

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Authority, based upon an analysis of existing laws, regulations, rulings, and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the 2017 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the “Code”). In the further opinion of Bond Counsel, interest on the 2017 Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, nor is it included in adjusted current earnings when calculating corporate alternative minimum taxable income. Bond Counsel is also of the opinion that, under 48 U.S.C. Section 1423a, interest on the 2017 Bonds is exempt from taxation by the Government of Guam, or by any state or territory or any political subdivision thereof or by the District of Columbia. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the 2017 Bonds. See “TAX MATTERS” herein.



GUAM WATERWORKS AUTHORITY

\$107,660,000

Water and Wastewater System Revenue Refunding Bonds Series 2017

Dated: Date of Delivery

Due: July 1, as shown on the inside front cover

This cover page contains certain information for quick reference only. It is not a summary of this issue. Investors must read the entire Official Statement to obtain information essential to making an informed investment decision. Capitalized terms not defined on this cover page are defined inside.

The Guam Waterworks Authority Water and Wastewater System Revenue Refunding Bonds, Series 2017 (the “2017 Bonds”) mature on the dates and in the amounts and will bear interest at the rates per annum listed on the inside front cover. Interest on the 2017 Bonds will be payable on January 1 and July 1 of each year, commencing July 1, 2018.

The Series 2017 Bonds are subject to mandatory, optional and extraordinary optional redemption prior to maturity.

The issuance, sale and delivery of the 2017 Bonds have been approved by the Board of Directors of the Guam Economic Development Authority (“GEDA”) and by the Consolidated Commission on Utilities, the governing board of the Guam Waterworks Authority (the “Authority”). The issuance, terms and conditions of the 2017 Bonds have been approved by the Legislature of Guam. The 2017 Bonds are authorized to be issued pursuant to Chapter 14 of Title 12 of the Guam Code Annotated, as amended (the “Act”), and pursuant to an indenture, dated as of December 1, 2005 (the “General Indenture”), by and among the Authority, Bank of Guam as Trustee and as Depositary, and U.S. Bank National Association, as Co-Trustee and Paying Agent, as supplemented, including as supplemented by a sixth supplemental indenture to be dated as of December 1, 2017 (the “Sixth Supplemental Indenture” and, together with the General Indenture and the previous supplemental indentures, the “Indenture”). The terms of the Indenture and the amounts and terms of the 2017 Bonds have been approved by the Guam Public Utilities Commission.

The Authority is issuing the 2017 Bonds to (i) refund a portion of the Authority’s outstanding 2010 Bonds (as defined herein) and (ii) pay costs incurred in connection with the issuance of the 2017 Bonds.

The Bonds (as herein defined, including but not limited to the 2017 Bonds) are limited obligations of the Authority payable solely from and secured by a pledge of Revenues (as defined in the Indenture and more particularly described herein) consisting primarily of all gross income and revenue received by the Authority from the ownership or operation of the System, all as more fully described herein, subject to the provisions of the Indenture permitting the application of Revenues for the purposes (including payment of Operation and Maintenance Expenses), and exclusive of certain surcharges, described herein.

The Bonds are not a legal or equitable pledge, charge, lien or encumbrance upon any property of the Authority or upon any of its income, receipts or revenues except the Revenues pledged to the payment thereof as provided in the Indenture. Neither the Government of Guam (the “Government”) nor any political subdivision thereof is obligated to pay the principal of, Redemption Price, if applicable, or the interest on the Bonds, except from such Revenues, and neither the Authority nor the Government or any political subdivision thereof has pledged its faith or credit to the payment of the principal of, Redemption Price, if applicable, or the interest on the 2017 Bonds.

The 2017 Bonds will be issued as fully registered bonds and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”). DTC will act as securities depository of the 2017 Bonds. Individual purchases of the 2017 Bonds will be made in book-entry form only. The 2017 Bonds will be issued only in denominations of \$5,000 or any integral multiple thereof. Payments of principal of, Redemption Price, if applicable, and interest on the 2017 Bonds are to be made to purchasers by DTC through DTC participants. See APPENDIX F—“DTC AND ITS BOOK-ENTRY ONLY SYSTEM.” Purchasers will not receive physical delivery of 2017 Bonds.

