

**BEFORE THE GUAM PUBLIC UTILITIES COMMISSION**

<b>IN RE: REQUEST BY THE GUAM</b>	<b>)</b>	<b>GWA DOCKET 20-03</b>
<b>WATERWORKS AUTHORITY</b>	<b>)</b>	
<b>FOR APPROVAL OF THE</b>	<b>)</b>	<b>ALJ REPORT</b>
<b>ISSUANCE AND SALE OF GUAM</b>	<b>)</b>	
<b>WATERWORKS AUTHORITY</b>	<b>)</b>	
<b>WATER AND WASTEWATER</b>	<b>)</b>	
<b>REVENUE BONDS</b>	<b>)</b>	
<hr/>	<b>)</b>	

**I. INTRODUCTION**

This matter comes before the Guam Public Utilities Commission (the “PUC”) pursuant to the Petition for Approval of the Issuance and Sale of Guam Water and Wastewater System Revenue Bonds and to Approve the Associated Documents, (the “Petition”), filed by the Guam Waterworks Authority (“GWA”) on February 7, 2020.<sup>1</sup>

**II. DISCUSSION**

**A. Bond Review Authority**

Pursuant to 12 G.C.A. §12105, GWA cannot enter into any contractual agreements or obligations which could increase rates and charges without the PUC’s express approval. Additionally, pursuant to GWA’s Contract Review Protocol, all externally funded loan obligations and other financial obligations,

---

<sup>1</sup> Petition, filed February 7, 2020.

such as lines of credit, bonds, etc., in excess of \$1,000,000, and any use of such funds, must be approved by the PUC.<sup>2</sup>

**B. February 7, 2020, Petition for Approval of the Issuance and Sale of Water and Wastewater System Revenue Bonds**

GWA's Petition seeks two approvals from the PUC: (1) approval for the issuance of revenue bonds in the amount of \$134M; and (2) approval for the refunding of its 2013 Bond Series. With regard to the Bond Issuance, the purpose is to fund capital projects required to meet the Order for Preliminary Relief in Civil Case No. 02-0035 in the United States District Court dated November 10, 2011, and for other capital projects necessary for regulatory compliance, system improvement, funding of a capitalized interest account and a debt service reserve account.<sup>3</sup>

With regard to the Bond Refunding, GWA maintains that it is authorized under Public Law 32-069 to refund the 2013 Bond Series provided that the present value of debt service on the refinancing bonds shall be at least two percent (2%) less than the present value of debt service on the bonds being refinanced. GWA submits that, according to its Underwriters, refunding the 2013 Bonds in May would result in substantial debt service savings to the ratepayers.<sup>4</sup>

On February 27, 2020, GWA filed an Amendment to its Petition.<sup>5</sup> Included with the Amendment were GWA's list of proposed Projects for FY2020 through

---

<sup>2</sup> See Contract Review Protocol for Guam Waterworks Authority, Administrative Docket 00-04, p. 1.

<sup>3</sup> Petition, p. 1.

<sup>4</sup> See Public Law 32-069 ("...the present value of debt service on the refinancing bonds *shall* be at least two percent (2%) less than the present value of debt service on the bonds being refinanced...").

<sup>5</sup> Amendment to GWA's Petition ("Amendment"), filed February 27, 2020.

2024, an updated Seventh Supplemental Indenture, and a GEDA Resolution approving GWA's Bond Issuance and Refunding.<sup>6</sup>

C. CCU Resolution No. 15-FY2020

Pursuant to Resolution No. 15-FY2020, the Consolidated Commission on Utilities (the "CCU") authorized the issuance of the new bonds and the subject refunding bonds. According to the CCU, the Bond issuance is needed "for additions and improvements to the System, including certain water production, treatment and distribution projects, certain wastewater collection and treatment projects, and certain electrical projects." Projects "requiring immediate financing" were "for the Court Order (approximately forty million dollars)", potential consent decree projects (approximately thirty-nine million dollars), water loss control (approximately twelve million dollars), and projects needed to address environmental safety and compliance, system capacity, operational efficiency and other requirements (\$13,860,000).<sup>7</sup>

The CCU also authorized issuance of "a principal amount not to exceed a principal amount sufficient to provide funds for the redemption or retirement of such Prior Bonds, plus the related costs of ...such redemption or retirement (the additional bonds authorized to be issued for such purposes, the "Refunding Bonds)."<sup>8</sup> Furthermore, these bonds "shall be issued in such series and amounts and at such times as the Chair of the Commission, the Vice Chair of the Commission or the General Manager of the GWA (the 'Designated Officers') deem appropriate, provided that such bonds have a final maturity not later than 30

---

<sup>6</sup> Id.

<sup>7</sup> GWA Resolution No. 15-FY2020, p. 1.

<sup>8</sup> Id. at p. 4.

years from their date of issuance with respect to the New Bonds, and not later than the final maturity of the Prior Bonds with respect to the Refunding Bonds, bear interest at such rate or rates and are sold for such price or prices not exceeding any limitation established by the Legislation, and are issued and sold pursuant to the Indenture and otherwise in compliance with the provisions of the Act.”<sup>9</sup>

Pursuant to the Resolution, the CCU also approved the Bond Documents, which include the Supplemental Indenture, the Supplemental Continuing Disclosure Agreement and the Bond Purchase Agreement, and authorized GWA to execute such documents, subject to the approval of the Legislature, GEDA, and the PUC.<sup>10</sup>

D. Public Laws 28-71, 30-145, and 32-069

Collectively, these Public Laws authorize GWA to issue new bonds and refunding bonds. In accordance with the authority provided by the Legislature in these laws, GWA may issue the \$134M bond issuance for which it requests PUC approval. Furthermore, the “refunding” bonds are authorized by P.L. 32-069. As stated in the Petition: “Under Section 4(a) of Public Law 32-69, GWA is authorized to issue up to \$670M in revenue bonds to fund capital improvement projects. Specifically, P.L. 32-69 authorized GWA to issue an additional \$450M in bonds beyond the \$220M that GWA had issued prior to the Passage of P.L. 32-69. To date, GWA has issued a total of \$536M out of the \$670M authorized with the 2005, 2010, 2013, and 2016 Series Bonds.”<sup>11</sup>

---

<sup>9</sup> Id.

<sup>10</sup> Id. at p. 6.

<sup>11</sup> Petition, p. 2.

In P.L. 32-069, the Guam Legislature approved GWA's issuance and sale of "fixed rate revenue bonds in one or more series or issues to refinance the outstanding revenue bonds of the Authority . . . provided, that the issuance, terms and conditions of the refinancing bonds shall have been approved by the Guam Public Utilities Commission and the Guam Consolidated Commission on Utilities, and that the sale of the bonds shall be approved by the Board of Directors of GEDA; and further provided, that such refinancing bonds shall have a principal amount sufficient to provide funds for the payment of all bonds to be refinanced thereby (the 'prior bonds'), and in addition for the payment of all expenses incident to the calling, retiring or paying of such prior bonds and the issuance of such refinancing bonds....".<sup>12</sup> Refinancing or Refunding of bonds is subject to various other conditions which were referenced in CCU Resolution No. 15-FY2020, and the further requirement that the present value of debt service on the refinancing bonds shall be at least two percent (2%) less than the present value of debt service on the bonds being refinanced.<sup>13</sup>

Accordingly, GWA is authorized to issue new bonds and to refinance the outstanding revenue bonds in accordance with the above-cited requirements.

E. Guam Economic Development Authority Approval

On February 20, 2020, the Board of Directors of the Guam Economic Development Authority ("GEDA") enacted Resolution No. 20-07.<sup>14</sup> GEDA approved the issuance and sale of the 2020 Bonds in an aggregate principal amount not to

---

<sup>12</sup> P.L. 32-069, pp. 5-6.

<sup>13</sup> Id. at p. 6.

