage through an insurance company. Retirees do not share in the cost of this coverage. Because the Plan consists solely of GovGuam's firm commitment to provide OPEB through the payment of premiums to insurance companies on behalf of its eligible retirees, no stand-alone financial report is either available or generated.

For the years ended September 30, 2016, 2015 and 2014, GWA reimbursed GovGuam for certain supplemental benefits for retirees, including contributions for the abovementioned Plan, as follows:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Supplemental benefits	\$ 406,470	\$ 662,852	\$ 300,000
Contribution to GovGuam (COLA payments)	584,000	584,000	523,800
Medical and dental	<u>2,357,792</u>	<u>2,244,249</u>	<u>1,695,051</u>
	<u>\$ 3,348,262</u>	<u>\$ 3,491,101</u>	<u>\$ 2,518,851</u>

(9) Real Estate Property Transferred by Government of Guam

The Government of Guam, pursuant to Public Law 23-119, assigned to GWA various real estate property under GWA's administration. As of September 30, 2016 and 2015, the property has not been recognized in the financial statements pending completion of formal transfer proceedings.

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(10) Agreements with the United States Navy

Pursuant to a Memorandum of Agreement, the U.S. Navy supplies water through its water system to GWA for distribution and resale to non-military customers. Total purchases from the U.S. Navy for the years ended September 30, 2016 and 2015 are \$6,374,035 and \$5,098,872, respectively.

(11) Commitments and Contingencies

Merit System

In 1991, Public Law 21-59 was enacted to establish a bonus system for employees of GovGuam, autonomous and semi-autonomous agencies, public corporations and other public instrumentalities of GovGuam who earn a superior performances grade. The bonus is calculated at 3.5% of the employee's base salary beginning 1991. GWA did not calculate or pay any bonuses pursuant to the law from 1991 through 2012. As of September 30, 2016, GWA has not assessed the impact of the requirements of the law for fiscal years 1991 to 2015. Therefore, no liability which may ultimately arise from this matter has been recorded in the accompanying financial statements.

Claims

Due to the nature of its operations, GWA is subject to various claims by private and governmental customers and vendors for various alleged losses. Because an estimate of the amount or range of potential loss cannot be determined at this time, no provision for any liability that may result from such claims has been made in the accompanying financial statements.

Contract Commitments

Contract commitments in connection with projects currently in construction approximate \$103,264,319 at September 30, 2016, of which \$21,013,647 will be funded by federal contracts from the U.S. Government.

Program Management Office Services

On February 6, 2012, GWA entered into a contract for Program Management Office (PMO) services to provide a wide variety of as needed program management services and general staff assistance for the development of required utility infrastructure improvements. The PMO provides GWA with additional resources to address the deadlines defined in the November 10, 2011 court order and supports GWA staff in executing 2010 and 2013 Series Bond funded projects, military buildup, and other related tasks. The PMO contract is for a five-year period with an option to extend for two two-year periods. Contract commitments for the PMO services approximate \$4,710,499 as of September 30, 2016.

Operating Lease

In February 2015, GWA moved to a new building owned by Guam Power Authority (GPA). GWA does not currently have a signed lease agreement with GPA but pays for its share of building maintenance costs.

On October 27, 2016, CCU, GWA, and GPA agreed that GWA's cost share for the Gloria B. Nelson building is \$269,170 annually.

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(11) Commitments and Contingencies, Continued

Medicare

The Government of Guam and its component units, including GWA, began withholding and remitting funds to the U.S. Social Security System for the health insurance component of its salaries and wages effective October 1998. Prior to that date, the Government of Guam did not withhold or remit Medicare payments to the U.S. Social Security System. If the Government is found to be liable for Medicare payments on salaries and wages prior to October 1998, an indeterminate liability could result. It has been the practice of GWA and all other component units of the Government of Guam that payment of this health insurance component is optional prior to October 1998. Therefore, no liability for any amount which may ultimately arise from this matter has been recorded in the accompanying financial statements.

Court Order

In 2002, the U.S. Government filed a complaint against GWA and the Government of Guam for alleged violations under the Federal Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA). Because of GWA's non-compliance with the National Primary Drinking Water Regulations, the U.S. Government is seeking both civil penalties and injunctive relief to address such non-compliance. Both GWA and the U.S. Department of Justice, Environmental and Natural Resources Division, mutually agreed in the form of a Court Order to resolve the violation issues.

On June 5, 2003, a Court Order for Preliminary Relief was filed before the District Court of Guam. The Stipulation requires implementation of short-term projects and initial planning measures by GWA. GWA is required to submit a final financial plan in the Master Plan that generates sufficient revenue to cover the cost of all compliance activities and deliverables required by the Court Order for Preliminary Relief, as well as any other anticipated expenses, including any measures necessary to ensure compliance with the CWA and the SDWA and costs related to the infrastructure improvements identified in the Master Plan.

