

***I MINA 'TRENTAI KUÅTTRO 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 Public Hearing and Informational Briefing: Wednesday, January 25, 2017**

Telena Cruz Nelson <senatortcnelson@guamlegislature.org>  
Bcc: senatortcnelson@gmail.com

Thu, Jan 19, 2017 at 10:45 AM

*Hafa Adai,*

Please disregard Public Hearing Notice sent on Wednesday, January 18, 2017 and see attached for the corrected First Notice of Informational Briefing which will be held on **Thursday, January 26, 2017 at 5:30 P.M.** in the Guam Legislature's Public Hearing Room.

Thank you!

January 19, 2017

**MEMORANDUM**

To: All Senators, Media, and Stakeholders

From: Senator Telena Cruz Nelson, *Chairperson*

Subject: **First Notice of Informational Briefing: Thursday, January 26, 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 **Thursday, January 26, 2017**. This meeting will take place in the public hearing room of *I Liheslaturan 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.

----- Forwarded message -----


From: **Telena Cruz Nelson** <senatortcnelson@guamlegislature.org>

Date: Wed, Jan 18, 2017 at 5:59 PM

Subject: First Notice of Public Hearing and Informational Briefing: Wednesday, January 25, 2017

[Quoted text hidden]

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 **2017.01.19\_TCN First Notice of Informational Briefing.pdf**  
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# 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

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**Second Notice of Informational Briefing: Thursday, January 26, 2017, 5:30 P.M.**

Office of Senator Telena C. Nelson <senatortcnelson@gmail.com> Mon, Jan 23, 2017 at 5:25 PM  
Bcc: phnotice@guamlegislature.org, mcbordallo@guamwaterworks.org, Bernadette Lou Sablan  
<l.sablan@gpagwa.com>, heidi@guamwaterworks.org, thomas@guamwaterworks.org, mis@guamlegislature.org

January 23, 2017

**MEMORANDUM**

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From: Senator Telena Cruz Nelson, *Chairperson*

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 **2017.01.23\_TCN Second Notice of IB on 2017.01.26.pdf**  
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# OFFICE OF SENATOR TELENA CRUZ NELSON

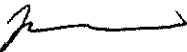
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CHAIRPERSON OF THE COMMITTEE ON HOUSING, UTILITIES, PUBLIC SAFETY & HOMELAND SECURITY  
I MINA'TRENTAI KUÁTRO NA LIHESLATURAN GUAHAN | 34th GUAM LEGISLATURE

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# 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 20, 2017

**VIA E-MAIL:**

[l.sablan@gpagwa.com](mailto:l.sablan@gpagwa.com)

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

**Subject: Invitation to Informational Briefing- Thursday, January 26, 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 **Thursday, January 26, 2017** at the 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. Please feel free to extend this invitation to other interested members of our community. Individuals requiring special accommodations, auxiliary aids, or service shall contact and submit their request to Ramon Salas at my office.

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 Kuátro Na Liheslaturan Guâhan*

cc: All CCU Members

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



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**Invitation to Informational Briefing- Thursday, January 26, 2017, 5:30 P.M.**

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

Fri, Jan 20, 2017 at 1:32 PM

To: Joseph Duenas <jtduenas@hotmail.com>

Cc: Bernadette Lou Sablan <l.sablan@gpagwa.com>

January 20, 2017

**VIA E-MAIL:**

*l.sablan@gpagwa.com*

Mr. Joseph T. Duenas

Chairman

Consolidated Commission on Utilities

578 North Marine Corps Drive

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**Telena Cruz Nelson**

Senator

*I Mina' Trentai Kuâtro Na Liheslaturan Guâhan*

cc: All CCU Members

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 **2017.01.20\_TCN Letter of Invitation to GWA re Informational Briefing 2017.01.26\_Duenas.pdf**  
678K



**Invitation to Informational Briefing- Thursday, January 26, 2017, 5:30 P.M.**

Joseph Duenas <jtduenas@hotmail.com>

Fri, Jan 20, 2017 at 9:57 PM

To: "Office of Senator Telena C. Nelson" <senatorcnelson@gmail.com>

Cc: Bernadette Lou Sablan <l.sablan@gpagwa.com>

Hafa Adai Senator Nelson,

Thank you for your invitation to the Informational Briefing you have scheduled for January 26, 2017. Unfortunately, Fitch, one of the three Rating Agencies, who rates the credit worthiness of the Guam Waterworks Authority (GWA), has scheduled a meeting for the Consolidated Commission on Utilities and the Management of GWA to present an update on the Finances and Operations of GWA. This meeting was scheduled for January 26, 2017 in San Francisco back in December. 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.

In view of this schedule, we request a postponement of the Informational Briefing to the following week. We hope for your favorable response to our request.

Senseramente,

Joseph T. Duenas  
Chairman, CCU

Sent from my iPad

> On Jan 20, 2017, at 1:32 PM, Office of Senator Telena C. Nelson <senatorcnelson@gmail.com> wrote:

>

>

> January 20, 2017

>

> VIA E-MAIL:

> l.sablan@gpagwa.com<mailto:l.sablan@gpagwa.com>

>

> Mr. Joseph T. Duenas

> Chairman

> Consolidated Commission on Utilities

> 578 North Marine Corps Drive

> Tamuning, Guam 96913

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> Subject: Invitation to Informational Briefing- Thursday, January 26, 2017, 5:30 P.M.

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- > Sensesramente,
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- > Senator
- > I Mina' Trentai Kuâtro Na Liheslaturan Guåhan
- >
- > cc: All CCU Members
- >
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- > <2017.01.20\_TCN Letter of Invitation to GWA re Informational Briefing 2017.01.26\_Duenas.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 KUÁTRO NA LIHESLATURAN GUAHAN | 34th GUAM LEGISLATURE

January 25, 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: Response regarding request to postpone Informational Briefing**

Dear Mr. Chairman:

*Håfa Adai!* Thank you for your request of January 20 to postpone the Informational Briefing scheduled for January 26. I understand and acknowledge the importance of your meetings in San Francisco. I agree that your presentation is important to the ratepayers of Guam and I look forward to receiving that same briefing during a continuation of the January 26<sup>th</sup> Informational Briefing.

I am moving ahead with the Briefing as originally scheduled. It was called to allow GWA officials to shed light on issues raised by the Public Auditor in her recent report. We have also requested specific documents that we hope to receive by that time. It will be necessarily limited to allow GWA staff to attend the Public Utilities Commission meeting at 6:30 p.m. the same day.

Tomorrow's Briefing is only the first of a series of meetings to familiarize not only myself as Chair, but also the people of Guam on the relationship of rates to services, and the effort to modernize GWA and bring it to full compliance to applicable regulations and standards.