<sup>14</sup> Board of Directors of the Guam Economic Development Authority -, Resolution No. 20-07, enacted February 20, 2020.

exceed \$134M to finance the Projects, plus other necessary amounts. GEDA determined that “it is in the public interest for GWA to sell the 2020 Bonds for the purposes of financing the Projects and/or refunding the Prior Bonds...”. Finally, the Board approved the Bond documents, and further recognized that “the 2020 Bonds shall not be issued without the approval of the PUC...”.<sup>15</sup>

F. March 20, 2020 Georgetown Consulting Group Report

The PUC’s water and wastewater consultants, Georgetown Consulting Group Inc. (“GCG”), performed an independent review of GWA’s petition and detailed its review in a Report (“the Report”) to the Commission on March 20, 2020. The following are GCG’s key findings.

1. The \$134M Bond Issuance

GCG indicates that its review is limited to the bond issuance itself. The primary justification indicated in the Petition for issuance of the bonds “is to provide GWA funds to be used for certain Capital Improvements Projects.”<sup>16</sup> GCG is unable, at the present time, to review the proposed projects to be financed by the bonds, as required by the PUC’s Contract Review Protocol, “as GWA has not presented to the PUC any of the informational requirements associated with the PUC Contract Review Protocol.”<sup>17</sup> GCG finds that GWA’s proposed bond issuance, in terms of debt service reserve structure, capitalized interest, other costs, and Supporting Documents, is consistent with standard industry practice.<sup>18</sup>

---

<sup>15</sup> Id.

<sup>16</sup> GCG Report, p. 1.

<sup>17</sup> Id.

<sup>18</sup> Id. at pgs. 2-3.

However, “to the extent the coronavirus impact on GWA’s revenues are significant and negative, we encourage GWA to consider reducing the size of the FY 2020 bond issue to a smaller amount.” Because of the considerable uncertainty with regard to the near-term Guam economy, and the impact on projected revenues and expenses, a smaller bond issue in FY 2020 would reduce the amount of debt service in FY 2022 and could mitigate some of the negative impact from reduced revenues and the potential upward pressure on rates. Any amount not included would be available to GWA in its next bond issue.<sup>19</sup>

## 2. The Refunding Bonds

GWA also seeks approval to issue Refunding Bonds in an amount that is currently loosely estimated at \$135M associated with the 2013 Series Bonds.<sup>20</sup> GCG believes that the estimated gross savings of \$15.3M from the refunding could be even greater due to the recent steep decline in interest rates.<sup>21</sup> In reliance upon a comparative table provided by GWA, GCG concludes that the estimated gross savings from a taxable refunding of the 2013 GWA bonds is higher than the gross savings realized on prior GWA and GPA refunding in 2014 and 2017.<sup>22</sup> GCG concurs that, “based on the data provided, a refunding would be advantageous to both GWA and consumers.” It recommends that the ALJ propose, and the GPUC approve, this refunding.<sup>23</sup>

---

<sup>19</sup> Id. at p. 5-6.

<sup>20</sup> Id. at pgs. 3-4.

<sup>21</sup> Id. at p. 4.

<sup>22</sup> Id.

<sup>23</sup> Id.

GCG further proposes that GWA provide the details of the refunding to PUC and GCG as soon as it is available. GWA should be required to take the refunding into account when the 2021 update to the 5-year Financial Plan is provided to the PUC and GCG to determine the next step of the 5-Year Financial Plan implementation.<sup>24</sup>

### III. ANALYSIS

#### A. The \$134M Bond Issuance

The Guam Legislature intended that GWA have the authority to issue the proposed bonds in the amount of \$134M. The cost of the bonds to be issued is what remains in terms of GWA's authority. Furthermore, GWA has offered a substantial justification for the issuance of the Bonds in terms of mandated and necessary capital improvement projects. After the payment of the debt service reserve, capitalized interest, and the cost of issuance, out of the gross bond proceeds of \$134M, the remaining amount to be deposited to the Construction Fund will be \$108,925,581.<sup>25</sup> This amount will be expended for the categories of projects set forth above in CCU Resolution No.15-FY2020.

Nearly 38% of the bond funds will be expended for 2011 Court ordered projects (\$40M). \$39M will go to proposed Consent Decree projects. Although a Consent Decree has not been finalized, GWA has been in negotiations with USEPA and has an understanding of projects that will likely be required. As a result of the Stipulation between GWA and GCG in the Rate Case, GWA Docket 19-08,

---

<sup>24</sup> Id. at pgs. 4-5

<sup>25</sup> Brown and Caldwell Consulting Engineer's Report at pg. 1-2.



GWA will include planned water loss reduction project spending for FY 2020-2021 of no less than \$14 million.<sup>26</sup>

However, it must be clarified that if the PUC approves the Bond Issuance, such is not tantamount to approval of the individual bond projects. At present, such projects still must be reviewed by PUC in accordance with the Contract Review Protocol.<sup>27</sup> The Protocol requires review of bonds in the excess of \$1,000,000 and **any use of said funds**.<sup>28</sup> GCG takes the position that any use of bond funds, regardless of amount, must be reviewed by PUC under the Protocol (“All bond funded projects require review under the CRP not just those that are above \$1M.”).<sup>29</sup>

The Consulting Engineer has opined that facilities in the GWA System are in need of significant rehabilitation or upgrades. Some groundwater wells, transmission and distribution pipelines, reservoirs, and booster pump stations are in need of capital investment to ensure that GWA continues to provide a safe, reliable drinking water supply to its customers.<sup>30</sup> Wastewater collection systems and pump stations are generally in need of capital investment to achieve regulatory requirements.<sup>31</sup> Attached hereto as Exhibit “1” is the Five- Year Capital Improvement Plan of GWA, as set forth in the Brown and Caldwell Consulting Engineer’s Report.<sup>32</sup>

---

<sup>26</sup> Stipulations of the Guam Waterworks Authority and Georgetown Consulting Group on behalf of the Public Utilities Commission of Guam, GWA Docket 19-08, dated January 17, 2020.

<sup>27</sup> Contract Review Protocol for Guam Waterworks Authority, Administrative Docket 00-04.

<sup>28</sup> Id. at Par. 1(d).

<sup>29</sup> GCG Report, pg. 5.

<sup>30</sup> Brown and Caldwell Consulting Engineer’s Report at pg. 9-2.

<sup>31</sup> Id. at pg. 9.3.

<sup>32</sup> Brown and Caldwell Consulting Engineer’s Report at pgs. 7-1 to 7-6.

Based on a February 2020 estimate of GWA's Bond Underwriter, Citigroup Global Markets Inc., GWA's bond issuance will result in an "All-in Total Interest Cost" of 4.319214%. Attached hereto as Exhibit "2" is the Citigroup Global Markets Inc. Estimated Results of the GWA Series 2020A Issuance, February 2020.<sup>33</sup> Although the present Coronavirus pandemic has created a lot of uncertainty in the financial markets, it appears that GWA may obtain even more favorable interest rates on its bond issuance. The Federal Reserve recently cut its benchmark by a full percentage point. The benchmark U.S. interest rate is now in a range of 0 to 0.25 percent, down from a range of 1 to 1.25 percent.<sup>34</sup> This factor could create a beneficial financial environment for GWA's bond issuance.

As to the costs of issuance for the Bonds, the PUC has already ordered that such costs are expected to be 2% of par.<sup>35</sup> Based upon the Series 2016 Costs of Issuance, GWA estimates that total expenses could be in the range of \$2,467,854, which would be 1.72% of Par.<sup>36</sup>

## B. The Refunding Bonds

Attached hereto as Exhibit "3" is the Citigroup Global Markets Inc., GWA Series 2013 Bonds Refunding Update, dated February 2020.<sup>37</sup> In its Summary, Citigroup indicates that the New Refunding Par will be \$135,855,000; the Par Refunded will be \$119,010,000. The Estimate indicates that the Refunding will result in Gross Debt Service Savings of \$15,272,350. The Net present Value (NPV) Savings over

---

<sup>33</sup> Citigroup Global Markets Inc. Estimated Results of the GWA Series 2020A Issuance, February 2020.