Investment in the 2017 Bonds involves risks which may not be appropriate for certain investors. See the section in this Official Statement entitled “CERTAIN INVESTMENT CONSIDERATIONS” for a discussion of certain factors that should be considered, in addition to the other matters set forth herein, in evaluating the investment quality of the 2017 Bonds.

The 2017 Bonds are offered when, as and if issued and received by the Underwriters, subject to the approval of legality by Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Authority. Certain legal matters will be passed upon for the Authority by Kelly O. Clark, counsel for the Authority, and for the Underwriters by their counsel, Hawkins Delafield & Wood LLP. Certain legal matters will be passed upon by Orrick, Herrington & Sutcliffe LLP as disclosure counsel to the Authority. It is expected that the 2017 Bonds in book-entry form will be available for delivery through the DTC book-entry system on or about December 20, 2017.

Citigroup

Barclays

MATURITY SCHEDULE

\$107,660,000

GUAM WATERWORKS AUTHORITY
Water and Wastewater System Revenue Refunding Bonds
Series 2017

\$67,845,000 Serial Bonds

Maturity (July 1)	Principal Amount	Interest Rate	Yield	CUSIP Number (40065F)*
2019	\$ 295,000	5.00%	1.88%	CL6
2021	2,040,000	5.00	2.06	CM4
2022	2,145,000	5.00	2.21	CN2
2023	2,250,000	5.00	2.37	CP7
2024	2,365,000	5.00	2.51	CQ5
2025	2,485,000	5.00	2.65	CR3
2026	2,610,000	5.00	2.80	CS1
2027	2,740,000	5.00	2.93	CT9
2028	2,875,000	5.00	3.06 [†]	CU6
2029	3,015,000	5.00	3.14 [†]	CV4
2030	3,170,000	5.00	3.23 [†]	CW2
2031	3,325,000	5.00	3.29 [†]	CX0
2032	3,495,000	5.00	3.34 [†]	CY8
2033	3,665,000	5.00	3.40 [†]	CZ5
2034	3,850,000	5.00	3.45 [†]	DA9
2035	4,040,000	5.00	3.47 [†]	DB7
2036	11,455,000	5.00	3.48 [†]	DC5
2037	12,025,000	5.00	3.49 [†]	DD3

\$39,815,000 Term Bonds

\$39,815,000 5.00% Term Bonds due July 1, 2040, Yield 3.50%[†], CUSIP No. 40065F DE1*

* Copyright 2017, American Bankers Association. CUSIP® is a registered trademark of the American Bankers Association. The CUSIP data herein are provided by CUSIP Global Services, managed on behalf of the American Bankers Association by S&P Capital IQ. The CUSIP numbers are not intended to create a database and do not serve in any way as a substitute for CUSIP service. CUSIP numbers have been assigned by an independent company not affiliated with either the Authority or GEDA and are provided solely for convenience and reference. The CUSIP numbers for a specific maturity or maturities are subject to change after the issuance of the 2017 Bonds. None of the Authority, GEDA or the Underwriters takes responsibility for the accuracy of the CUSIP numbers, and no representation is made as to their correctness on the applicable 2017 Bond certificates or in this Official Statement.

[†] Priced to par call on July 1, 2027.

CONSOLIDATED COMMISSION ON UTILITIES

Joseph T. Duenas
Chairman

Francis E. Santos
Vice Chairman

J. George Bamba
Secretary

Judith T. Guthertz, Ph.D.
Treasurer

Simon A. Sanchez II
Commissioner

GUAM WATERWORKS AUTHORITY

Miguel C. Bordallo, P.E.
General Manager

Greg P. Cruz
Chief Financial Officer

Thomas F. Cruz, P.E.
Chief Engineer

Paul J. Kemp
Assistant General Manager,
Compliance and Safety

GOVERNMENT OF GUAM

Edward J. B. Calvo
Governor

Raymond S. Tenorio
Lieutenant Governor

GUAM ECONOMIC DEVELOPMENT AUTHORITY

Jay Rojas
Administrator

Mana Silva Tajeron
Deputy Administrator

Christina Garcia
Manager, Public Finance Division

SPECIAL SERVICES

Bond Counsel and Disclosure Counsel
Orrick, Herrington & Sutcliffe LLP

Trustee and Depositary
Bank of Guam
Hagåtña, Guam

Independent Auditors
Deloitte & Touche LLP

Co-Trustee and Paying Agent
U.S. Bank National Association
Los Angeles, California