I thank you for your concern and I look forward to receiving the briefing upon your return from San Francisco. *Si Yu'os Ma'ase!*

*Senserapiente,*

**Telena Cruz Nelson**  
Senator

*I Mina' Trentai Kuátro Na Libeslaturan Guåhan*

cc: Mr. Miguel C. Bordallo, P.E., General Manager, Guam Waterworks Authority

155 Hesler Place Suite 302 *Hagåtña*, Guam 96910 \* (671) 989-7696  
senatortcnelson@guamlegislature.org



**Response regarding request to postpone Informational Briefing**

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

Wed, Jan 25, 2017 at 12:07 PM

To: Joseph Duenas <jtduenas@hotmail.com>

Cc: mcbordallo@guamwaterworks.org, Bernadette Lou Sablan <l.sablan@gpagwa.com>

Bcc: senatortcnelson@guamlegislature.org, jennifer.lj.dulla@gmail.com, pmesa@guamlegislature.org, darryl@guamtech.com

January 25, 2017

**VIA E-MAIL:**

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Mr. Joseph T. Duenas

Chairman

Consolidated Commission on Utilities

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> Chairman  
> Consolidated Commission on Utilities  
> 578 North Marine Corps Drive  
> Tamuning, Guam 96913  
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> Subject: Invitation to Informational Briefing- Thursday, January 26, 2017, 5:30 P.M.  
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> Senator  
> I Mina' Trentai Kuátro Na Liheslaturan Guåhan  
>  
> cc: All CCU Members  
>  
>  
>  
> <2017.01.20\_TCN Letter of Invitation to GWA re Informational Briefing 2017.01.26\_Duenas.pdf>

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

## Committee on Housing, Utilities, Public Safety and Homeland Security

### Informational Briefing

5:00 p.m., Thursday, January 26, 2017

## AGENDA

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

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

Thursday, January 26, 2017 • 5:30 p.m. • Public Hearing Room

Informational Briefing, **Guam Waterworks Authority: Increase of water and wastewater rates**

NAME	AGENCY OR ORGANIZATION (IF ANY)	CONTACT NUMBER	EMAIL ADDRESS
Kelly Clark	GWA	320-6853	kocclark@guamwaterworks.org
Gilda Mafnas	GWA	300-6862	gildam@guamwaterworks.org
Thomas Cruz	GWA	300 6036	thomas@guamwaterworks.org
<del>Josette Sumal</del> Joe			
Bill Chang	GWA contract		
Alan Cepeda		683-0977	cepeda.alan@gmail.com
Josette Sumal			josettesumal@gmail.com
Angela B. Guerrero	N/A	683-4515	guerrero274@yahoo.com





GUAM WATERWORKS AUTHORITY

“Better Water. Better Lives.”

Gloria B. Nelson Public Service Building | 688 Route 15, Mangilao, Guam 96913  
P.O. Box 3010, Hagatna, Guam 96932

January 26, 2017

**VIA HAND DELIVERY**

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

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

Hafad Adai Senator Nelson,

The written testimony herein is intended to provide you with information relative to the subject of Increases of Water and Wastewater Rates. GWA appreciates you providing in advance the specific information request to the subject matter which this written testimony will attempt response to. There were eleven specific information request posed to GWA and I will like to go over each one.

The first information requested was relative to “*Copy of Consent Decree(s)*”. GWA would like to clarify that we are under a 2011 Court Order that requires GWA to meet certain water and wastewater system improvements that comply with the Safe Drinking Water Act and the Clean Water Act. A copy of the 2011 Court Oder (See Exhibit 1) is provided as part of the written testimony. GWA can send via email a pdf file of the Court Order.

The second information request to GWA was a “*Briefing of history on Consent Decree(s)*”. GWA’s failure to meet all of the SDWA and CWA standards came under scrutiny by the United States Environmental Protection Agency (the “USEPA”) which resulted in the USEPA bringing suit against GWA in the United States District Court of Guam (the “District Court”) in December of 2002. On June 5, 2003, GWA and the USEPA entered into a Stipulated Order for Preliminary Relief, which was subsequently amended in 2004 and in 2006 (collectively, the “2003 Stipulated Order”). The 2003 Stipulated Order required GWA to make specified improvements to the System and to undertake certain planning measures by specific dates. GWA did not meet all of the deadlines in the 2003 Stipulated Order, resulting in GWA paying fines totaling \$389,750. In 2010, the USEPA requested that the District Court order GWA to address the then-remaining items in the 2003 Stipulated Order, as well as certain additional actions or improvements. On November 10, 2011, the District Court issued an Order for Preliminary Relief (the “2011 Court Order”) establishing new deadlines for the unfinished projects. The 2011 Court Order superseded the 2003 Stipulated Order and all prior orders. GWA has not been fined for any missed deadlines since March 2010.

The third information requested was in regards to *“Current priorities for addressing the Consent Decree(s)”* GWA submits as part of this written testimony our Court Order Dashboard (See Exhibit 2) which itemizes all specific requirements GWA is to meet. The dashboard describes what GWA is required to do, when GWA is to complete the requirement and the status of the individual requirements.

The fourth information request to GWA was related to *“How do the projects that are in the list of priorities going to address the percentage of water that are captured, for revenue purposes?”* In response to this question there are a few of the projects in the Court Order that will have an effect on the reliability of the distribution system, namely, the requirement for working meters and a meter repair and replacement plan/program. GWA has completed all these court ordered items, and continues the meter program, including QA/QC testing at our meter test facility, as a regular part of our operations. The extensive reservoir replacement program is also a court order item that has an effect on capturing more water for revenue purposes, as replacement of older steel reservoirs which may be leaking at bottom plates will decrease losses, and improve system reliability. This project is still on-going. In addition, GWA has other non-court order programs underway which address this issue, such as:

- a. our on-going line replacement project, which targets specific areas GWA tracks for high incidence of leaks/breaks, pipe age, pipe material issues, and sub-standard installation conditions – this project is in progress, with several phases already completed
- b. system pressure zone re-alignment program, which involves matching distribution zones, reservoirs and pressure control valves to correctly balance system pressures to avoid and prevent leaks and breaks – this project is in progress.

The fifth information request to GWA asked *“Is there an analysis of water loss that compares known amounts pumped versus the amount that is captured by meters for revenue purposes? If report is available, please provide, inclusive of any discussion on this subject presented to the PUC.”* GWA submits as part of this written testimony an internal GWA memorandum (See Exhibit 3) that provides comparative review of the water audits completed which follows the AWWA M36 Standards.

The sixth information request to GWA was related to *“The history of water rate increases and increase in borrowing”* – GWA submits as part of this written testimony a copy of a report titled *“Lummus Report”* dated 2013 and Subsequent order entered (See Exhibit 4) prepared by the consultant to the Public Utility Commission which describes and explains the current 5-year rate plan GWA received approval for. But to summarize the rate increases as part of the current 5-year rate plan GWA increased rates, 6.1% and 15% in 2013, 17.4% in 2014, 16.5% in 2015, and 3.5% in 2016. GWA last planned rate increase for 2017 is 4% but this will have to go through approval process with the CCU and PUC. A more complete history and general information on the utility is also included in Exhibit 4 as the Water Resource Master Plan (See CD).

The seventh information request to GWA was related to the *“Schedule of planned rate increases”* – The current planned rate increase is as discuss above. The next five year rate plan will be negotiated with the PUC starting in early 2018.