<sup>34</sup> <https://www.washingtonpost.com/business/2020/03/15/federal-reserve-slashes-interest-rates-zero-part-wide-ranging-emergency-intervention/>.

<sup>35</sup> PUC FY2020 RATE DECISION, GPA Docket 19-08, Ordering Provision 20, dated February 27, 2020.

<sup>36</sup> Email from GWA GM Miguel Bordallo to PUC ALJ Fred Horecky, dated March 19, 2020, Re: GWA Docket 20-03, Bond Issuance.

<sup>37</sup> Citigroup Global Markets Inc., GWA Series 2013 Bonds Refunding Update, dated February 2020.

23 years will \$8,920,440, or 7.5%. It appears that the rough amount of annual net savings over the twenty-three-year period would be \$387,845.22. The estimated All-in TIC is 4.01%. Thus, the Refunding will result in substantial savings. See the Estimated Gross Debt Service Savings Chart. GCG has noted that the savings could even be greater than estimated as a result of the interest rate cuts. As noted by the Update, “actual savings will vary and be dependent on a number of factors including prevailing interest rates at the time of pricing.”<sup>38</sup>

#### **IV. RECOMMENDATION**

Based on the record before this Commission, and on the independent review by the PUC’s consultant, Georgetown Consulting Group, Inc., the Administrative Law Judge recommends that the PUC approve GWA’s Petition for Issuance of the 2020 Series A Bonds and the refunding of GWA’s 2013 Bond Series (2020 Series B Bonds). The ALJ does not recommend that the PUC order GWA to reduce the amount of the \$134 Bond Issuance. However, GWA should consider whether the amount of the issuance should be reduced in light of the potential impact of the coronavirus situation upon its revenues.

The PUC previously approved the General Indenture in 2005. Very minor and “cosmetic” revisions have been made to the Seventh Supplemental Indenture. Accordingly, the ALJ recommends that the Commission approve the issuance, as well as the form, terms, and conditions contained in the Bond Documents for the 2020 Series A Bonds and the 2020 Series B Revenue Refunding Bonds. A proposed Order and Order Approving Long-Term Debt are submitted herewith for the Commissioners’ consideration.

---

<sup>38</sup> Id. at p. 2.

Respectfully submitted this 23d day of March, 2020.

---

Frederick J. Horecky  
Administrative Law Judge

## Section 7

# Capital Improvement Plan

This section provides a summary of GWAs current 2020 to 2025 Capital Improvement program. In June 2019, the CCU approved GWA's 5-yr Financial Plan and CIP FY 2020 through 2024 which is the basis for CIP described in this section. The plan has been extended by 1-year to include 2025 in this Report as required by the bond Indenture.

## 7.1 Overall CIP

Table 7-1 presents the CIP project types and the funding sources for FY 2020 through 2025. The information presented is taken from the GWA 5-yr Financial Plan and CIP FY 2020 through 2024 and extended by GWA to include projects planned for 2025. The Table also presents the percentage of funding required for 2011 Court Order projects. The total CIP requires funding of \$392M over the 5-yr period.

Table 7-1. The Authority's CIP and Sources of Funds (\$1,000s)							
FY Ending September 30	2020	2021	2022	2023	2024	2025	Total
<b>CIP</b>							
Water production, treatment, distribution, and storage	\$63,577	\$14,450	\$29,444	\$38,996	\$27,403	\$18,090	\$191,960
Wastewater collection and treatment	\$37,287	\$26,350	\$24,569	\$22,242	\$21,119	\$25,816	\$157,383
Electrical, including monitoring and control	\$2,510	\$2,600	\$1,500	\$3,200	\$5,530	\$2,884	\$18,224
General plant and miscellaneous	\$8,700	\$3,950	\$2,550	\$2,550	\$3,700	\$2,632	\$24,082
<b>Total</b>	<b>\$112,074</b>	<b>\$47,350</b>	<b>\$58,063</b>	<b>\$66,988</b>	<b>\$57,752</b>	<b>\$49,422</b>	<b>\$391,649</b>
Percent for 2011 Court Order projects	37.7%	3.7%	2.1%	1.8%	0.4%	0.4%	
Percent for Non - 2011 Court Order Projects	62.3%	96.3%	97.9%	98.2%	99.6%	99.6%	
<b>Sources of Funds</b>							
Proceeds from the 2016 Bond Series	\$2,703	--	--	--	--	--	\$2,703
Proceeds from the 2020 Bond Series	\$75,722	\$26,350	\$1,600	--	--	--	\$103,672
Proceeds from the 2022/2023 Bond Series	--	--	\$27,463	\$37,488	\$24,752	\$15,978	\$105,681
State Revolving Fund (SRF) <sup>a</sup> and OEA Grants	\$18,149	\$3,000	\$8,000	\$8,000	\$8,000	\$4,350	\$49,499
System Development Charge (SDC)	\$500	\$1,000	\$500	\$500	\$500	\$594	\$3,594
Internally Funded CIP (PAY GO)	\$15,000	\$17,000	\$20,500	\$21,000	\$24,500	\$28,500	\$126,500
<b>Totals</b>	<b>\$112,074</b>	<b>\$47,350</b>	<b>\$58,063</b>	<b>\$66,988</b>	<b>\$57,752</b>	<b>\$49,422</b>	<b>\$391,649</b>

a. SRF funds are administered by USEPA and are grants in U.S. territories such as Guam.

The sources of funds for the 2020–2025 CIP include the 2016 Bond Series, this 2020 Bond Series, and future 2022 and 2023 Bond Series. Unencumbered funds from the 2016 Bond Series are approximately \$2.7M. Other sources of funding for the CIP include rate revenues (internally funded CIP), SRF, SDCs, and grants.

The CIP has been generated by GWA staff with minimal input by BC in its role as the PMO other than the development of the WRMPU in 2016–2017; however, the WRMPU is a significant resource used for planning the future CIP. BC does not have a company interest in the CIP, is not paid in proportion to the CIP, and does not have an incentive to increase the CIP.

BC has reviewed the CIP and it appears reasonable and adequate to address regulatory requirements and the 2011 Court Order, and demonstrates reasonable progress toward self-directed renewal and replacement projects. Focus on implementing the level of capital projects proposed will be a challenge for GWA because of limited staff resources; however, GWA has implemented some major projects through the Northern District PM/CM and has access to acquire assistance for other projects through the multiple ID/IQ contracts currently in place.

Approximately 12.6 percent of the funds necessary for the 2020-2025 CIP (\$49.5M) are anticipated to be provided by SRF and OEA grants. Finally, the current CIP does not include secondary treatment improvements for the Hagåtña WWTP. The implementation schedules for the current CIP appear to be reasonable and achievable.

## 7.2 Water Production, Treatment, Distribution, and Storage

The Water Production, Treatment, Distribution, and Storage CIP includes projects to rehabilitate, replace or construct new groundwater wells, water distribution pipelines and BPS; and to complete the remaining reservoirs necessary to be in compliance with the 2011 Court Order, and other regulatory requirements previously described. Table 7-2 provides a summary of the Water CIP for the next five years.