Dissemination Agent
Digital Assurance Certification, L.L.C.
Winter Park, Florida

Verification Agent
Causey Demgen & Moore, P.C.
Denver, Colorado

The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their respective responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

No dealer, broker, salesperson or other person has been authorized by the Authority or the Underwriters to give any information or to make any representations other than those contained herein and, if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the 2017 Bonds by any person in any jurisdiction in which it is unlawful for such person to make such an offer, solicitation or sale.

This Official Statement is not to be construed as a contract with the purchasers of the 2017 Bonds. Statements contained in this Official Statement that involve estimates, forecasts or matters of opinion, whether or not expressly so described herein, are intended solely as such and are not to be construed as representations of fact.

Certain statements contained or incorporated by reference in this Official Statement are not intended to reflect historical facts but are estimates and “forward-looking statements.” No assurance can be given that the future results discussed herein will be achieved, and actual results may differ materially from the expectations or forecasts described herein. In this respect, the words “estimate,” “project,” “forecast,” “anticipate,” “expect,” “assume,” “intend,” “believe” and similar expressions are intended to identify forward-looking statements. All projections, forecasts, assumptions, expressions of opinion, estimates and other forward-looking statements are expressly qualified in their entirety by the cautionary statements set forth in this Official Statement. The Authority does not plan to issue any updates or revisions to such forward-looking statements whether or not its expectations, or any events, conditions or circumstances on which such statements are based, do or do not occur.

The information set forth in this Official Statement has been furnished by the Authority and other sources which are believed to be reliable, but it is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation by, the Underwriters. The information and expressions of opinion stated herein are subject to change without notice and neither delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the information or opinions stated herein or in the affairs of the Authority since the date hereof.

The 2017 Bonds have not been registered under the Securities Act of 1933, as amended, in reliance upon an exemption contained in such act. The 2017 Bonds have not been registered or qualified under the securities laws of any state.

In connection with this offering the Underwriters may over-allot or effect transactions which stabilize or maintain the market price of the 2017 Bonds offered hereby at a level above that which might otherwise prevail in the open market. Such stabilizing, if commenced, may be discontinued at any time.