In 2006, the Court Order was amended which required GWA to perform approximately \$220 million worth of capital improvement projects and perform other actions to bring GWA's system into compliance. However, GWA was unable to meet all deadlines set out in the amended Court Order. The District Court ordered the parties to stipulate as to scope of remaining projects and project completion dates; however, the parties were unable to reach an agreement on all items. As a result, on November 10, 2011, the District Court issued an order setting new deadlines for the unfinished projects and establishing new projects that were not part of the amended Court Order. As of September 30, 2016, the financial impact of the order has not been fully known and has been estimated to cost approximately \$450 million to \$500 million, including financing costs.

Primary Treatment Permits

On November 29, 2011, the United States Environmental Protection Agency (USEPA) informed GWA that its primary treatment permits for the Hagatna and Northern District Wastewater Treatment Plants had been denied and that GWA would be required to upgrade the plants to secondary treatment. The upgrades have been estimated to cost approximately \$300 million. GWA intends to negotiate with the USEPA on the timelines for upgrading the plants, which will determine implementation schedule for secondary treatment.

**GUAM WATERWORKS AUTHORITY  
(A Component Unit of the Government of Guam)**

Notes to Financial Statements  
September 30, 2016 and 2015

(12) Contributions Received

Contributions received by GWA during the years ended September 30, 2016 and 2015, are as follows:

	<u>2016</u>	<u>2015</u>
Grants from U.S. Government:		
Received from the U.S. EPA	\$ 5,211,045	\$ 3,506,633
Passed through from the Government of Guam	<u>277,817</u>	<u>80,004</u>
	<u>\$ 5,488,862</u>	<u>\$ 3,586,637</u>

(13) Supplemental/COLA Annuities

As required by Public Law 26-49, as amended by Public Law 27-106, GWA must pay to the Government of Guam Retirement Fund certain supplemental benefits for retirees. During the years ended September 30, 2016 and 2015, GWA levied surcharges of 3.25% and 3.7%, respectively, amounting to \$2,898,325 and \$2,798,030, respectively, in accordance with this legislation. The supplemental benefits are derived from an annual appropriation by the Guam Legislature and do not relate to covered Plan benefits.

(14) System Development Charge (SDC)

On January 29, 2010, PUC approved the implementation of a water and sewer SDC which authorized GWA to charge water and wastewater SDC to applicable customers on and after March 2, 2010. SDC revenues generated and collected are to be expended for costs associated with the construction, expansion, upgrade, and repair of water and wastewater facilities for users who are for the first time connecting property into the Guam water or wastewater system or for builders if the density of the existing connection is increased. SDC revenues may also be used to pay the principal sum and interest and other finance costs on bonds, notes or other obligations issued by or on behalf of GWA to finance such capital improvements or facilities expansion or renovations. During the years ended September 30, 2016 and 2015, SDC revenues were \$1,428,332 and \$1,181,254, respectively.

(15) Related Party Transactions

GWA receives electrical and administrative services from GPA, a component unit of the Government of Guam also governed by the CCU. Electricity purchases from GPA for the years ended September 30, 2016 and 2015 were \$11,225,884 and \$14,026,448, respectively, and GWA was also charged \$981,961 and \$917,250, respectively, for administrative services provided by GPA. Outstanding payables for power purchases, administrative expenses and cost reimbursements owed by GWA to GPA were \$1,164,722 and \$933,386 as of September 30, 2016 and 2015, respectively.

For the years ended September 30, 2016 and 2015, GWA billed GPA a total of \$1,166,911 and \$1,426,618, respectively, for water and sewer charges on the facilities transferred by the Navy to GPA. The amount due from GPA as of September 30, 2016 and 2015 was \$1,086,164 and \$344,766, respectively, which is included in receivables in the accompanying statements of net position.

GWA receives waste disposal services from Guam Solid Waste Authority (GSWA). Waste disposal fees for the years ended September 30, 2016 and 2015 were \$1,565,080 and \$1,343,767, respectively. Outstanding payables for waste disposal fees owed by GWA to GSWA were \$134,837 and \$135,098 as of September 2016 and 2015, respectively, and were included in trade accounts payable in the accompanying statements of net position.

**GUAM WATERWORKS AUTHORITY**  
**(A Component Unit of the Government of Guam)**

Notes to Financial Statements  
September 30, 2016 and 2015

(16) Subsequent Events

In October 2016, Bill 2-33 was passed, enacting two new government retirement plans; the DB Lite plan and the Guam Retirement Security Plan. Beginning 2018, the Security Plan and Defined Contribution plan are to become the primary systems for all new hires.

**GUAM WATERWORKS AUTHORITY**  
**(A Component Unit of the Government of Guam)**

Required Supplemental Information (Unaudited)  
Schedule of Proportional Share of the Net Pension Liability  
Last 10 Fiscal Years\*

	2016	2015	2014
Total net pension liability	\$ 1,370,173,934	\$ 1,246,306,754	\$ 1,303,304,636
GWA's proportionate share of the net pension liability	\$ 38,195,938	\$ 34,047,740	\$ 38,536,384
GWA's proportion of the net pension liability	2.79%	2.73%	2.96%
GWA's covered-employee payroll**	\$ 14,388,631	\$ 13,930,486	\$ 13,733,821
GWA's proportionate share of the net pension liability as percentage of its covered employee payroll	265.46%	244.41%	280.59%
Plan fiduciary net position as a percentage of the total pension liability	53.50%	56.60%	53.45%

\* This data is presented for those years for which information is available.