Table 7-2. CIP Projects: Potable Water

Project Name	Total CIP Funding (\$000s)	CIP Number
Water System Reservoirs 2005 Improvements	\$30,891	PW 09-11
Well Rehabilitation Program	\$17,384	MP-PW-Well-01
Asbestos Cement Pipe Replacement Program	\$13,050	MP-PW-Pipe-14
Rehabilitation and Replacement Program	\$11,576	MP-PW-Pipe-12
2-Inch Pipe Replacement Program	\$10,930	MP-PW-Pipe-13
Water Distribution System Pipe Replacement and Upgrades	\$7,750	PW 09-03
Ugum WTP Reservoir	\$7,500	PW 11-02
Route 1 Astumbo Zone Piping	\$7,193	MP-PW-Pipe-02
Tank Replacement Piti & Hyundai	\$6,500	PW 12-06
PRV Rehab and Replacement	\$6,386	MP-PW-Pipe-15
Well Repair Program	\$6,072	MP-PW-Well-06
Deep Well Rehabilitation	\$5,538	PW 05-13
Capacity Enhancement - Well Development and Construction Program	\$5,380	MP-PW-Well-04
Water Wells	\$4,900	PW 09-02
Astumbo Zone Piping	\$4,850	MP-PW-Pipe-01

Table 7-2. CIP Projects: Potable Water

Project Name	Total CIP Funding (\$000s)	CIP Number
Water Booster Pump Stations	\$4,200	PW 05-06
Rehabilitation and New NGLA Monitoring Wells	\$4,000	DoD-3
Hydrant Condition Assessment and Maintenance	\$3,880	MP-PW-Misc-03
Ugum SWTP 7-Year Improvement Project	\$3,168	MP-PW-SWTP-04
Master Meter Implementation and Ongoing Meter Replacement	\$2,952	MP-PW-Misc-02
Well Equipment Overhaul Program	\$2,518	MP-PW-Well-02
Yigo, Santa Rosa Zone Realignment	\$2,342	MP-PW-Pipe-09
Capacity Enhancement - Well Exploration Program	\$1,688	MP-PW-Well-03
Nimitz Lower BPS Piping	\$1,590	MP-PW-Pipe-08
Cross Island Highway Piping	\$1,501	MP-PW-Pipe-17
Recurring Tank Inspections	\$1,256	MP-PW-Tank-23
Pressure Zone Realignment / Development 2005 Improvements	\$1,211	PW 09-04
Ugum WTP Intake	\$1,200	PW 09-01
Ugum SWTP Intake Modifications	\$1,174	MP-PW-SWTP-02
Rehabilitate and Replace BPSs	\$1,159	MP-PW-BPS-01
Ugum SWTP Reliability Improvements	\$1,150	MP-PW-SWTP-03
Route 15 BPS	\$1,136	MP-PW-BPS-03
Wellhead Protection Program	\$1,010	MP-PW-Well-05
Fire Hydrant Replacement Program	\$1,000	PW 14-01
Miscellaneous Piping Projects	\$894	MP-PW-Pipe-10
Valve Exercise, Repair, and Replacement Program	\$750	MP-PW-Pipe-16
Leak Detection Assistance	\$635	MP-PW-Misc-05
Leak Detection	\$600	PW 05-09
Rehabilitation of Asan Springs	\$550	PW 05-15
Potable Water System Planning	\$500	PW 05-10
New Deep Wells at Down Hard	\$500	PW 05-14
Hyundai Well Piping	\$500	MP-PW-Pipe-04
Mataguac BPS Suction Piping	\$500	MP-PW-Pipe-07
Harmon Cliffline Piping to Route 1	\$424	MP-PW-Pipe-03
Miscellaneous Piping Connections	\$394	MP-PW-Pipe-11
Ugum SWTP River Intake Cleaning Project	\$380	MP-PW-SWTP-01
Kaiser Zone Looping	\$300	MP-PW-Pipe-05
Mangilao Pressure Zone Realignment	\$300	MP-PW-Pipe-06
OneGuam Program	\$300	MP-PW-Misc-04
South Guam Water Supply Study	\$200	MP-PW-Misc-01
Existing Tank Inspections	\$150	MP-PW-Tank-22
Nimitz Hill Upper BPS	\$48	MP-PW-BPS-02
Total potable water CIP projects	\$191,960	

## 7.3 Wastewater Collection and Treatment

The Wastewater Collection and Treatment CIP includes projects to rehabilitate or replace collection system pipes and pump stations, and to bring the WWTPs into regulatory compliance in accordance with the 2011 Court Order and other regulatory actions previously described. The CIP does not include projects to upgrade the Hagátña WWTP to achieve secondary treatment standards to comply with the June 2013 NPDES permit renewals previously described. Table 7-3 provides a summary of the Wastewater CIP.

Table 7-3. CIP Projects: Wastewater		
Project Name	Total CIP Funding (\$000s)	CIP Number
Lift Station Rehabilitation/ Replacement Program	\$24,870	MP-WW-Pump-01
Northern District WWTP Completion	\$15,300	MP-WW-WWTP-08
Gravity Pipe Rehabilitation/ Replacement Program	\$14,452	MP-WW-Pipe-01
Septic/ Cesspool System Reduction Program	\$11,126	MP-WW-Pipe-27
Tumon Basin - Fujita Lift Station Analysis	\$10,923	MP-WW-Pump-02
Wastewater Collection System Repl/ Rehabilitation	\$8,000	WW 09-06
Hagátña WWTP Force Main Rehabilitation/Replacement	\$6,689	MP-WW-FM-04
Lift station upgrades	\$6,491	WW 09-01
Northern Systems Wastewater System	\$6,000	DoD-02
Northern District Route 1 Capacity Replacement - Phase 1	\$5,923	MP-WW-Pipe-06
Mamajanao Capacity Replacement	\$4,274	MP-WW-Pipe-17
Baza Gardens Capacity Replacement - Phase 1	\$4,213	MP-WW-Pipe-21
Route 16 Capacity Replacement	\$4,055	MP-WW-Pipe-11
Miscellaneous Wastewater Improvements	\$3,888	MP-WW-Misc-03
Barrigada Pump Station Pipe Rehabilitation/Replacement	\$3,629	MP-WW-Pipe-02
Umatac-Merizo Capacity Replacement	\$2,730	MP-WW-Pipe-24
Pago Socio WWTP Pump Station Conversion	\$2,700	MP-WW-WWTP-04
Agana Heights Pipe Replacement	\$2,669	MP-WW-Pipe-05
NDWWTP Secondary Treatment Capacity 12 mgd	\$2,500	DoD-01
Route 1 Piti Pipe Rehabilitation/Replacement	\$2,340	MP-WW-Pipe-03
Piping Near Bayside Lift Station	\$2,250	MP-WW-Pipe-25
Route 1 Asan Force Main Rehabilitation/Replacement	\$2,124	MP-WW-FM-03
Replace Yigo Lift Station Force Main	\$2,029	MP-WW-FM-02
Force Main Rehabilitation/Replacement Program	\$1,678	MP-WW-FM-01
Replacement of Former Navy Pump Station (Donut Hole)	\$1,301	MP-WW-Pump-03
Manhole Rehabilitation Program	\$1,050	MP-WW-MH-01
Finile Drive Rehabilitation - Agat	\$813	MP-WW-Pipe-26
Southern Link Pump Station Pipe Rehabilitation/Replacement	\$657	MP-WW-Pipe-04
Barrigada Capacity Replacement	\$609	MP-WW-Pipe-12



Table 7-3. CIP Projects: Wastewater

Project Name	Total CIP Funding (\$000s)	CIP Number
Baza Gardens STP Replacement	\$550	WW 11-03
I/I and SSES Assessments	\$550	MP-WW-Misc-02
Update Wastewater Collection System Model (Continued)	\$400	MP-WW-Misc-01B
Ocean Outfall Inspection Program	\$300	MP-WW-WWTP-09
Wastewater System Planning	\$150	WW 05-04
Fats, Oils, and Grease Study	\$150	MP-WW-Misc-04
<b>Total Wastewater CIP Projects</b>	<b>\$157,383</b>	

## 7.4 Electrical, Including Monitoring and Control

The Electrical CIP, including monitoring and control, includes electrical and control system upgrade projects at groundwater wells, BPS, and wastewater pump stations, as well as development of a SCADA system to increase operational control and efficiency. Table 7-4 provides a summary of the Electrical CIP.