TABLE OF CONTENTS

INTRODUCTION	1	Secondary Treatment Requirements Under NPDES	
The 2017 Bonds	1	Permits	53
Security and Sources of Payment for the 2017 Bonds.....	1	Limitation of Rights upon Insolvency	54
The Authority and the System.....	2	LITIGATION	54
Investment Considerations	3	No Litigation Relating to the 2017 Bonds.....	54
Continuing Disclosure.....	3	Other Litigation Relating to the Authority and the	
Forward-Looking Statements.....	3	System	55
Miscellaneous.....	3	TAX MATTERS	55
PLAN OF FINANCE.....	4	UNDERWRITING	56
Authorization.....	4	FINANCIAL STATEMENTS	57
Refunding Plan.....	4	CERTAIN LEGAL MATTERS.....	57
ESTIMATED SOURCES AND USES OF FUNDS.....	5	VERIFICATION OF ESCROW	57
THE 2017 BONDS	5	AVAILABLE INFORMATION.....	58
General	5	RATINGS.....	58
Redemption of the 2017 Bonds.....	6	CONTINUING DISCLOSURE	58
Trustee, Co-Trustee, Registrar and Paying Agent	7	MISCELLANEOUS.....	59
Book-Entry System	7		
DEBT SERVICE SCHEDULE	8	APPENDIX A – CERTAIN INFORMATION	
SECURITY AND SOURCES OF PAYMENT FOR THE		REGARDING THE TERRITORY OF GUAM.....	A-1
BONDS.....	9	APPENDIX B – FINANCIAL STATEMENTS,	
Pledge of Revenues	9	ADDITIONAL INFORMATION AND	
Allocation of Revenues	9	INDEPENDENT AUDITORS’ REPORT FOR THE	
Rate Covenant	11	FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND	
Bond Reserve Fund	12	2015.....	B-1
Additional Bonds.....	12	APPENDIX C – SUMMARY OF CERTAIN	
Parity Payment Agreements	13	PROVISIONS OF THE INDENTURE	C-1
Subordinate Obligations.....	14	APPENDIX D – PROPOSED FORM OF OPINION OF	
Events of Default and Remedies; No Acceleration	14	BOND COUNSEL.....	D-1
Depositories for Funds and Accounts	14	APPENDIX E – PROPOSED FORM OF CONTINUING	
THE AUTHORITY	15	DISCLOSURE AGREEMENT.....	E-1
General	15	APPENDIX F – DTC AND ITS BOOK-ENTRY ONLY	
Consolidated Commission on Utilities	15	SYSTEM.....	F-1
Key Management Personnel	16		
THE SYSTEM.....	17		
The Water System	18		
The Wastewater System.....	22		
One-Guam Initiative.....	24		
Leak Detection Program and Leak Management System.....	25		
The Authority’s Largest Customers.....	26		
New Water and Sewer Installations; System			
Development Charge	27		
Meter Replacement Programs	28		
Billing, Collections and Enforcements	29		
Uniform Disconnection Policy.....	31		
Debt Service Coverage.....	31		
Funding of Required Reserves	31		
Additional Operating Reserves	32		
Security Measures	32		
Labor and Employee Relations.....	32		
Employees’ Retirement Plan.....	33		
Other Post-Employment Benefits	36		
REGULATORY ENVIRONMENT	37		
Environmental Regulations.....	37		
Regulation of Ratemaking.....	40		
Historical Rate Adjustments	40		
FUTURE SYSTEM CAPITAL REQUIREMENTS.....	42		
Capital Improvement Program.....	42		
Proposed U.S. Military Relocation and Installations.....	44		
HISTORICAL AND PROJECTED OPERATING RESULTS	45		
Historical Operating Results	45		
Projected Operating Results	47		
CERTAIN INVESTMENT CONSIDERATIONS.....	49		
General	49		
Limitations on Remedies.....	49		
Uncertainties of Projections and Assumptions	50		
Guam Economy; Impact of Tourism and Military			
Presence	50		
Uncertainties Relating to Political and Military Actions.....	51		
2011 Court Order with the USEPA.....	51		
Typhoons and Earthquakes	52		
Rates	52		
Self-Insurance.....	53		
Government Regulation	53		
Implementation of Capital Improvement Program	53		

[THIS PAGE INTENTIONALLY LEFT BLANK]

GUAM WATERWORKS AUTHORITY

\$107,660,000

Water and Wastewater System Revenue Refunding Bonds Series 2017

INTRODUCTION

The purpose of this Official Statement, which includes the cover page, the inside cover page, the table of contents and appendices hereto (collectively, the “Official Statement”), is to provide information in connection with the offering by the Guam Waterworks Authority (the “Authority”) of the \$107,660,000 Guam Waterworks Authority Water and Wastewater System Revenue Refunding Bonds, Series 2017 (the “2017 Bonds”).

This Introduction is not a summary of this Official Statement, but is only a brief description of, and is qualified by, more complete and detailed information contained in this Official Statement. The Introduction should not be relied upon to provide all of the information necessary to make an informed decision about purchasing the 2017 Bonds. A full review should be made of the entire Official Statement. The offering of 2017 Bonds to potential investors is made only by means of the entire Official Statement.

Capitalized terms used herein that are not otherwise defined shall have the meanings set forth in APPENDIX C—“SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.”

The 2017 Bonds

The Authority is issuing the 2017 Bonds (i) to refund a portion of the Authority’s outstanding Guam Waterworks Authority Water and Wastewater Revenue Bonds, Series 2010 (the “2010 Bonds”) and (ii) to pay costs of issuing the 2017 Bonds. See “PLAN OF FINANCE.”