\*\* Covered-employee payroll data from the actuarial valuation date with one-year lag.

See Accompanying Independent Auditors' Report.

**GUAM WATERWORKS AUTHORITY**  
**(A Component Unit of the Government of Guam)**

Required Supplemental Information (Unaudited)  
Schedule of Pension Contributions  
Last 10 Fiscal Years\*

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Actuarially determined contribution	\$ 3,759,121	\$ 3,684,774	\$ 3,658,076
Contribution in relation to the actuarially determined contribution	<u>3,545,111</u>	<u>3,687,568</u>	<u>3,649,267</u>
Contribution deficiency (excess)	<u>\$ 214,010</u>	<u>\$ (2,794)</u>	<u>\$ 8,809</u>
GWA's covered-employee payroll **	<u>\$ 14,388,631</u>	<u>\$ 13,930,486</u>	<u>\$ 13,733,821</u>
Contribution as a percentage of covered-employee payroll	24.64%	26.47%	26.57%

\* This data is presented for those years for which information is available.

\*\* Covered-employee payroll data from the actuarial valuation date with one-year lag.

See Accompanying Independent Auditors' Report.

**GUAM WATERWORKS AUTHORITY**  
**(A Component Unit of the Government of Guam)**

Schedule of Certain Operating and Maintenance Expenses  
Years Ended September 30, 2016 and 2015

	<u>2016</u>	<u>2015</u>
Salaries, wages and benefits:		
Regular, differential and hazardous pay	\$ 12,829,124	\$ 14,803,408
Pension costs and other benefits	4,771,075	362,883
Overtime pay	886,208	1,001,876
Total salaries, wages and benefits	<u>\$ 18,486,407</u>	<u>\$ 16,168,167</u>
Administrative and general:		
Chemicals	\$ 2,239,147	\$ 2,418,497
Materials and supplies	1,244,535	1,367,765
Insurance	1,213,327	1,236,685
Transportation	574,510	462,372
Public Utility Commission	325,252	432,436
Advertising	190,889	89,572
Training	149,481	147,240
Liability claims	127,412	69,765
Communications	123,178	198,103
Miscellaneous	821,152	80,882
Total administrative and general	<u>\$ 7,008,883</u>	<u>\$ 6,503,317</u>
Contractual:		
Labor, materials and others	\$ 1,855,070	\$ 1,617,961
Accounting	1,037,609	424,662
Equipment rental	697,942	228,475
Property rental	399,343	40,965
Testing	122,810	481,067
Legal	4,348	137
Total contractual	<u>\$ 4,117,122</u>	<u>\$ 2,793,267</u>
Other expense:		
Interest expense	\$ 24,641,647	\$ 20,865,205
Retiree healthcare costs and other benefits	3,348,262	3,491,101
	<u>\$ 27,989,909</u>	<u>\$ 24,356,306</u>

See Accompanying Independent Auditors' Report.