The eighth information request to GWA was related to the *“Progress on the One Guam water pool and pricing with the Navy”*. GWA submits as part of this written testimony a copy of the *“One Guam”* Memorandum of Understanding (See Exhibit 5). GWA would like clarify the One Guam initiative does

not currently define or contemplate a “water pool” or “pricing” agreement with the Navy. It does, however, seek to achieve interoperability opportunities of both systems, where it makes sense, to increase reliability, sustainability, safety, and security of the water systems for all consumers on Guam, and to foster joint protection and management of our shared water resources. The initial step toward this goal of interoperability is currently being undertaken – specifically, the GWA operation of a Navy Water System asset, the Tumon Maui Well Facility – with the idea that this first year of GWA operation is a “proof of concept” activity. If GWA and the Navy agree that this first project is a success, it demonstrates that GWA is capable of successfully operating to Navy standards and providing acceptable levels of service, thereby paving the way for additional future interoperability projects. If such successes can be built upon, one by one, consolidated operations, or joint operating agreements, have the potential to save pumping/energy costs, increase reliability, and increase efficiencies to benefit the entire island, both military and civilian populations.

The ninth information request to GWA was to *“Explain the progress toward gravity fed water distribution from the direct delivery to consumers from the well and projected savings in operational budget, if any”*. GWA understands the request to be related to the condition of the water system which includes the source water (i.e water production wells, surface water treatment facility, Navy feed, and spring water facility), as well as the storage and distribution systems. In general, progress towards improving GWA’s operation and reliability of the water system is not without challenges which GWA is tackling head on. GWA has made good strides in water system improvements with the completion of four concrete reservoirs in Barrigada, Agana Heights and Chalan Pago to replaced old and deteriorated steel tanks. The concrete tanks are design to last 75 to 100 years with minimal maintenance as compared to steel tanks. GWA has also implemented within our Capital Improvement Plan a water line replacement program to replace old deteriorated lines that persistently leak. It is also important to note the unique nature of our water resources (NGLA), the historical development of Guam’s water system, and how it has been tapped to serve development that has occurred throughout Guam which resulted in a set of operating conditions and constraints that GWA must manage as effectively as possible. Wells are not located optimally in relation to storage reservoirs, or the communities that they may serve.

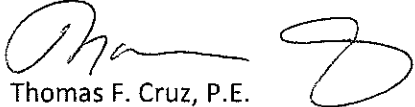
Moreover, as GWA pursues reservoir replacements, and new well development, our planning efforts will involve the use of transmission mains directly to reservoirs where feasible. The AH-Chaot transmission line and reservoir projects are an initial attempt at this concept and are just being completed. In addition all existing distribution systems are still gravity fed, as reservoirs feed the distribution system during periods of peak demand, and fill during periods of reduced demand. The reservoir repair/replacement/ relocation program is approximately 30% complete. As for any operational savings, this will not be appreciable with an increase in dedicated transmission lines, and are more likely to be achieved with a working SCADA system to monitor and control system operation, which GPA and GWA are working towards, jointly.

The tenth information request to GWA was to *“Explain how water rate increases fund wastewater improvements and what is the percentage of overall water rate that goes towards wastewater projects?”* In general, the revenues received from the rate increases are not segregated into water and wastewater project funding allotments. For FY16, \$105M was generated for water and wastewater revenue, (63.2%) was for water and (36.8%) was wastewater.

The eleventh and final information request to GWA was relative to "Operational information that effect rate payers and bond borrowing." GWA's response to this request is that the continued efforts in completing capital projects will increase operational efficiency and compliance that directly relates to whether there would be a need for future rate increase and/or the cost of bond funding due to improved credit rating.

With that I close and again express appreciation for the opportunity to submit this written testimony on the subject of increase to the water and wastewater rates. GWA would be happen to prepare subsequent response to any additional inquiry the Senator may have to the information provided herein.

Si yu'os ma'ase',



Thomas F. Cruz, P.E.  
General Manager (Acting)

Enclosures

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



**FINAL STIPULATION – FOR SUBMISSION TO THE GPUC**

**JOINT STIPULATION RELATIVE TO RATE RELIEF – PETITION OF  
GUAM WATERWORKS AUTHORITY DOCKET NUMBER 09-03**

The Guam Waterworks Authority ("GWA") and Lummus Consultants International, Inc. ("Lummus Consultants"), who serves as independent regulatory consultant to the Guam Public Utilities Commission ("GPUC"), hereafter collectively referred to as "the Parties," hereby enter into this evidentiary Stipulation and make the following recommendations to the GPUC for its consideration:

The Parties make the following recommendations in this Stipulation.

1. GWA has and is continuing to experience very high levels of unaccounted for water ("UAW") losses. GWA and Lummus Consultants agree that GWA needs to make very significant reductions in these losses in the short run in order to achieve long term savings. In light of this, GWA has set aggressive goals over the five year plan that equate to annual reductions of 3% per year in UAW losses. GWA will reprioritize its meter replacement program and its leak detection and repair program ("LD&R") as a result of this Stipulation. GWA will increase spending levels on these two programs, particularly in the early years of the 5 year program, so that associated O&M savings (principally chemicals and power costs) can be realized as soon as possible.

Because of this aggressive LD&R program, GWA will lower its projection of chemical and power costs by the following percentages in each of the 5 years of the financial and rate plan:

- FY2015 ----- 1%
- FY2016 ----- 2%
- FY2017 ----- 3.5%
- FY2018 ----- 5%

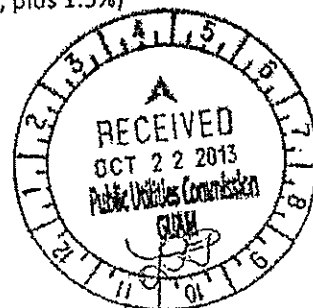
These adjustments will be monitored closely with each annual true-up and readjusted if necessary to reflect actual experience in the prior year(s).

2. To further reduce UAW losses, GWA and Lummus Consultants agree that water and sewer metered sales (and thereby related revenues) should be based on a continuation of the 7.50% increase agreed to in the 2013 true-up stipulation and that it should continue throughout the five years of the current plan. Furthermore, due to the installation of 26,000 more replacement meters in FY2013 and FY2014, water and sewer metered sales starting in FY2014 should be increased 3% and 1.5% in FY 2015. The resulting impact on metered sales is that by FY2015 sales will have increased 12.0% above levels achieved in FY2013. The cumulative effect of these increases is as follows:

- FY2014 ----- 10.5% (7.5% in FY2013, plus 3%)
- FY2015 ----- 12.0% (7.5% in FY2013, 3% in FY2014, plus 1.5%)
- FY2016 ----- 12.0%
- FY2017 ----- 12.0%

**LUMMUS CONSULTANTS**  
INTERNATIONAL, INC.

  
GUAM WATERWORKS AUTHORITY



## FINAL STIPULATION – FOR SUBMISSION TO THE GPUC

- FY2018 - - - - - 12.0%

These adjustments will be monitored closely with each annual true-up and readjusted if necessary to reflect actual experience in the prior year(s).

3. GWA and Lummus Consultants agree that the increase in salaries and benefits should be lowered to a 3% increase in FY2014. Additionally, for each subsequent year of the 5 year plan the annual increase will be limited to a maximum of 3% unless GWA provides additional justification for higher increases in subsequent reviews. The cumulative effect of these decreases on salaries and benefits in the current five-year plan is as follows:

- FY2014 - - - - - (-3.0%)
- FY2015 - - - - - (-6.0%)
- FY2016 - - - - - (-9.0%)
- FY2017 - - - - - (-12.0%)
- FY2018 - - - - - (-15.0%)

These adjustments will be monitored closely with each annual true-up and readjusted if necessary to reflect actual experience in the prior year(s) and economic recovery and growth.