Table 7-4. CIP Projects: Electrical

Project Name	Total CIP Funding (\$000s)	CIP Number
SCADA Implementation Phase A2 - Initial Project Completion	\$11,300	MP-Gen-EE-01
SCADA Implementation Phase B - Additional Sites	\$3,754	MP-Gen-EE-02
SCADA Improvements - Phase 3	\$2,125	EE 09-08
SCADA System Improvement Program	\$660	MP-Gen-EE-04
Electrical Upgrade - Water Booster	\$150	EE 09-04
Electrical Upgrade - Other Water	\$100	EE 09-05
Electrical Upgrade - Water Wells	\$90	EE 09-02
SCADA Improvements - Phase 2	\$45	EE 09-07
<b>Total Electrical CIP projects</b>	<b>\$18,224</b>	

## 7.5 General Facilities

The General Facilities CIP includes projects for information technology improvements, security improvements, mobile fleet replacements, and general plant improvements. Table 7-5 provides a summary of the General Plant and Maintenance CIP.

Table 7-5. CIP Projects: Miscellaneous

Project Name	Total CIP Funding (\$000s)	CIP Number
--------------	----------------------------	------------

Table 7-5. CIP Projects: Miscellaneous

Project Name	Total CIP Funding (\$000s)	CIP Number
Information Technology Improvements	\$6,200	MP-Gen-Misc-04
GWA Infrastructure Improvements	\$3,250	MP-Gen-Misc-05
GWA Systems Planning	\$3,050	MP-Gen-Misc-01
General Plant Improvements	\$2,882	MP-Gen-Misc-08
General Plant Improvements/ Water	\$2,400	MC 09-01
Mobile Equipment Replacement Program	\$2,000	MP-Gen-Misc-07
Information Technology Integration Improvements	\$1,600	MC 15-01
Surveying and Property Delineation	\$1,000	MP-Gen-Misc-03
Security and Resilience Program	\$700	MP-Gen-Misc-09
GPWA Fleet Maintenance Facility	\$500	MP-Gen-Misc-06
WRMP Update (Interim Update)	\$400	MP-Gen-Misc-02B
WRMP Update (Comprehensive Update)	\$100	MP-Gen-Misc-02A
<b>Total Miscellaneous CIP projects</b>	<b>\$24,082</b>	

TABLE OF CONTENTS

Guam Waterworks Authority  
Series 2020A - Estimated Results  
Assumes Current GWA Ratings of Baa2/A-/BBB-  
\$134 Million Par Amount  
PRELIMINARY - SUBJECT TO CHANGE

Report	Page
Sources and Uses of Funds . . . . .	1
Bond Summary Statistics . . . . .	2
Aggregate Debt Service . . . . .	3
Net Debt Service . . . . .	4
Disclaimer . . . . .	5

---

**SOURCES AND USES OF FUNDS**

**Guam Waterworks Authority**  
**Series 2020A - Estimated Results**  
**Assumes Current GWA Ratings of Baa2/A-/BBB-**  
**\$134 Million Par Amount**  
**PRELIMINARY - SUBJECT TO CHANGE**

**Sources:**


---

<b>Bond Proceeds:</b>	
Par Amount	134,000,000.00
Premium	17,596,880.00
	151,596,880.00

---

**Uses:**


---

<b>Project Fund Deposits:</b>	
Construction Fund	128,072,435.56
<b>Other Fund Deposits:</b>	
Deposit to Debt Service Reserve Fund	6,700,000.00
CAPI (through 7/1/2022)	14,144,444.44
	20,844,444.44
<b>Delivery Date Expenses:</b>	
Estimated Cost of Issuance (2%)	2,680,000.00
	151,596,880.00

**Notes:**

Based on estimated market conditions as of February 2020.

Actual Results will vary and be dependent on prevailing market rates at the time of pricing.

---

## BOND SUMMARY STATISTICS

Guam Waterworks Authority  
Series 2020A - Estimated Results  
Assumes Current GWA Ratings of Baa2/A-/BBB-  
\$134 Million Par Amount  
PRELIMINARY - SUBJECT TO CHANGE

Dated Date	05/21/2020
Delivery Date	05/21/2020
Last Maturity	07/01/2050
Arbitrage Yield	3.450869%
True Interest Cost (TIC)	4.207149%
Net Interest Cost (NIC)	4.541993%
All-In TIC	4.319214%
Average Coupon	5.000000%
Average Life (years)	28.672
Duration of Issue (years)	16.312
Par Amount	134,000,000.00
Bond Proceeds	151,596,880.00
Total Interest	192,102,694.44
Net Interest	174,505,814.44
Total Debt Service	326,102,694.44
Maximum Annual Debt Service	37,790,500.00
Average Annual Debt Service	10,829,978.78
Underwriter's Fees (per \$1000)	
Average Takedown	
Other Fee	
Total Underwriter's Discount	
Bid Price	113.132000

Bond Component	Par Value	Price	Average Coupon	Average Life	Duration	PV of 1 bp change
Term Bond	134,000,000.00	113.132	5.000%	28.672	16.312	121,940.00
	134,000,000.00			28.672		121,940.00

	TIC	All-In TIC	Arbitrage Yield
Par Value	134,000,000.00	134,000,000.00	134,000,000.00
+ Accrued Interest			
+ Premium (Discount)	17,596,880.00	17,596,880.00	17,596,880.00
- Underwriter's Discount			
- Estimated Cost of Issuance (2%) Expense		-2,680,000.00	
- Other Amounts			
Target Value	151,596,880.00	148,916,880.00	151,596,880.00
Target Date	05/21/2020	05/21/2020	05/21/2020
Yield	4.207149%	4.319214%	3.450869%

## Notes:

Based on estimated market conditions as of February 2020.

Actual Results will vary and be dependent on prevailing market rates at the time of pricing.

## AGGREGATE DEBT SERVICE

Guam Waterworks Authority  
 Series 2020A - Estimated Results  
 Assumes Current GWA Ratings of Baa2/A-/BBB-  
 \$134 Million Par Amount  
 PRELIMINARY - SUBJECT TO CHANGE

Period Ending	Series 2020 Revenue Bonds	Existing Debt Service	Aggregate Debt Service
09/30/2020	744,444.44	21,472,593.75	22,217,038.19
09/30/2021	6,700,000.00	34,229,950.00	40,929,950.00
09/30/2022	6,700,000.00	34,234,350.00	40,934,350.00
09/30/2023	6,700,000.00	34,229,625.00	40,929,625.00
09/30/2024	6,700,000.00	34,235,013.00	40,935,013.00
09/30/2025	6,700,000.00	34,233,725.00	40,933,725.00
09/30/2026	6,700,000.00	34,229,763.00	40,929,763.00
09/30/2027	6,700,000.00	34,231,013.00	40,931,013.00
09/30/2028	6,700,000.00	34,232,513.00	40,932,513.00
09/30/2029	6,700,000.00	34,232,763.00	40,932,763.00
09/30/2030	6,700,000.00	34,234,638.00	40,934,638.00
09/30/2031	6,700,000.00	34,235,963.00	40,935,963.00
09/30/2032	6,700,000.00	34,229,950.00	40,929,950.00
09/30/2033	6,700,000.00	34,230,075.00	40,930,075.00
09/30/2034	6,700,000.00	34,234,050.00	40,934,050.00
09/30/2035	6,700,000.00	34,230,875.00	40,930,875.00
09/30/2036	6,700,000.00	34,235,925.00	40,935,925.00
09/30/2037	6,700,000.00	34,231,400.00	40,931,400.00
09/30/2038	6,700,000.00	34,235,200.00	40,935,200.00
09/30/2039	6,700,000.00	34,229,225.00	40,929,225.00
09/30/2040	6,700,000.00	34,236,125.00	40,936,125.00
09/30/2041	6,700,000.00	34,887,300.00	41,587,300.00
09/30/2042	6,700,000.00	34,886,050.00	41,586,050.00
09/30/2043	6,700,000.00	34,888,400.00	41,588,400.00
09/30/2044	6,700,000.00	34,885,000.00	41,585,000.00
09/30/2045	6,700,000.00	34,883,250.00	41,583,250.00
09/30/2046	6,700,000.00	34,055,625.00	40,755,625.00
09/30/2047	37,790,000.00		37,790,000.00
09/30/2048	37,790,500.00		37,790,500.00
09/30/2049	37,788,250.00		37,788,250.00
09/30/2050	37,789,500.00		37,789,500.00
	326,102,694.44	914,610,359.75	1,240,713,054.19

## Notes:

Based on estimated market conditions as of February 2020.