**GUAM WATERWORKS AUTHORITY**  
**(A Component Unit of the Government of Guam)**

Schedule of Construction Work in Progress  
Year Ended September 30, 2016

Project Title	Type	Beginning Balance FY2015	Additions and Transfers	Closed out during FY2016	Ending Balance FY2016
Agat/Santa Rita STP Replacement	Wastewater	\$ 4,984,160	\$ 9,811,785	\$ -	\$ 14,795,945
Baza Gardens Treatment Plant	Wastewater	712,507	2,618,668	-	3,331,175
Central Guam Reservoirs	Water	606,786	19,545	(19,545)	606,786
Chaot and Agana Heights Reservoirs	Water	8,028,624	1,761,750	(5,685,710)	4,104,664
General Plant Improvements	Water/Wastewater	762,530	955,570	(358,887)	1,359,213
Ground Water Chlorination	Water	19,949	4,411	-	24,360
Hagatna Wastewater Treatment Plant	Wastewater	234,740	-	-	234,740
I&I SSES Southern	Wastewater	2,059	1,096,381	-	1,098,440
I&I SSES Northern	Wastewater	461,347	374,126	-	835,473
I&I SSES Central	Wastewater	1,668,026	750,851	-	2,418,877
Island-Wide Real Property Survey and Mapping	Water	-	-	-	-
Leak Detection/Line Replacement Program	Water	734,174	224,714	-	958,888
Leak Repair Program	Water	326,103	3,945,385	(2,493,208)	1,778,280
Lift Station Upgrades	Water	22,815	-	-	22,815
Mechanical/Electrical Equipment	Wastewater	58,665	417,679	(341,320)	135,024
Meter Replacement Program	Water	324,532	2,121,949	(448,309)	1,998,172
Northern District Wastewater Treatment Interim Primary	Water	105,498	123,382	(227,797)	1,083
Treatment Improvements Project	Wastewater	1,626,908	-	-	1,626,908
Ordot/Chalan Pago 2B	Wastewater	622,341	-	-	622,341
Program Management for CWIP Projects	Water/Wastewater	7,455,122	4,770,015	(100,040)	12,125,097
Rehabilitation or Replacement of Sewerlines along Route 1 from Asan "War in the Pacific"	Wastewater	978	1,036,817	-	1,037,795
National Park to Agana Main Pump Station	Wastewater	978	119,324	-	120,302
Rt 2 Agat Water in the Pacific Nat'l Park	Wastewater	978	89,498	-	90,476
Rt 4 Relief Sewer Line Rehab and Replacement	Water	1,565,785	672,951	-	2,238,736
SCADA Project	Water	79,564	-	(79,564)	(0)
Sinajana Transmission Line	Wastewater	992,297	-	-	992,297
Southern Sewer Basin SSES	Wastewater	943,596	-	-	943,596
SSES for Central Sewer System	Wastewater	-	34,152	-	34,152
Taiofofo and Chalan Pago Wastewater Pump Stations	Wastewater	-	55,513	-	55,513
Tumon Hot Spots Sewer Line Rehabilitation	Water	264,128	143,175	(252,192)	155,111
Ugum Treatment Plant Rehabilitation	Wastewater	222,355	-	-	222,355
Wastewater System Upgrades	Wastewater	113,001	230,265	(202,715)	140,551
Water Reservoir Condition	Water	2,455,718	1,206,454	-	3,662,172
Assessment and Rehabilitation	Water	4,371,182	3,596,301	(1,696,246)	6,271,237
Water System Reservoirs Improvements	Water	1,931,816	953,481	-	2,885,297
Well Site Rehabilitation and New Well Site Development	Water	1,931,816	953,481	-	2,885,297
All Others	Water/Wastewater	11,191,905	5,086,954	(1,329,169)	14,949,690
		<u>\$ 52,891,167</u>	<u>\$ 42,221,096</u>	<u>\$ (13,234,702)</u>	<u>\$ 81,877,561</u>

See Accompanying Independent Auditors' Report.

**GUAM WATERWORKS AUTHORITY**  
**(A Component Unit of the Government of Guam)**

System Development Charge Fund  
Schedule of Net Position, Revenue, Expenses and Changes in Net Position  
September 30, 2016 and 2015

ASSETS

	<u>2016</u>	<u>2015</u>
Current assets:		
Restricted cash	\$ 9,064,792	\$ 7,852,884
Receivables	<u>186,025</u>	<u>120,348</u>
	<u>\$ 9,250,817</u>	<u>\$ 7,973,232</u>

LIABILITIES AND NET POSITION

Current liabilities:		
Due to GWA	\$ 61,270	\$ 173,879
Net position:		
Restricted	<u>9,189,547</u>	<u>7,799,353</u>
	<u>\$ 9,250,817</u>	<u>\$ 7,973,232</u>

REVENUES, EXPENSES AND CHANGES IN NET POSITION

Revenues:		
System development charge	\$ 1,428,332	\$ 1,181,254
Other revenues	<u>22,746</u>	<u>18,730</u>
	1,451,078	1,199,984
Expenses:		
Miscellaneous	<u>60,884</u>	<u>-</u>
Change in net position	1,390,194	1,199,984
Net position at beginning of year	<u>7,799,353</u>	<u>6,599,369</u>
Net position at end of year	<u>\$ 9,189,547</u>	<u>\$ 7,799,353</u>

See Accompanying Independent Auditors' Report.

**GUAM WATERWORKS AUTHORITY**  
**(A Component Unit of the Government of Guam)**

Schedule of Operating Revenues  
Years Ended September 30, 2016 and 2015

	2016	2015
Water	\$ 64,339,714	\$ 56,746,066
Wastewater	37,228,780	32,679,297
Surcharges:		
Legislative	2,898,325	2,798,030
System development charge	1,428,332	1,181,254
Other	519,898	706,657
Bad debts expense	(1,034,310)	(980,243)
Total operating revenues	\$ 105,380,739	\$ 93,131,061

See Accompanying Independent Auditors' Report.

**GUAM WATERWORKS AUTHORITY**  
**(A Component Unit of the Government of Guam)**

Schedule of Employee and Other Data  
Years Ended September 30, 2016 and 2015

2016					
Department	Full-Time Employees	Personnel Services	Contractual Services	Materials and Supplies	Total
Administration	52	\$ 4,039,134	\$ 985,651	\$ 88,263	\$ 5,113,048
Accounting	27	1,611,822	952,906	17,877	2,582,605
Engineering	29	580,900	48,056	7,627	636,583
Collection and Distribution	66	2,942,584	765,228	698,445	4,406,257
Utility Services	54	2,924,244	55,232	26,087	3,005,563
Production and Treatment	105	6,387,723	1,310,049	406,236	8,104,008
<b>Total</b>	<b>333</b>	<b>\$ 18,486,407</b>	<b>\$ 4,117,122</b>	<b>\$ 1,244,535</b>	<b>\$ 23,848,064</b>