4. While there is considerable uncertainty as to the level of growth in new customers, the Parties agree that, for purposes of forecasting revenues from System Development Charges (SDCs), at least some growth is likely to occur during the 5 year rate plan. Therefore, revenues from SDCs will be forecasted to increase by 5% per year starting in FY2014 and continue for the remainder of the 5 year plan. On a cumulative basis the total increase in SDC revenues will be as follows:

- FY2014 - - - - - 5%
- FY2015 - - - - - 10%
- FY2016 - - - - - 15%
- FY2017 - - - - - 20%
- FY2018 - - - - - 25%

These adjustments will be monitored closely with each annual true-up and readjusted if necessary to reflect actual experience in the prior year(s).

5. GWA and Lummus Consultants have reviewed the proposed 5 year rate plan and collectively propose an additional reduction of \$1.4 Million in O&M expenses to be achieved through active management of such costs during the rate plan period. Lummus Consultants applauds the efforts of GWA to said reductions and agrees to the proposed changes in the plan. The resulting savings are projected to be achieved in the following manner: (1) FY2014 - \$500k, (2) FY2015 - \$500k, and (3) FY2016 - \$400k which equates to a total combined reduction of \$1.4M Million.

The adjustments will be monitored closely with each annual true-up and readjusted if necessary to reflect actual experience in the prior year(s).

## FINAL STIPULATION – FOR SUBMISSION TO THE GPUC

6. GWA and Lummus Consultants agree that miscellaneous fees and charges are significantly below cost, and therefore, these need to be increased to reflect the actual costs involved in providing each service. GWA will perform an analysis to estimate the total costs of providing each service in FY2014 and will file proposed changes in these fees/charges with the PUC in FY 14 in order to begin charging approved fee changes in FY2015. The revenue projections for these services will be adjusted upward to reflect these increased fees. Because the actual increases will not be known prior to FY2015, it is assumed that the current projections of revenues for these fees in FY2015 and the remainder of the five year period will be 25% higher than currently estimated.

These adjustments will be monitored closely with each annual true-up and readjusted if necessary to reflect actual experience in the prior year(s).

7. GWA and Lummus Consultants agree that customers currently receiving private fire protection service (sprinkler systems or private hydrants directly connected to the distribution system) should be charged for that service based on the total cost of providing that service. GWA should have a study performed and a report provided in order to estimate the total costs of providing fire protection service for various size connections; this should be completed no later than FY2015. The study time frame is intended to allow the Authority to begin charging for private fire protection service beginning in FY2016. Lummus Consultants recommends that the GPUC approve the necessary and reasonable expenditures needed to pay for such a study and report. While it is difficult to estimate the cost of such a study, it should cost less than almost all of the projects included in the 5 year plan. Because the revenues to be derived from these charges will not be known prior to FY2015, it is assumed that the revenues to be derived from private fire protection service will equal the estimated number of private fire protection customers, times \$200 per year starting in FY2016 and continue through FY2018. Examples are as follows:

- FY2016 - - - - - 100 Customers x \$200 = \$20,000
- FY2017 - - - - - 100 Customers x \$200 = \$20,000
- FY2018 - - - - - 100 Customers x \$200 = \$20,000

These adjustments will be monitored closely with each annual true-up and readjusted if necessary to reflect actual experience in the prior year(s).

8. GWA and Lummus Consultants agree that there is considerable uncertainty in estimating the total costs of large construction projects, particularly the further out in time the construction is planned to take place. The Parties also recognize that the current estimates include contingency factors that increase the expected costs considerably and, in some cases, be lower than projected today. The Parties agree that with each true-up, the cost estimates of all future projects will be re-assessed in light of changing economic conditions, market competitiveness for large construction projects in Guam and in the region, and realized actual costs for completed projects. To the extent that these assessments indicate that prior cost estimates beyond the then current true-up year are significantly higher or lower than experienced costs, then future cost estimates will be appropriately adjusted. Furthermore, to the extent that future cost estimates are adjusted during a true-up process, the size of associated bond levels will be adjusted proportionately.

## FINAL STIPULATION – FOR SUBMISSION TO THE GPUC

9. GWA and Lummus Consultants have agreed that GWA's Improving financial position as a result of PUC rate approvals and GWA performance may allow for improved ratings from the rating agencies that would in turn result in lower interest rates for the 2015 and 2017 expected borrowings. Thus, for the purposes of estimating the debt service costs associated with the three major bond issues included in the 5 year financial plan, the interest rate on the first major bond issue ("FY2013 bonds") will be set at the level reflective of current financial market conditions, as determined by the bond underwriters (currently 7%). The applicable interest rates for the second ("FY2015 bonds") and third ("FY2017 bonds") bond issues will be set at 5.5% for remainder of the initial 5 year rate plan approved by the PUC. Similar to estimated cost estimates going forward, the assumed interest rates will be recalibrated with each true-up process, and the interest rates will be adjusted to reflect the then-current financial market conditions.
10. GWA and Lummus Consultants agree that the proposed New Financial Policies are reasonable and will, in the long run, improve GWA's financial position, leading to lower financing costs that also benefits ratepayers. However, with the addition of the reserve funds (Working Capital and Cash Reserve and the Working Capital Reserve Fund required for debt service requirements), the need for a large net surplus at the end of the 5 year plan is diminished. Therefore, for the purpose of estimating needed rate increases, the net surplus at the end of FY2018 will be adjusted down to be at a level of approximately \$1 Million (within the 5 year rate model). Thus, the new funds and the net surplus should be set as follows:
- Working Capital and Cash Reserve – as proposed (\$13.5Million at the end of FY2018)
  - Capital Improvement Fund – Working Capital Reserve for Debt Service – as proposed (\$11.185 Million). This fund replaces the \$9.5M Rate Stabilization Fund originally proposed. This change was necessary to comply with bond covenants and will be utilized to reduce rates during the 5 year planning period.
  - The rate model will be set to produce no more than a \$1 Million balance of net cumulative surplus at the end of the 5 year period (original proposal - a cumulative surplus of \$13.9 Million).

These adjustments will be monitored closely with each annual true-up and readjusted if necessary to reflect actual experience in the prior year(s).

11. GWA and Lummus Consultants agree that GWA should consider adopting the rate structure changes outlined below. However, before adopting such changes, GWA should undertake a study that would evaluate the proposed structural change, in addition to other changes that may be more advantageous to the GWA and to its customers. Lummus Consultants recommends that the PUC approve the necessary and reasonable expenditures necessary to obtain such a study and to provide a final report. While it is difficult to estimate the cost of such a study, it should cost less than almost all of the projects included in the 5 year plan. These suggested rate structure changes are expected to result in significant increases in rate revenues without raising the general level of rates to all customers. Additionally, if properly designed, these structural changes will result in a more equitable recovery of rates from those responsible for cost-incurrence.

- Currently GWA applies fixed or "flat" charges for Residential Sewer Service. The appropriate rate structure for these types of charges should be consumption based rather than fixed. Such a structure will enhance equity within the class and is likely to

## FINAL STIPULATION – FOR SUBMISSION TO THE GPUC

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enhance the level of rate revenues received from this class. In recognition of the timing needed to implement changes to rate structure, an assessment of this opportunity should be completed by December 30, 2015, for implementation of recommended changes by FY2016. Because the associated expected increases in rate revenues due to this structural change will not be known until the end of FY2016, for purposes of this Financial Plan it is assumed that rate revenues will not be significantly increased as a result of this change.