Actual Results will vary and be dependent on prevailing market rates at the time of pricing.

FY2020 existing debt service reflects remaining FY2020 payment on 7/1/20.

## NET DEBT SERVICE

Guam Waterworks Authority  
 Series 2020A - Estimated Results  
 Assumes Current GWA Ratings of Baa2/A-/BBB-  
 \$134 Million Par Amount  
 PRELIMINARY - SUBJECT TO CHANGE

Period Ending	Total Debt Service	CAPI (through 7/1/2022)	Net Debt Service
09/30/2020	744,444.44	744,444.44	
09/30/2021	6,700,000.00	6,700,000.00	
09/30/2022	6,700,000.00	6,700,000.00	
09/30/2023	6,700,000.00		6,700,000
09/30/2024	6,700,000.00		6,700,000
09/30/2025	6,700,000.00		6,700,000
09/30/2026	6,700,000.00		6,700,000
09/30/2027	6,700,000.00		6,700,000
09/30/2028	6,700,000.00		6,700,000
09/30/2029	6,700,000.00		6,700,000
09/30/2030	6,700,000.00		6,700,000
09/30/2031	6,700,000.00		6,700,000
09/30/2032	6,700,000.00		6,700,000
09/30/2033	6,700,000.00		6,700,000
09/30/2034	6,700,000.00		6,700,000
09/30/2035	6,700,000.00		6,700,000
09/30/2036	6,700,000.00		6,700,000
09/30/2037	6,700,000.00		6,700,000
09/30/2038	6,700,000.00		6,700,000
09/30/2039	6,700,000.00		6,700,000
09/30/2040	6,700,000.00		6,700,000
09/30/2041	6,700,000.00		6,700,000
09/30/2042	6,700,000.00		6,700,000
09/30/2043	6,700,000.00		6,700,000
09/30/2044	6,700,000.00		6,700,000
09/30/2045	6,700,000.00		6,700,000
09/30/2046	6,700,000.00		6,700,000
09/30/2047	37,790,000.00		37,790,000
09/30/2048	37,790,500.00		37,790,500
09/30/2049	37,788,250.00		37,788,250
09/30/2050	37,789,500.00		37,789,500
	326,102,694.44	14,144,444.44	311,958,250

## Notes:

Based on estimated market conditions as of February 2020.

Actual Results will vary and be dependent on prevailing market rates at the time of pricing.

## DISCLAIMER

Guam Waterworks Authority  
 Series 2020A - Estimated Results  
 Assumes Current GWA Ratings of Baa2/A-/BBB-  
 \$134 Million Par Amount  
 PRELIMINARY - SUBJECT TO CHANGE

In any instance where distribution of this communication is subject to the rules of the US Commodity Futures Trading Commission ("CFTC"), this communication constitutes an invitation to consider entering into a derivatives transaction under U.S. CFTC Regulations §§ 1.71 and 23.605, where applicable, but is not a binding offer to buy/sell any financial instrument.

This presentation has been prepared by individual personnel of Citigroup Global Markets Inc., Citigroup Global Markets Limited or their subsidiaries or affiliates (collectively, "Citi"). Such employees are not research analysts and are not subject to SEC or FSA rules designed to promote the independence of research and research analysts and accordingly may receive compensation related to securities or products to which these materials relate. These materials may contain general market commentary and excerpts of research; however they are not intended to constitute investment research, a research recommendation, research analysis or a research report for purposes of such rules.

In connection with any proposed transaction, Citi will be acting solely as a principal and not as your agent, advisor, account manager or fiduciary. Citi has not assumed a fiduciary responsibility with respect to the proposed transaction, and nothing in this or in any prior relationship between you and Citi will be deemed to create an advisory, fiduciary or agency relationship between us in respect of a proposed transaction. You should consider carefully whether you would like to engage an independent advisor to represent or otherwise advise you in connection with any proposed transaction, if you have not already done so.

Any terms set forth herein are intended for discussion purposes only and are subject to the final terms as set forth in separate definitive written agreements. This presentation is not a commitment to lend, syndicate a financing, underwrite or purchase securities, or commit capital nor does it obligate us to enter into such a commitment. By accepting this presentation, subject to applicable law or regulation, you agree to keep confidential the existence of and proposed terms for any contemplated transaction.

The provision of information in this presentation is not based on your individual circumstances and should not be relied upon as an assessment of suitability for you of a particular product or transaction. Even if Citi possesses information as to your objectives in relation to any transaction, series of transactions or trading strategy, this will not be deemed sufficient for any assessment of suitability for you of any transaction, series of transactions or trading strategy.

This presentation is provided for information purposes and is intended for your use only. Except in those jurisdictions where it is impermissible to make such a statement, Citi hereby informs you that this presentation should not be considered as an offer to sell or the solicitation of an offer to purchase any securities or other financial products. This presentation does not constitute investment advice and does not purport to identify all risks or material considerations which should be considered when undertaking a transaction. Citi makes no recommendation as to the suitability of any of the products or transactions mentioned. Any trading or investment decisions you take are in reliance on your own analysis and judgment and/or that of your advisors and not in reliance on us.

Certain transactions, including those involving swaps and options, give rise to substantial risk including the potential loss of the principal amount invested, and are not suitable for all investors. Citi does not provide investment, accounting, tax, financial or legal advice; however, you should be aware that any proposed indicative transaction could have accounting, tax, legal or other implications that should be discussed with your independent advisors. Therefore, prior to entering into any transaction, you should determine, without reliance on Citi, the economic risks or merits, as well as the legal, tax and accounting characteristics and consequences of the transaction and that you are able to assume these risks. By acceptance of these materials, you and Citi hereby agree that from the commencement of discussions with respect to any transaction, and notwithstanding any other provision in this presentation, Citi hereby confirms that no participant in any transaction shall be limited from disclosing the U.S. tax treatment or U.S. tax structure of such transaction.

This presentation is not intended to forecast or predict future events. Past performance is not a guarantee or indication of future results. Any estimates and opinions included herein constitute Citi's judgment as of the date hereof and are subject to change without any notice.

This presentation may contain 'forward-looking' information. Such information may include, but not be limited to, projections, forecasts or estimates of cash flows, yields or return, scenario analyses and proposed or expected portfolio composition. Any forward-looking information is based upon certain assumptions about future events or conditions and is intended only to illustrate hypothetical results under those assumptions (not all of which are specified herein or can be ascertained at this time). It does not represent actual termination or unwind prices that may be available to you. Actual events or conditions are unlikely to be consistent with, and may differ significantly from, those assumed. Illustrative performance results may be based on mathematical models that calculate those results by using inputs that are based on assumptions about a variety of future conditions and events and not all relevant events or conditions may have been considered in developing such assumptions. Accordingly, actual results may vary and the variations may be substantial. The products or securities identified in any of the illustrative calculations presented herein may therefore not perform as described and actual performance may differ, and may differ substantially, from those illustrated in this material. When evaluating any forward looking information you should understand the assumptions used and, together with your independent advisors, consider whether they are appropriate for your purposes.

Any securities or other financial products described herein may be subject to fluctuations of their mark-to-market price or value. Such fluctuations may be substantial, depending on the type of securities or other financial products and the financial environment. In addition certain securities described in the presentation may provide for payments linked to or derived from prices or yields of one or more securities or other instruments or foreign currencies, and such provisions may result in negative fluctuations in the value of and the amounts payable with respect to such securities prior to or at redemption. You should consider the implication of such fluctuation with your independent accounting, tax and risk advisors.