2015					
Department	Full-Time Employees	Personnel Services	Contractual Services	Materials and Supplies	Total
Administration	45	\$ 2,520,138	\$ 1,324,578	\$ 91,592	\$ 3,936,308
Accounting	25	1,338,557	326,775	281,256	1,946,588
Engineering	28	495,411	804	3,999	500,214
Collection and Distribution	47	3,911,301	537,032	556,001	5,004,334
Utility Services	57	1,566,826	2,044	22,937	1,591,807
Production and Treatment	107	6,335,934	602,034	411,980	7,349,947
<b>Total</b>	<b>309</b>	<b>\$ 16,168,167</b>	<b>\$ 2,793,267</b>	<b>\$ 1,367,765</b>	<b>\$ 20,329,199</b>

See Accompanying Independent Auditors' Report.

# Guam Waterworks Authority

Supplemental Information

# Summary of Borrowings

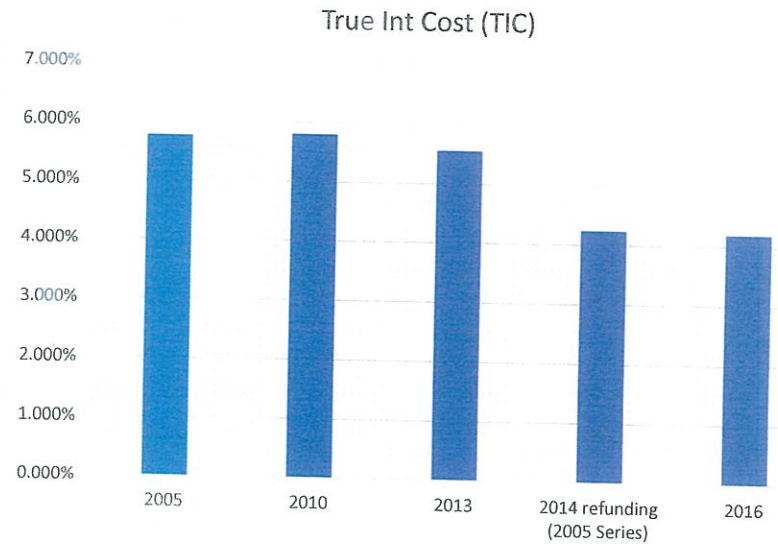
Issuance	Total Funding	Spent/Encumbered	Un-Encumbered
2005 Bond	\$ 89,711,698	\$ 89,711,698	\$ -
2010 Bond	\$ 87,402,000	\$ 81,280,184	\$ 6,121,816
2013 Bond	\$ 139,325,000	\$ 109,790,703	\$ 29,534,297
2016 Bond	\$ 140,019,463	\$ 19,858,363	\$ 120,161,100
<b>Sub-Total</b>	\$ 456,458,161	\$ 300,640,948	\$ 155,817,213
2018 Bond	\$ 67,250,000		\$ 67,250,000
<b>Grand Total</b>	\$ 523,708,161		

# Summary of Borrowings by Project Type

Project Type	Funding to FY2017	Funding FY2018-20	Funding Total
Wastewater	\$ 189,618,400	\$ 8,247,100	\$ 197,865,500
Water	\$ 157,880,506	\$ 114,284,500	\$ 272,165,006
Miscellaneous	\$ 49,252,745	\$ 4,424,910	\$ 53,677,655
Totals	\$ 396,751,651	\$ 126,956,510	\$ 523,708,161

# Summary of Cost of Borrowing

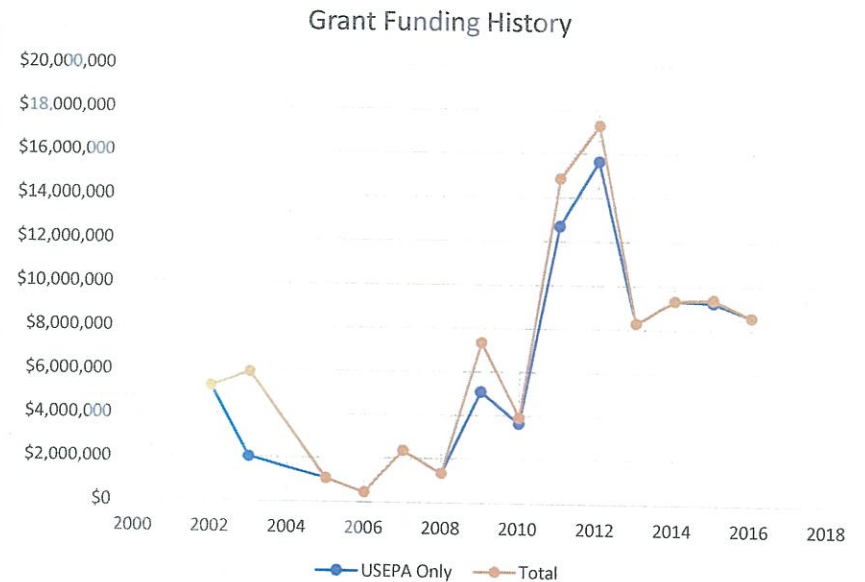
Series Bond	Par Amount	True Int Cost (TIC)	Cap Int No. of Year
2005	\$ 101,175,000	5.76%	2 years
2010	\$ 118,825,000	5.81%	3 years
2013	\$ 172,630,000	5.56%	2 years
2014 refunding (2005 Series)	\$ 85,600,000	4.25%	none
2016	\$ 143,310,000	4.21%	2 years