- For all residential customers, GWA and GPUC should consider adopting a rate to encourage conservation. For example, GWA, with the approval of the PUC, could add a high tail (3rd) block rate (for all consumption above 10,000 gallons per month). The second block level would be for use between 5,001 gallons and 10,000 gallons per month. GWA and GPUC could set the Residential 3rd block rate at 1.25 to 1.5 times the current second block rate. This type of approach to rate structure is expected to result in charging those using excessive amounts of water a much higher rate. (For example, most residential usage for a given customer in excess of 120,000 gallons per year is used for non-essential or discretionary purposes, such as lawn irrigation, pool filling or car washing, etc.). In recognition of the timing needed to implement changes to rate structure, an assessment of this opportunity should be completed by December 30, 2016, for implementation of recommended changes by FY2017. Because the associated expected increases in rate revenues due to this structural change will not be known until the end of FY2017, for purposes of this Financial Plan it is assumed that rate revenues will not be significantly increased as a result of this change.

12. As a result of the stipulated findings herein, and in order for GWA to meet the projected revenue requirements over the next five fiscal years, Lummus Consultants agrees that GWA should be awarded overall increases in customers' bills, including water and wastewater rates across all customer classes (including the Navy) as follows and a one-time adjustment to Lifeline rates of 7% in FY2017:

- a. FY2014 ----- 15.0%
- b. FY2015 ----- 14.5%
- c. FY2016 ----- 16.5%
- d. FY2017 ----- 7.0%
- e. FY2018 ----- 4.0%

All increases should be implemented on October 1st of the given fiscal year except for FY2014 rates, which shall be implemented on Nov 1, 2013. Based upon the information received by Lummus Consultants at this time, these rates are "just" and "reasonable" pursuant to 12 GCA §§12015 and 12017. These rates will be monitored closely and adjusted with each annual true-up to reflect actual experience in the prior year(s) and new information for the upcoming years.

**FINAL STIPULATION - FOR SUBMISSION TO THE GPUC**

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The parties hereby agree to the terms and covenants set forth in this Stipulation:

**The Guam Waterworks Authority**

Martin L. Roush  
Martin L. Roush, P.E.  
GWA General Manager

Date: 10/10/2013

**Lummus Consultants International Inc.:**

Kathleen A. Kelly  
Kathleen A. Kelly  
Vice President

Date: October 18, 2013

**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	328	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	1,552	1,792	1,456	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	160	144	128	104	168	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	684	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	Sewer Pump Sta - Southern	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>	



BEFORE THE GUAM PUBLIC UTILITIES COMMISSION

	)	GWA DOCKET 13-01
	)	
PETITION OF	)	
GUAM WATERWORKS AUTHORITY	)	RATE DECISION
FOR RATE RELIEF	)	
	)	
	)	
	)	

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**INTRODUCTION**

This matter comes before the Guam Public Utilities Commission (the "PUC") pursuant to the Petition for the Approval of the Guam Waterworks Authority's 5 Year Financial Plan, filed by the Guam Waterworks Authority ("GWA") on June 5, 2013.

**BACKGROUND**

On March 1, 2013, GWA filed its Five Year Financial Plan relative to fiscal years 2014 through 2018 (hereinafter referred to as the "Rate Plan"). On June 5, 2013, GWA filed its Petition for approval of the Rate Plan. On June 5, 2013, Administrative Law Judge ("ALJ") David A. Mair transmitted the Rate Plan to Lummus Consultants International Inc. ("Lummus"), the PUC's consultants for water and wastewater matters, for their independent review.

In accordance with the Ratepayers' Bill of Rights, duly noticed public hearings were held in the village of Hagåtña on October 21, 2013, and in the villages of Asan and Dededo on October 23, 2013. On October 22, 2013, GWA and Lummus entered into a Stipulation agreeing to certain terms and conditions, as well as agreeing to certain proposed rates. On October 25, 2013, ALJ Joephet R. Alcantara filed an ALJ Report detailing his review of the instant rate investigation.



## DETERMINATIONS

Based on the record before the Commission, the ALJ found that Lummus thoroughly reviewed GWA's proposed rate increases contained in the Rate Plan, and that GWA appropriately demonstrated its need to increase its rates, particularly to: fund projects in order to comply with the "2011 Federal Court Order, regulatory mandates and policy statements"<sup>1</sup>; improve "service levels, meeting reserve requirements and contractual obligations such as the 2005 and 2010 Revenue bond covenants"<sup>2</sup>; as well as "to cover the cost of internally financed capital projects of approximately \$50M" and "to cover costs of operation such as sludge disposal, power, chemicals, payroll and Navy water purchases."<sup>3</sup>

The ALJ further found that during this rate investigation, there have been substantial discussion and negotiation between GWA and Lummus which has culminated in a slight reduction of the rate increases originally proposed by GWA by way of Stipulation. As a result, the ALJ recommended that the PUC approve the Stipulation entered into between Lummus and GWA. The ALJ, therefore, recommended that the Commission determine that the proposed rates, as well as the recommendations, set forth in the Stipulation are "just" and "reasonable" as required under 12 G.C.A. §§ 12015 and 12017.

Accordingly, the ALJ recommended that the PUC approve implementation of the 15% rate increase for FY2014, effective November 1, 2013. The ALJ further recommended that the PUC approve the subsequent rate increases, in particular: (1) 14.5%

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<sup>1</sup> Rate Plan, p. 1.

<sup>2</sup> Rate Plan, p. 1.

<sup>3</sup> Petition, p. 2.

for FY2015; (2) 16.5% for FY2016; (3) 7% for FY2017; and (4) 4% for FY2018; and that these remaining rate increases should be implemented on October 1<sup>st</sup> of each fiscal year, subject to an annual true-up to reflect the actual data for the prior year.

In addition, the ALJ further recommended that GWA be ordered to perform the additional obligations set forth in the Stipulation as agreed between the parties, which include conducting the proposed studies indicated in the Stipulation.

The Commission hereby adopts the findings contained in the October 25, 2013 ALJ Report and, therefore, issues the following:

### **ORDERING PROVISIONS**

After careful review and consideration of the above determinations, the October 25, 2013 ALJ Report, the testimonies presented at the public hearings, the Stipulation, and the record herein, for good cause shown, on motion duly made, seconded and carried by the undersigned Commissioners, the Guam Public Utilities Commission hereby ORDERS that:

1. The Stipulation of the parties, attached hereto as "Exhibit A" is approved.
2. In accordance with the Stipulation, GWA is authorized to implement the 15% rate increase for FY2014, effective November 1, 2013.
3. In accordance with the Stipulation, GWA is further authorized implement the following rate increases for subsequent fiscal years, in particular: (1) 14.5% for FY2015; (2) 16.5% for FY2016; (3) 7% for FY2017; and (4) 4% for FY2018; and that these remaining rate increases shall be implemented on October 1<sup>st</sup> of each fiscal year, subject to an annual true-up to reflect the actual data for the prior year.