Citi shall have no liability to you, the user or to third parties, for the quality, accuracy, timeliness, continued availability or completeness of the data nor for any special, direct, indirect, incidental or consequential loss or damage which may be experienced because of the use of the information in this presentation or otherwise arising in connection with this presentation, provided that this exclusion of liability shall not exclude or limit any liability under any law or regulation applicable to Citi that may not be excluded or restricted. These materials are intended for distribution solely to customers of Citi in jurisdictions where such distribution is permitted. The information contained herein is proprietary information of Citi and may not be reproduced or otherwise disseminated in whole or in part without Citi's prior written consent.

Citi often acts as (i) a market maker; (ii) an issuer of financial instruments and other products; and (iii) trades as principal in many different financial instruments and other products, and can be expected to perform or seek to perform investment banking and other services for the issuer of such financial instruments or other products. The author of this presentation may have discussed the information contained herein with others within or outside Citi and the author and/or such other Citi personnel may have already acted on the basis of this information (including by trading for Citi's proprietary accounts or communicating the information contained herein to other customers of Citi). Citi, Citi's personnel (including those with whom the author may have consulted in the preparation of this presentation), and other customers of Citi may be long or short the financial instruments or other products referred to in this presentation, may have acquired such positions at prices and market conditions that are no longer available, and may have interests different from or adverse to your interests.

Citi is required to obtain, verify and record certain information that identifies each entity that enters into a formal business relationship with Citi. Citi will ask for your complete name, street address, and taxpayer ID number. Citi may also request corporate formation documents, or other forms of identification, to verify information provided.

Although Citibank, N.A. (together with its subsidiaries and branches worldwide, "Citibank") is an affiliate of Citi, you should be aware that none of the financial instruments or other products mentioned in this presentation (unless expressly stated otherwise) are (i) insured by the Federal Deposit Insurance Corporation or any other governmental authority, or (ii) deposits or other obligations of, or guaranteed by, Citibank or any other insured depository institution.

IRS Circular 230 Disclosure: Citi and its employees are not in the business of providing, and do not provide, tax or legal advice to any taxpayer outside of Citi. Any statements in this presentation regarding tax matters were not intended or written to be used, and cannot be used or relied upon, by any taxpayer for the purpose of avoiding tax penalties. Any such taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor.

© 2019 Citigroup Global Markets Inc. Member SIPC. All rights reserved. Citi and Arc Design are trademarks and service marks of Citigroup Inc. or its affiliates and are used and registered throughout the world.

## Notes:

Based on estimated market conditions as of February 2020.

Actual Results will vary and be dependent on prevailing market rates at the time of pricing.



# GWA Series 2013 Bonds Refunding Update

February 2020

Ex. 3



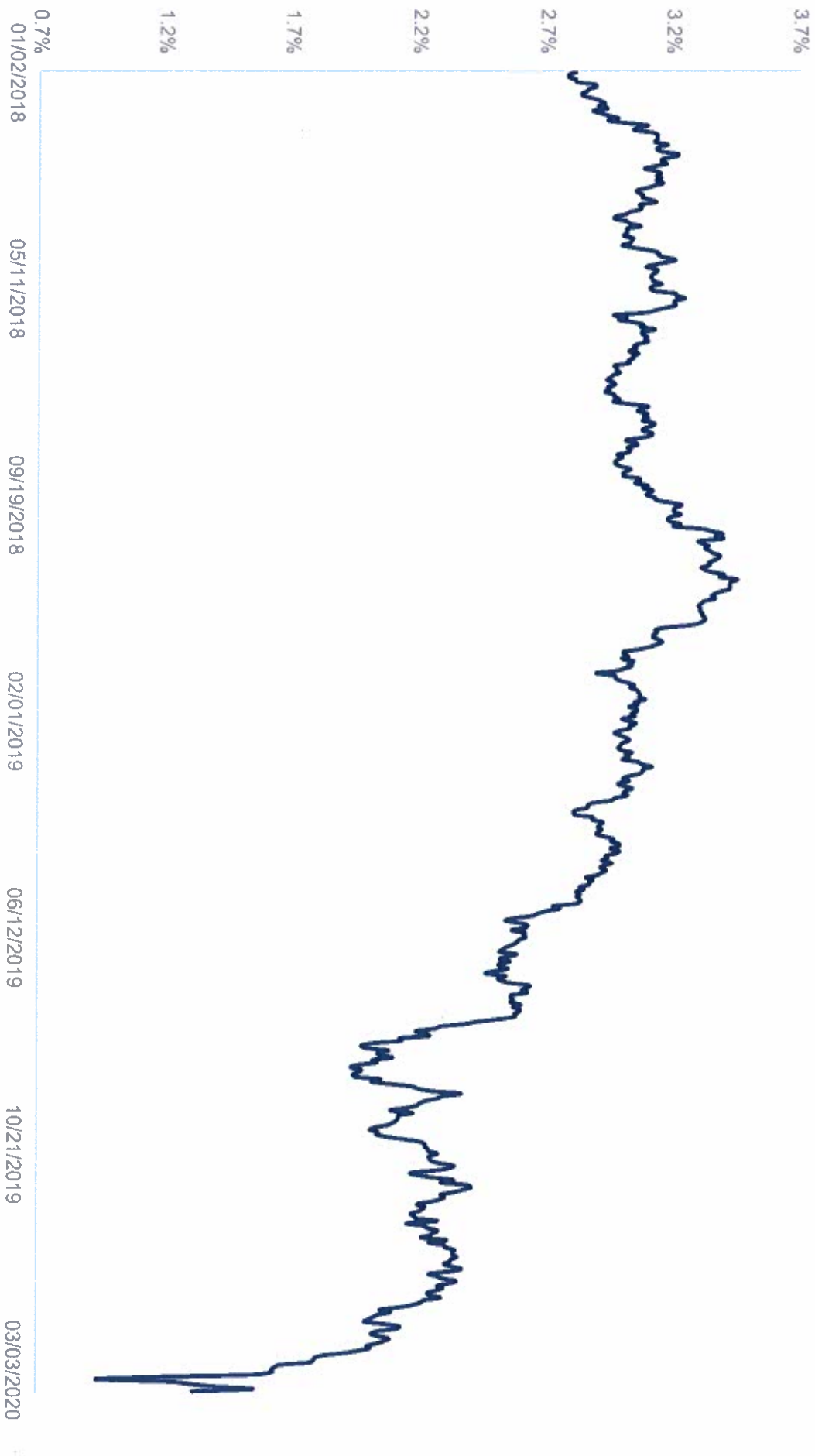
GUAM WATERWORKS AUTHORITY

Citigroup is providing the information contained in this document for discussion purposes only in anticipation of serving as underwriter to the Guam Waterworks Authority ("GWA"). The primary role of Citigroup, as an underwriter, is to purchase securities, for resale to investors, in an arm's-length commercial transaction between GWA and Citigroup. Citigroup has financial and other interests that differ from those of GWA. Citigroup is not acting as a municipal advisor, financial advisor or fiduciary to GWA or any other person or entity. The information provided is not intended to be and should not be construed as "advice" within the meaning of Section 15B of the Securities Exchange Act of 1934. GWA should consult with its own financial and/or municipal, legal, accounting, tax and other advisors as applicable, to the extent it deems appropriate. GWA should consider whether to engage an advisor to act in a fiduciary capacity on its behalf in connection with this transaction.