# Summary of Grant Funding

Total Grants by Year	USEPA Only	Total	Percentage
2002	\$5,260,539	\$ 5,260,539	5.5%
2003	\$2,025,100	\$ 5,915,585	6.2%
2005	\$1,072,000	\$ 1,072,000	1.1%
2006	\$446,737	\$ 446,737	0.5%
2007	\$2,360,984	\$ 2,360,984	2.5%
2008	\$1,326,624	\$ 1,326,624	1.4%
2009	\$5,086,900	\$ 7,336,900	7.7%
2010	\$3,643,854	\$ 3,929,854	4.1%
2011	\$12,701,302	\$ 14,843,502	15.6%
2012	\$15,643,929	\$ 17,286,906	18.1%
2013	\$8,279,959	\$ 8,279,959	8.7%
2014	\$9,324,000	\$ 9,324,000	9.8%
2015	\$9,251,700	\$ 9,377,757	9.8%
2016	\$8,575,000	\$ 8,575,000	9.0%



Guam Waterworks Authority  
 Typical Monthly Combined Water and Wastewater Bill  
 FY2013-2018

	<u>FY13</u>	<u>FY14</u>	<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>
Basic & Nonlife Rate Increases	6.10%	15.00%	14.50%	16.50%	3.50%	4.00%
Lifeline	6.10%	0.00%	0.00%	0.00%	3.50%	0.00%
RESIDENTIAL = 5 KGALS	\$ 55.43	\$ 57.48	\$ 59.82	\$ 62.80	\$ 65.08	\$ 65.75
RESIDENTIAL > 5 KGALS	\$ 72.42	\$ 76.91	\$ 82.01	\$ 88.54	\$ 91.84	\$ 93.29
COMMERCIAL I	\$ 451.75	\$ 516.43	\$ 590.12	\$ 684.65	\$ 711.56	\$ 732.60
HOTEL	\$ 114,190.50	\$ 130,546.86	\$ 149,192.87	\$ 173,076.59	\$ 179,868.97	\$ 185,187.68
GOVERNMENT	\$ 1,089.14	\$ 1,245.33	\$ 1,423.09	\$ 1,650.66	\$ 1,716.03	\$ 1,766.77
AGRICULTURE	\$ 166.03	\$ 177.58	\$ 203.02	\$ 235.31	\$ 235.31	\$ 243.57
IRRIGATION	\$ 104.84	\$ 112.15	\$ 128.23	\$ 148.61	\$ 154.66	\$ 159.23

**CIP FUNDING TABLES**

Funding Source Key:

2010 Bond	B2010
2013 Bond	B2013
2015 Bond	B2015
2018 Bond	B2018
System Development Charge	SDC
Internally Funded CIP	IFCIP
Grants (DOI,EPA,ARRA, etc.)	GRANTS
State Revolving Fund	SRF

**POTABLE WATER FUNDING TABLE**

FS-Funding Source

PW 09-02	Water Wells
PW 09-03	Water Distribution System Pipe Replacement and Upgrades
System Development Charges	

2016		2017		2018		2019		2020	
FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)	FS	(x1000)
B2013	2,256					B2018	1,000		
IFCIP	2,500								
B2015	0	B2015	2,160	B2015	2,160				
SDC	2,000	SDC	500	SDC	500				
B2013	2,332.5	IFCIP	7,900	IFCIP	500	B2018	5,000		
		B2015	49	B2018	2800				
		SDC	2,311						
	2,000		2,811		500		0		0

**WASTEWATER FUNDING TABLE**

WW 09-11	WWTP Priority 1 Upgrades
WW 12-07	Umatac Merizo STP Replacement
WW 17-01	Wastewater Sewer System Expansion
System Development Charges	

SDC	1300				
B2015	942.7	B2015	19,800		
		SDC	1,500		
		SDC	1,683		
	1,300		3,183		



# OFFICE OF SENATOR TELENA CRUZ NELSON

CHAIRPERSON OF THE COMMITTEE ON HOUSING, UTILITIES, PUBLIC SAFETY & HOMELAND SECURITY  
I MINA'TRENTAI KUATTRO NA LIHESLATURAN GUAHAN | 34th GUAM LEGISLATURE

## COMMITTEE REPORT DIGEST

### I. OVEVIEW

The Committee on Housing, Utilities, Public Safety & Homeland Security continued an Informational Briefing with the Guam Waterworks Authority (GWA) on Monday February 6, 2017, 5:30 PM in *I Libeslatura's* Public Hearing Room on the increase of water and wastewater rates.