4. All findings, recommendations, and determinations contained in the Stipulation are adopted and approved; the parties are instructed to fully implement such

determinations and rate relief in accordance with the provisions contained in the Stipulation, and shall undertake all duties and obligations agreed to in the Stipulation;

5. With respect to GWA's miscellaneous fees and charges, GWA shall examine the costs of providing each service and shall file with the PUC any proposed modifications to such fees and charges, during FY2014 in order to implement any such fees and charges by FY2015;

6. With respect to GWA's fire protection system, GWA shall perform a study in order to determine the cost of providing fire protection service for sprinkler systems or private hydrants directly connected to the distribution system; GWA shall complete this study no later than FY2015 in order to implement any fees related to such fire protection service by FY2016;

7. With respect to its fee for Residential Sewer Service, GWA shall perform a study related to switching from fixed fees for its Residential Sewer Service to consumption-based fees; GWA shall complete such a study by December 30, 2015;

8. With respect to adopting a third block water rate to encourage conservation, as outlined in the Stipulation, GWA shall complete its assessment of a third block rate by December 30, 2016.

9. GWA shall continue to file annual true-ups no later than June 1<sup>st</sup> of each year.

10. GWA is ordered to pay the Commission's regulatory fees and expenses, including and without limitation, consulting and other fees, and the fees and expenses associated with conducting the rate investigation and hearing process. Assessment of the


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PUC's regulatory fees and expenses is authorized pursuant to 12 G.C.A. §§ 12002(b) and 12024(b), and Rule 40 of the Rules of Practice and Procedure before the PUC.

**SO ORDERED** this 29<sup>th</sup> day of October, 2013.

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**JEFFREY C. JOHNSON**  
Chairman



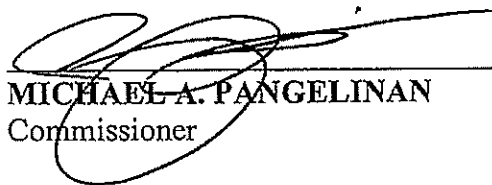
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**JOSEPH M. MCDONALD**  
Commissioner



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**ROWENA E. PEREZ**  
Commissioner



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**MICHAEL A. PANGELINAN**  
Commissioner



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**PETER MONTINOLA**  
Commissioner

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**FILOMENA CANTORIA**  
Commissioner

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# 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 resumed an Informational Briefing with the Guam Waterworks Authority (GWA) on Thursday, January 26, 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 Thursday, January 19, 2017 (5-Day Notice), and again on Monday, January 23, 2017 (48-Hour Notice).

#### Senators present

Senator Telen Cruz Nelson, Chairperson  
Vice Speaker Therese M. Terlaje, Vice-Chairperson  
Senator Thomas C. Ada, Member  
Senator Michael F.Q. San Nicolas, Member  
Senator Regine Biscoe Lee, Member  
Senator Louise Borja Muna, Member

#### Panel:

Mr. Kelly Clark, General Counsel, Guam Waterworks Authority (GWA)  
Ms. Gilda Mafnas, Assistant Chief Financial Officer, Guam Waterworks Authority (GWA)  
Mr. Thomas Cruz, P.E., Acting General Manager, Guam Waterworks Authority (GWA)

#### Signed-in:

Mr. Billy Chang, Brown and Cladwell  
Mr. Alan Cepeda  
Ms. Josette Quinata  
Ms. Angela B. Guerrero  
Ms. Heidi Ballendorf, Guam Waterworks Authority (GWA)  
Mr. Ryan Calvo  
Ms. Bella Fagota, Department of Public Health and Social Services (DPHSS)

### II. SUMMARY OF TESTIMONY & DISCUSSION

The Informational Bearing was Called-to-Order at 5:32 PM.

#### Senator 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 first of a series of meetings. Today's meeting will be brief, as the same witnesses appearing today are scheduled to appear before the Public Utility Commission at 6:30, which is in about one hour. We will continue next week, when officials return from meetings in San Francisco and brief this committee on their efforts there.

The management team for GWA along with the CCU are currently in San Francisco for a bond rating meeting. So we are doing another meeting next week to discuss the water rates and the current issues we discuss today.

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

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

Today, we will begin with issues raised by recent Office of Public Accountability audit Report. In particular, as water rates are rising, we hear that 58% of water pumped out of the ground, treated and transported is not accounted for in customer meters.

We had requested a number of documents in a letter last week. We can take delivery as digital files or access to online content. Thank you very much for the documents we received today. Thank you GWA staff for providing it. This Committee appreciates the cooperation of the management of Guam Waterworks Authority, and members of the Consolidated Commission on Utilities.

Mr. Thomas Cruz reads submitted written testimony from GWA (*Please see attached*).

Senator Nelson

In the audit report, we are looking 58% of the water that is being pumped out or produced. Have you identified the locations of these water leakages?

Mr. Cruz

I know not all the senators have the exhibits related to exhibit 3, the 58% which the auditor had cited as I understand it is how much water was pumped out from our records and how much we billed, which resulted into a 58%.

Senator Nelson

Loss

Mr. Cruz

Yes, the M36 standards that we follow, has a different equation. The exhibit that you have, we essentially tabled out with all the data we've had, from what I believe 2011, in putting into the M36 standard, it shows that we started off when we started looking at the numbers, 60% of non-revenue water. Over the last five (5) years, we brought that down to the standard that we follow to 53%.

Senator Nelson

Is there an error in the report?

Mr. Cruz

We look one number and divided by another. But we use other factors.

Senator Nelson

So the amount of water loss that you are accounting for is 53%?

Mr. Cruz

Yes, we follow a different standard.

Senator Nelson

So we are losing 53% of our water that is produced? How much is that in dollar figures?

Mr. Clark

I wouldn't say that for sure. There are a lot of things to look at. I wouldn't say that it is 53% for sure, it could be...

Senator Nelson

Are you saying that it could be more?

Mr. Clark

No, I think it is probably less. You have to look at what's coming out of the ground and how is that monitored as well. There may be some changes there. We are working on that and will submit more documentation.

Senator Nelson

Mr. Cruz, you stated that it was 53%, what is the acceptable loss?

Mr. Cruz

I would say the standard is 10.

Senator Nelson

10% is the acceptable loss for industry standard?

Senator Lee

Quick research on that, 110 municipalities had an average of 12.1% with a median of 9.9%.

Senator Nelson

That's 110 municipalities. How many are on Guam?

Senator Lee

I think that is in the United States (US). 110 various municipalities throughout the US.

Senator Ada

I ask that question only to show that we still have a ways to go yet but not discounting the fact that some progress has been made.

Senator Nelson

Roughly from the 60% to give or take 53%. What is the cost of the amount of water saved 53%? What is the cost of that water loss?

Mr. Cruz

We will have to get back to you on that number.

Senator Nelson

The reason I am asking that questions is because according to the audit report, 58% of water was lost and there was still a 28.5 million dollar profit. I just want to know what is the cost of the water that is lost? And what is the cost to the rate payer of loosing that water?

Mr. Clark

And you want to know what it will cost to get that water out of the ground?

Senator Nelson

Yes. Thank you. Other than that, I believe from reading historically, that you did have a contractor come out years back to do an assessment on pipe leakage. Were there any results or forward progress to resolve what came out of assessment?