# Current Treasury Market Overview

Since January 2018, 30-Year US Treasury Rates have decreased significantly which has provided an attractive market for municipal issuers

**30 Year U.S. Treasury Rates (January 2018 – March 2020)**



Source: US Treasury



# Summary of Estimated Refunding Results as of February 2020

Based on current taxable interest rates, Citi estimates GWA could refund a portion of the 2013 Bonds for over \$15 million in debt service savings

## Summary of Estimated Refunding Results

Gross Debt Service Savings	\$15,272,350
Net Present Value (NPV) Debt Service Savings	8,920,440
% NPV Savings	7.50%

Summary of Refunding Results		Level Savings
New Refunding Par	\$135,855,000	
Par Refunded	\$119,010,000	
Series Refunded	Series 2013	
Coupon on Existing Bonds	5.50%	
Estimated New All-in TIC	4.01%	
Average Life	18.8 years	
Maturities Refunded	2034 - 2043	

- Favorable taxable interest rates could allow GWA to refund a portion of the 2013 Bonds for over \$15 million in debt service savings based on a matched maturity refunding (net of all estimated refunding expenses)
  - No extension of debt service
- Depending on rates, additional maturities may also provide refunding savings
- Refunding savings are interest rate sensitive and subject to market conditions
- Actual savings will vary and be dependent on a number of factors including prevailing interest rates at the time of pricing**

## Estimated Gross Debt Service Savings

Fiscal Year (9/30)	Existing Debt Service <sup>1</sup>	New Est. Debt Service	Annual Savings
2020	\$727,283	\$680,943	\$46,340
2021	6,545,550	6,146,380	399,170
2022	6,545,550	6,146,968	398,582
2023	6,545,550	6,151,194	394,356
2024	6,545,550	6,149,385	396,165
2025	6,545,550	6,151,139	394,411
2026	6,545,550	6,146,293	399,257
2027	6,545,550	6,149,513	396,037
2028	6,545,550	6,150,363	395,187
2029	6,545,550	6,148,971	396,579
2030	6,545,550	6,150,595	394,955
2031	6,545,550	6,150,599	394,952
2032	6,545,550	6,147,402	398,149
2033	6,545,550	6,147,753	397,798
2034	12,030,550	11,301,470	729,080
2035	12,033,875	11,306,428	727,448
2036	12,030,425	11,302,673	727,752
2037	12,029,650	11,300,601	729,049
2038	12,030,450	11,303,353	727,097
2039	12,031,725	11,300,353	731,372
2040	12,032,375	11,301,409	730,966
2041	27,301,300	25,645,945	1,655,355
2042	27,302,550	25,645,879	1,656,671
2043	27,303,400	25,647,776	1,655,624
<b>Gross Debt Service Savings</b>			<b>\$15,272,350</b>

<sup>1</sup> FY 2020 existing debt service is net of \$2.5 million of monthly set aside payments for the refunded bonds made through May 2020 as required under the Bond Indenture.

<sup>2</sup> Estimated market conditions and interest rates as of February 24, 2020. Refunding analysis assumes issuance of taxable bonds with 10-year par call and existing GWA ratings of Baa2/+, closing May 2020, estimated cost of issuance of 1.0% and escrow funded with State and Local Government Securities ("SLGS"). All savings analyses shown net of estimated issuance costs. FY2020 assumes existing monthly debt service deposits through May 21, 2020. PV savings discounted at arbitrage yield of 3.9%. Actual results will vary.

*IRS Circular 230 Disclosure: Citigroup Inc. and its affiliates do not provide tax or legal advice. Any discussion of tax matters in these materials (i) is not intended or written to be used, and cannot be used or relied upon, by you for the purpose of avoiding any tax penalties and (ii) may have been written in connection with the "promotion or marketing" of any transaction contemplated hereby ("Transaction"). Accordingly, you should seek advice based on your particular circumstances from an independent tax advisor.*

*In any instance where distribution of this communication is subject to the rules of the US Commodity Futures Trading Commission ("CFTC"), this communication constitutes an invitation to consider entering into a derivatives transaction under U.S. CFTC Regulations §§ 1.71 and 23.605, where applicable, but is not a binding offer to buy/sell any financial instrument.*

Any terms set forth herein are intended for discussion purposes only and are subject to the final terms as set forth in separate definitive written agreements. This presentation is not a commitment to lend, syndicate a financing, underwrite or purchase securities, or commit capital nor does it obligate us to enter into such a commitment, nor are we acting as a fiduciary to you. By accepting this presentation, subject to applicable law or regulation, you agree to keep confidential the information contained herein and the existence of and proposed terms for any Transaction.

Prior to entering into any Transaction, you should determine, without reliance upon us or our affiliates, the economic risks and merits (and independently determine that you are able to assume these risks) as well as the legal, tax and accounting characterizations and consequences of any such Transaction. In this regard, by accepting this presentation, you acknowledge that (a) we are not in the business of providing (and you are not relying on us for) legal, tax or accounting advice, (b) there may be legal, tax or accounting risks associated with any Transaction, (c) you should receive (and rely on) separate and qualified legal, tax and accounting advice and (d) you should apprise senior management in your organization as to such legal, tax and accounting advice (and any risks associated with any Transaction) and our disclaimer as to these matters. By acceptance of these materials, you and we hereby agree that from the commencement of discussions with respect to any Transaction, and notwithstanding any other provision in this presentation, we hereby confirm that no participant in any Transaction shall be limited from disclosing the U.S. tax treatment or U.S. tax structure of such Transaction.

We are required to obtain, verify and record certain information that identifies each entity that enters into a formal business relationship with us. We will ask for your complete name, street address, and taxpayer ID number. We may also request corporate formation documents, or other forms of identification, to verify information provided.

Any prices or levels contained herein are preliminary and indicative only and do not represent bids or offers. These indications are provided solely for your information and consideration, are subject to change at any time without notice and are not intended as a solicitation with respect to the purchase or sale of any instrument. The information contained in this presentation may include results of analyses from a quantitative model which represent potential future events that may or may not be realized, and is not a complete analysis of every material fact representing any product. Any estimates included herein constitute our judgment as of the date hereof and are subject to change without any notice. We and/or our affiliates may make a market in these instruments for our customers and for our own account. Accordingly, we may have a position in any such instrument at any time.

Although this material may contain publicly available information about Citi corporate bond research, fixed income strategy or economic and market analysis, Citi policy (i) prohibits employees from offering, directly or indirectly, a favorable or negative research opinion or offering to change an opinion as consideration or inducement for the receipt of business or for compensation; and (ii) prohibits analysts from being compensated for specific recommendations or views contained in research reports. So as to reduce the potential for conflicts of interest, as well as to reduce any appearance of conflicts of interest, Citi has enacted policies and procedures designed to limit communications between its investment banking and research personnel to specifically prescribed circumstances.

© 2020 Citigroup Global Markets Inc. Member SIPC. All rights reserved. Citi and Citi and Arc Design are trademarks and service marks of Citigroup Inc. or its affiliates and are used and registered throughout the world.

All rights reserved. Citi and Citi and Arc Design are trademarks and service marks of Citigroup Inc. or its affiliates and are used and registered throughout the world.

Citi believes that sustainability is good business practice. We work closely with our clients, peer financial institutions, NGOs and other partners to finance solutions to climate change, develop industry standards, reduce our own environmental footprint, and engage with stakeholders to advance shared learning and solutions. Highlights of Citi's unique role in promoting sustainability include: (a) releasing in 2007 a Climate Change Position Statement, the first US financial institution to do so; (b) targeting \$50 billion over 10 years to address global climate change; includes significant increases in investment and financing of renewable energy, clean technology, and other carbon-emission reduction activities; (c) committing to an absolute reduction in GHG emissions of all Citi owned and leased properties around the world by 10% by 2011; (d) purchasing more than 234,000 MWh of carbon neutral power for our operations over the last three years; (e) establishing in 2008 the Carbon Principles, a framework for banks and their U.S. power clients to evaluate and address carbon risks in the financing of electric power projects; (f) producing equity research related to climate issues that helps to inform investors on risks and opportunities associated with the issuer; and (g) engaging with a broad range of stakeholders on the issue of climate change to help advance understanding and solutions.

Citi works with its clients in greenhouse gas intensive industries to evaluate emerging risks from climate change and, where appropriate, to mitigate those risks.

**efficiency, renewable energy and mitigation**