#### Public Notice Requirements

Public Hearing notices were disseminated via e-mail to all senators and all main media broadcasting outlets on \_\_March 14, 2017 (5-Day Notice), and again on March 17, 2017 (48-Hour Notice).

#### Senators present

Senator Telena Cruz Nelson, Chairperson  
Vice Speaker Therese M. Terlaje, Vice-Chairperson  
Senator Regine Biscoe Lee, Member  
Senator Joe S. San Agustin, Member

#### Panel:

Mr. Miguel Bordallo, General Manager, Guam Waterworks Authority (GWA)  
Mr. Greg Cruz, Chief Financial Officer, Guam Waterworks Authority (GWA)  
Mr. Paul Kemp, Guam Waterworks Authority (GWA)  
Mr. Joseph T. Duenas, Chairman, Consolidated Commission on Utilities (CCU)  
Mr. Simon Sanchez, Board Member, Consolidated Commission on Utilities (CCU)  
Mr. Francis Santos, Board Member, Consolidated Commission on Utilities (CCU)  
Mr. George Bamaba, Board Member, Consolidated Commission on Utilities (CCU)

#### Signed-in:

Mr. Kelly Clark, Guam Waterworks Authority (GWA)  
Ms. Gilda Mafnas, Guam Waterworks Authority (GWA)  
Ms. Vangie Lujan, Guam Waterworks Authority (GWA)  
Ms. Erin Thompson, Office of Senator Regine Biscoe Lee  
Mr. Billy Chang, B&C  
Mr. George Watson, B&C  
Mr. Thomas Cruz, Guam Waterworks Authority (GWA)  
Ms. Bella Fagota, Department of Public Health and Social Services (DPHSS)

### II. SUMMARY OF TESTIMONY & DISCUSSION

The Informational Bearing was Called-to-Order at 5:36 PM.

Senator Telena Cruz Nelson

The purpose of this Informational Briefing is to help the Committee and the general public to understand issues of concern regarding water rates and quality of service. This is the second of a series of meetings.

Today, we will receive the briefing that was presented to Fitch Rating last week and a briefing on the CCU/GWA discussions with USEPA. The Committee will allocate time for a round of questioning on matters covered in your presentation.

I have also asked for the CCU and GWA to present a thorough public explanation of the plan to fix or reduce the leaks.

GUAM CONGRESS BLDG. 163 CHALAN SANTO PAPA HAGÁTÑA, GUAM 96910

Tel: (671) 989-4678/7689 | Email: [senatortcnelson@guamlegislature.org](mailto:senatortcnelson@guamlegislature.org)

This Informational Briefing should be about two hours long. Time permitting, we will also hear from GWA on the ongoing GWA line replacement project and system pressure zone re-alignment program.

A continuation of this Information Briefing will be announced at a later date.

And we will begin with the briefing that the CCU and GWA to Fitch Ratings. The CCU Chairman mentioned in his email of January 20, 2017, that the CCU and GWA management are traveling to San Francisco to present an update on the Finances and Operations of GWA to Fitch Ratings. Quoting Mr. Duenas, "Rating Meetings like these are important to our Ratepayers because the better the ratings that GWA receives, the lower the interest rates on our future Bond Issuances will be and thus lower costs to our Ratepayers."

Senator Nelson invited the panel to testify.

Mr. Joey Duenas

Madame Chairman, we will start with the Fitch presentations which is at the top of your binder (*Please see attached report*). Basically, this is the presentation we gave to Fitch. Just as a side note, its not only are the presentations important, but the presentations are important because we tried to achieve investment grade ratings with all three rating agencies. When we do that, it allows us to better attract bond investors. Some bond investors are not allowed to buy bonds if the entity that is selling bonds is not in that investment grade rated by one, two or three of the rating agencies. So like the Franklin Group is barred from buying if we are not investment grade. Some are barred if Fitch doesn't rate us. That is the importance. It gives us a broader spectrum of potential investors to be rated with investment grade with all three, which GWA and GPA is. Having said that, this is the presentation, and if you want, I can go through it page by page, as we do with the rating agencies, is that what you would like?

Senator Nelson

It is not necessary to go through page by page, we will dissect this document that you gave us today. Can you just tell us what transcribed during the meeting?

Mr. Duenas

What the meeting does is that we try and come and every time we meet with the rating agencies, we tell them the current state of our finances and our operations. And we also tell them where are going to go in the future. When we see them again, we tell them and impress upon them that what we told them we are going to do, we've done, and that the finances that we thought we would achieve with financial results we projecting to achieve, we have achieved. That's in the grand scheme of things of what we do. The importance is that they see as we are going forward, we told them that we are looking to borrow money, towards the end of this calendar year. But in the next fiscal year. We are looking to borrow in this last group of borrowing to finish off whatever court order projects. They asked us when we are going to borrow and we told them towards the end of the year. They asked us if we knew how much but we told them not yet because we are working on one very important thing. We are working on updating our master plan. When we update our master plan, that will tell us the projects that we have finished and the court ordered projects that will definitely be finished then what other projects will be beneficial to our ratepayers that will update our masterplan? Then we will know how much we would want to borrow at that point but all within the authorization we've already received from the Legislature and the Governor.