Mr. Cruz

Yes, the M36 that we follow there's an input that is required related to leakage. Initially, leakage was not necessarily the smoking gun, in addition to our meters throughout the community. That wasn't the smoking gun as to why there was such high leakage or non-revenue water. The contractor that came out to help GWA, their goal was to do a sweep if the island along with GWA personnel from which GWA would then continue the leak detection program. It is an annual process from which it get put into the M36 standards. The results of that fieldwork, if I recall correctly and might be mistaken is roughly there was five million gallons of loss related to the leakage in the pipes.

Senator Nelson

When was that?

Mr. Cruz

2011 or 2012.

Senator Nelson

Due to leakage specifically?

Mr. Cruz

Correct

Senator Nelson

Now in the report, they are accounting for 8.37 billion gallons in 2016 of water being lost.

Mr. Cruz

For FY 16?

Senator Nelson

Correct, this recent only.

Senator Nelson

So what is the result of the remainder loss? You were saying that in 2011, there were 5 million gallons loss due to leakage, so I'm thinking that you are being proactive and fixing these leakages right? There is another source that is making us loose water, unaccounted for water. What is that source?

Mr. Cruz

The water system have many components as I mentioned earlier. The meters that read the usage, water distribution pipes and storage tanks that essentially move water out and the production.

Senator Nelson

Do you have the specifics of each measure, the water meter, how much is being lost?

Mr. Cruz

No, I don't have that. I was just describing in general the water system from the production well to the end use it where the meters are, ultimately in a home. Throughout the process, as an example are water production wells. We do have meters installed at the production wells. Similar to how we had some issues, any issues with meters on the consumer side. We can also have the same thing on the production side. Even if we under or over read, the information is obtained and still utilized, it will result in a number. So starting at the production wells, as the counsel had mentioned, we are working towards the meters at the production wells.

Senator Nelson

Do you have the concrete numbers for that?

Mr. Cruz

With respect to how much we lost?

Senator Nelson

Yes.

Mr. Cruz

No, my apologies, I don't have that.

Senator Nelson

Not on hand, but do you have it or is it part of the assessment that you do?

Do you have an assessment of this?

Mr. Cruz

We are working on it, yes. When the meters are working, pulling it out and checking it at our meter testing lead on weather its appropriated, weather its calibrated, is part of the process. Another big part of all of this is meters have to have certain space in front of it and behind it in order for it to work correctly. We have wells that have been built for many years and we have the configuration of certain wells that are not conducive for the meters to read appropriately, then it ends up being another CIP project that that's not about the meter but providing the appropriate length in front of after the meter. When water goes past it, its reading accurately to the manufacturers specifications. In many cases, we do have at our production wells not that set.

Senator Nelson

You mentioned the CIP, how far have you gotten for that in addressing this water loss?

Mr. Cruz

With respect to the production well or overall?



Senator Ada

Didn't GWA at one time have a program to master meter various segments of the island so that we knew for example could measure how much water was coming into Dededo, how much was being built and if there was a very low percentage being built, than that probably indicates a lot of...is that effort still underway?

Mr. Cruz

It is, we started a construction project specific to that, but only captured certain parts of the island. Essentially we called it the district meter and as Senator Ada described it, helps us know how much volumes of water is going to a certain part of the island and then with the customer meters we have, do a comparison. That is still on-going.

Senator Nelson

Do you have some segments in place?

Mr. Cruz

Yes we do. We've run into some challenges because we have an old system and in some situations, shutting off a main line to put in a district meter, can potentially shut off a whole village. We are re-evaluating that. We have put in a few district meters that the data is being used to assess the situation. It is not by any means, at this point in time, something that is helping us at this time because there are other pieces of the project that needs to happen.

Senator Ada

I guess the issue here is why are these rates going up right and so GWA has to go out and borrow approximately how much already?

Ms. Mafnas

About 500 million dollars.

Senator Ada

About 500 million dollars right? What would you say is the proportion, that percentage of that 500 million dollars that was used to improve the wastewater system versus the water system? Because the consent decree was triggered by deficiencies in the wastewater system, wasn't it?

Mr. Clark

Primarily.

Mr. Cruz

Yes.

Senator Ada

What I am getting at is that yes, we do have a lot of leaks in the system. It needs a lot of attention. But the rabbit that GWA has been chasing because that is what EPA told it to chase was to fix up the wastewater system so that we don't have *taki* water in the streets anymore. We are able to process the wastewater so that when we discharge out into our ocean, we are not killing our reef. Can you give me a rough estimate as to of the 500 million dollars that has been borrowed, how much of that was invested for wastewater. Because it was just very recently that you started using some of that money to rebuilt water reservoirs. I don't think you have built any new water wells yet. And you really haven't had that many distribution line replacements so really, do you have a feel out of the 500 million dollars, that has been borrowed, was it 400 million that has been invested in the wastewater system and as a result, a watered system that has been deteriorating already has continued to deteriorate and which explains why we have such a high unaccounted amount of water.

Mr. Clark

I would say that one of the things we will have to get back to you because the money that is there is in a pool. We aren't taking bond money and splitting it between regular CIP money. We can get back to you next week and give you pretty good numbers. They aren't apples and oranges. Its all one lump and you have to take it out. We can work on that.

Mr. Cruz

If I can potentially answer it in another way, the *Hagatna* Treatment Plant in 2009 we spent about 20 million to get that plant to a certain condition as well as build a new outfall in northern district. Similarly in northern district, we installed a new outfall and conducted a CIP to meet primary treatment standards as part of the court order. Our 2011 court order required GWA to meet primary treatment standards which about, I guess I will call it the initial project and then another 10 or 11 in *Hagatna* and then for northern district, maybe 15-20 million for northern district. Those are two largest wastewater treatment plants and at this point in time, our Agat Wastewater Treatment Plant, we are

constructing a brand new Agat Wastewater Treatment Plant which has a price tag of 57 million dollars to essentially meet secondary treatment limits for that particular treatment plant. Those are the three wastewater treatment plants which we are spending a lot of funds on.

Senator San Nicolas

Based on the information, first of all, thank you Madame Chair for your inquiry. It is very enlightening and thank you GWA for the information. I'm very much a numbers guy and I am using my calculator and punching away. Earlier in the conversation, it was mentioned Mr. Cruz that in 2011, there was a 5 million gallon loss of water?

Mr. Cruz

The leakage, the amount of water when they did use the machine's equipment to go out and find leaks estimate the amount, log and track it down.

Senator San Nicolas

5 million and then as Madame Chair pointed out, the audit for 2016 shows an 8 billion gallon loss.

Senator Nelson

But not specifically only for leakage.

Mr. Cruz

Correct.

Senator Nelson

So we need to target the areas where we are loosing the most water, right? And you are saying it is not through pipe leakage, essentially.

Mr. Cruz

We don't know. One thing about water system is some areas of pressures of pipes can be as high as or greater than PSI. we have some old asbestos pipes. We can have a leak but might not find it as fast. How much is coming out of that particular leak is one thing but the water distribution system, for lack of a better term is very alive.

Senator Nelson

So we don't know?

Senator San Nicolas

Based on the numbers we are talking about here though we had a 5 billion loss in 2011 that went up to 8 billion in 2016.

Senator Nelson

5 million in 2011.

Senator San Nicolas

5 million in 2011, 8 billion in 2016.

Senator Nelson

Yes, we understand.