Senator Nelson

How much were you authorized by the Legislature and the Governor to borrow?

Mr. Duenas

This last time we got through the Legislature and Governor was an authorization for 450 million dollars.

Senator Nelson

You said that this last time? How much all together for the court ordered projects?

Mr. Duenas

The total borrowing for GWA is really 670 million dollars. The initial authorization back in 2005 was for 220 million dollars which we did borrow. We got an additional authorization to borrow the next 450. You have to understand from the 2011 court order, we went back to court with EPA and we sat with the judge, we sat with USEPA and we came up with the updated list. When EPA first came out and we did the first masterplan, I think EPA wanted us to be very aggressive on the timelines and we really couldn't do all those timelines so they wanted us to update them on why we weren't completing the timelines. So as we did in 2011, we sat down with them and we met with them and we went through our plans again and all the court ordered projects and we came up with a schedule. Now we didn't agree on everything. So what

we did was we agreed on some things and said we can get some of these projects done on these dates and then we said, some of them will take us a little longer. They wanted an earlier date, we wanted a longer date. The judge made the decision for us. For example, the Agat-Santa Rita Wastewater Treatment Plant, which will be a brand new secondary wastewater treatment plant from the ground up, which we are building. We'll start to accept wastewater by the end of this month. Is it complete? No. It's just the start. As you start this plant up, there is a period you break it in, you start to do different things. You will flush it out. Within a year, then it will be running its full specs and that will eliminate the need to alleviate the existing Agat-Santa Rita Wastewater Treatment Plant which is polluting the ocean. That project for example was suppose to be completed when we walked out of the 2011 court order. We said that is going to take us a little longer, the judge split the difference and said you are going to be done by December of 2016. We are going to be finished two months are December 2016 but EPA is fine with that. They know we are almost there. If we got to this point today, and we hadn't done one thing, they would be really upset and rightfully so. But they know the progress we made they also know that sometimes they have delays in construction work and there have been some delays but when I say completed, here is what I am talking about, within a year, that plant will be really nice. You will see a lawn, you will see all the fences in, you will see all the nice things like shrubs. But when we start accepting sewage, from the community, there maybe no lawn yet. It maybe just bare ground. Because it is the facility. When we put the facility on, like any, it's a process. It processes the sewage. There may be some things you will need to fine tune, chemicals you add, the amount of time it has to digest, the standing time, so there's a process it goes through. We've already started to train all the people who will be working at this new plant, it's a secondary treatment plant. What we have on Guam, for the most part we have a lot of secondary treatment plants but they are small. They big two treatment plants we have in Agana and Northern are what we call "advanced primary treatment plants" and we meet our advanced primary treatment plant permit requirements. We've met those for several years. So what we are doing is this plant is a good example. We are going to open it soon. But in the grand scheme of things, these are all the work that EPA wanted us to do to have safe drinking water. And to clean our water and our oceans.

Senator Nelson

Just to clarify the Agat-Santa Rita Treatment Plant, where is it currently dumping into right now?

Mr. Duenas

The existing Agat Wastewater Treatment Plant in goes into a common outfall that we have with the US Navy has their own sewage treatment plant on Naval Station. The two plants share a common outfall. It goes out past Apra Harbor.

Senator Nelson

What is the wastewater that causes the area by Jeff's Pirates Cove? Where is that?

Mr. Duenas

That is an interesting plant because it is exactly what we are going to fix. That is the Baza Gardens Treatment Plant. And that currently dumps the effluent processes; doesn't do very well and he effluent is dumped into the Tocha River which goes out by Jeff's Pirates's Cove. We are converting that plant. That was one of the things we tried to negotiate with them instead of re-doing or filing that plant. We are going to make it into a pump station and pump that sewer to Agat-Santa Rita so that we won't be dumping into the river anymore. That's the other thing I said. As we put this plant online, within a year, we are going to be upgrading its capacity. To take in the Baza Gardens. As we pump it into the Agat-Santa Rita Plant, right across the Seabees compound, on the road to Agat, Camp Covington, as we pump the sewage over there, that will allow us to provide sewage services to along Cross Island Road. Within a year, it will be fully operational.

Senator Joe S. San Agustin

Mr. Chairman you mentioned how by December 2016 you are suppose to be up, you will probably be ready by February or March. By the end of this we will be receiveing wastewater. You are operational minus the Baza Gardens. We don't care about cosmetics unless it's a functional building. My concern is that in a year you will be able to accept other sewage, into Agat-Santa Rita area.

Mr. Duenas

We will be taking Agat-Santa Rita sewage to these new treatment plants and will shut off the old treatment plant. Not right away. But as we transition into a new plant.

Senator Nelson thanked the panel for participating in the Informational Briefing and noted a continuation will soon be scheduled.

The Informational Briefing was recessed at 7:30 p.m.

**III. FINDINGS & RECOMMENDATIONS**

- GWA officials stated they have 20 million for internal reserves.
- GWA's spending has been for CIPs and their System Development Fund is 9 million.