Mr. Cruz

For us, that's apples and oranges because the 5 million was specific to leakages that were estimated.

Senator Nelson

Now we don't know how much is being leaked out or if it is the pipes, if it's the meters, unaccounted for water. We don't know the source of the areas of the unaccounted for water.

Mr. Cruz

It is fair to say that but it is also fair to say we are toward towards all of them.

Senator Nelson

You are working towards..

Senator San Nicolas

To go from million to billion blows my mind. But the reason that is so concerning Madame Chair because if you look throughout the testimony, from 2013 to 2016, water rates went up a compounded 72% from 2013 to 2016 while water losses. Maybe it wasn't 5 million, it was higher in 2011 but its at 8 billion today. So we have a 72% increase to the consumer but more water loss. I'm just trying to understand but I do appreciate the question from Senator Ada because then it becomes a little more clear that amount was probable used to meet consent decree orders and those consent decree orders were more targeted to wastewater, so were these increases over the years, only for the wastewater line item in the billing or was that to the overall billing?

Mr. Cruz

Overall.

Senator San Nicolas

So somebody like my family who is from the south and a lot of us are on septic tank, we saw our water rates go up to meet a consent decree but we don't utilize at least not as much, we don't utilize the wastewater treatment as much as all the other rate payers throughout the island. That doesn't sound very equitable to me. If these increases were to meet consent decrees, relative to wastewater, why didn't we increase the wastewater rate only or why didn't we increase the overall water rates for all the rate payers when the utilization wasn't equal?

Mr. Cruz

I would like to defer to our CFO and General Manager to when they get back.

Senator San Nicolas

Just as a follow-up Madame Chair, the reason why it is a big deal is because on Page 3 on the last paragraph wastewater is only 36% of the revenue that is generated while water is 63% of the revenue that is generated which means that if wastewater is incurring more of the cost, in order to fund the consent decree, and if more of this borrowing was to finance improvements to wastewater operations, there's room to increase the wastewater charges to pay for that without having to also increase the water charges. This has been a very enlightening experience and I really thank you for the work that went into the inquiry. And if we can't get the answers to why the cost of the consent decree compliance was applied to general water rates, as opposed to the wastewater rates in particular, that would be very helpful.

Ms. Mafnas

We will defer this and give you the response.

Senator Ada

You are in the finance department, correct? Do you deal with the tariffs?

Ms. Mafnas

Yes.

Senator Ada

Tariff formulations?

Ms. Mafnas

Yes.

Senator Ada

You do. And Tom you are the Chief Engineer, correct?

Mr. Cruz

Correct.

Senator Ada

You are strictly on the technical side of things, right?

Mr. Cruz

Yes.

Senator Ada

You don't really handle bond issues and what not?

Mr. Cruz

The extent of my involvement is the planning of the CIPs. In some degree, I am involved with working with operations and management to plan the next projects.

Senator Nelson

Your primary job description is planning for CIPs, right?

Mr. Cruz

Correct, overseeing the engineering department.

Senator Nelson

What CIPs have been done to mitigate this? To mitigate the unaccounted for water. Is there money available to start taking action now? Do you have some kind of development fund that you can start mitigating this right away?

Mr. Cruz

Yes, the monies we received as I described earlier in the meter replacement program, that was one of the first capital projects to go out and ensure we have accurate reading meters and all our customers. It was speculated early on that might be where the smoking gun was, and where water would be going also to account the age of the system that there are leakages there. So GWA has replaced all but two of our older meters.

Senator Nelson

Even though you have been replacing the meters, you still see a significant loss through the years?

Mr. Cruz

Correct.

Senator Nelson

So that would be a red flag to say this is not the issue, where is the issue?

Mr. Cruz

Correct. All of that is when we talk about the leakage, when our dispatch receives all the reports of leaking, getting the guys out there and replacing or clamping it. Clamping it is an issue and the initial process but replacing the pipe because is it old and repairing it is the next step.

Senator Nelson

I need to remember Mr. Cruz that you are an engineer and you will give me details down to the nitty gritty. Do you have a plan in place now to mitigate the loss and is there some kind of funding whether it's a system development fund or anything like that available for you to take action now and are you doing that?

Mr. Cruz

The funding that is still available in a bank account related to or from the bonds that we borrowed are available.

Senator Nelson

How much is that?

Mr. Cruz

I apologize Senator, I don't have off the top of my head. There are funds available to continue line replacement, program, moving toward the production side of the house, so that one plus one does equal to two (1+1=2) and not half way in the middle. So it is a continued process.

Vice Speaker Terlaje

I thank you for having this hearing and thank you for coming in. I know a lot of your management team is off-island right now, so I really appreciate you coming in to answer, for me it is very basic. The audit report summarizes things, I wanted to hear more in detail your plan. From the audit summary it says, "Unaccounted for non-revenue water is due to leakage, malfunctioning meters, and water used for line

flushing, fighting fires and similar activities. Is there any other things you can point to for water loss? You were saying there might be other things. (Other reasons? Can you tell us any of those right now?

Mr. Cruz

Theft, we do have a section in our customer service area where it is revenue protection, when ever our operators find a line that is not connected to a meter, they will track it back. Its small percentage but that's an example of where water can be lost.

Vice Speaker Terlaje

Do you think out of these activities, leakage would be the highest percentage? Malfunctioning? Do you have any guesses at this point?

Mr. Cruz

I don't want to rule out the meters, because we went through this whole program of replacing them. It did crank up what we were capturing a little more but the other side of the equation is the source. If the production well normally for example, produced 200 gallons per minute, and we keep reporting it, on a monthly basis, when you turn it into a monthly rate, for me as an engineer, there is an error because you are dealing with a pump that in some cases, is not consistent throughout the month. It's a machine so you can get some wear and tear and therefore it starts to get inefficient. So even if we started pumping out as 200 gallons per minute, over time, that pump may not produce 200 gallons per minute and it might be doing 190 then that relates to the meter.

Senator Nelson

Is there a tracking system in place to determine the life cycle of the issues?

Mr. Cruz

Our SCADA system that we have wanting to implement. We have guy literally driving to the wells doing the information but part of the projects we are working on is providing SCADA.

Mr. Clark

That is funded and is underway. We will see quite a bit out of that. It's a wireless electronic system that is going to manage, control and track all, everything that is happening throughout the system. We did a joint MOU with GPA to make it cheaper. A lot of what they are doing, we are involved in. They are running out wells and providing electricity to our wells.

Vice Speaker Terlaje

We have the problem, the potential to where the problem is coming from and we got the potential to fix it.

Senator Nelson thanked the panel for participating in the Informational Briefing and noted a continuation will be scheduled once the GWA management team and CCU members are back on-island from their bond rating meetings.

The Informational Briefing was recessed at 6:30 PM.

### III. FINDINGS & RECOMMENDATIONS

- OPA audit reports that 58% of the water loss but GWA stated that they follow the M36 standards, which has a different equation. GWA stated that in 2011, they started using the M36 standard, which was at 60% of non-revenue water, but over the last five (5) years, they brought the water loss percentage to 53%.
- GWA stated that the acceptable industry standard for water loss is around 10%.
- GWA has gone out to borrow 500 million dollars and plans on going out to borrow again.
- GWA clarified that they aren't taking bond money and splitting it between regular CIP money.