The 2017 Bonds are authorized to be issued pursuant to the Act and pursuant to an indenture, dated as of December 1, 2005 (the “General Indenture”), as supplemented, including as supplemented by a sixth supplemental indenture, to be dated as of December 1, 2017 (the “Sixth Supplemental Indenture” and together with the General Indenture and the prior supplemental indentures, the “Indenture”), each by and among the Authority, Bank of Guam, as trustee (the “Trustee”) and Depositary for the Revenue Fund, and U.S. Bank National Association, as co-trustee (the “Co-Trustee”). The bonds previously issued by the Authority pursuant to the Indenture, including the 2010 Bonds, are referred to collectively herein as the “Prior Bonds,” which as of October 1, 2017 are outstanding in the aggregate principal amount of \$506,460,000. The Prior Bonds and the 2017 Bonds, together with any additional bonds that may be issued pursuant to, and outstanding at any given time under, the Indenture, are herein referred to as “Bonds.” After giving effect to the issuance of the 2017 Bonds and the defeasance of the refunded 2010 Bonds, the Bonds will be outstanding in the aggregate principal amount of \$505,015,000.

The Consolidated Commission on Utilities (the “CCU”) has approved the issuance, sale and delivery of the 2017 Bonds. The Board of Directors of the Guam Economic Development Authority (“GEDA”) has approved the issuance and sale of the 2017 Bonds. The Legislature of Guam has approved the issuance, terms and conditions of the 2017 Bonds. The terms of the Indenture and the aggregate principal amount and terms of the 2017 Bonds have been approved by the Guam Public Utilities Commission (the “PUC”).

See “PLAN OF FINANCE—Authorization” and “—Refunding Plan.”

Security and Sources of Payment for the 2017 Bonds

The Bonds, including the 2017 Bonds, are limited obligations of the Authority payable solely from and secured solely by a pledge of Revenues (as defined in the Indenture and described herein) consisting primarily of all gross income and revenue received by the Authority from the ownership or operation of the Authority’s water and wastewater systems (collectively, the “System”), subject to the provisions of the Indenture permitting the application of Revenues for or to the purposes (including payment of Operation and Maintenance Expenses) and on the terms

and conditions set forth in the Indenture. The Bonds are not a legal or equitable pledge, charge, lien or encumbrance upon any property of the Authority or upon any of its income, receipts or revenues except the Revenues pledged to the payment thereof as in the Indenture.

The Indenture prohibits the issuance of any bonds or obligations payable from Revenues or secured by a pledge, lien or charge upon Revenues superior to the Bonds, and permits issuance of obligations on a parity with the Bonds only in accordance with the Indenture. The Indenture does not prohibit the incurrence of indebtedness secured by subordinate liens on Revenues.

Neither the Government of Guam (the “Government”) nor any political subdivision thereof is obligated to pay the principal of, redemption price, if applicable, or interest on the Bonds, except from such Revenues, and neither the Authority nor the Government or any political subdivision thereof has pledged its faith or credit to the payment of the principal of, redemption price, if applicable, or interest on the Bonds.

See “SECURITY AND SOURCES OF PAYMENT FOR THE BONDS – Pledge of Revenues” and “–Allocation of Revenues” and “REGULATORY ENVIRONMENT – Regulation of Ratemaking.”

The Authority and the System

In 2002, pursuant to Public Law 26-76, the Authority was converted from a government agency to a Guam public corporation organized and existing under Chapter 14 of Title 12 of the Guam Code Annotated, as amended (the “Act”). The Authority is authorized to operate and maintain the System for the island of Guam.

The Authority is governed by the CCU, which acts as the governing board of the Authority and the Guam Power Authority (“GPA”). The CCU was created in 2002 and consists of five elected members. The CCU makes decisions regarding policies, management, budgeting and financing of the Authority’s operations. Certain actions, however, such as issuing bonds for financing utility capital projects, also require the approval of the Legislature of Guam and the PUC. In addition, ratemaking by the CCU is subject to the approval of the PUC, as the regulatory ratemaking body. The Authority may not enter into any contractual agreements or obligations which could increase rates and charges without the prior written approval of the PUC.

The Authority’s goals are directed towards providing more efficient and reliable service to its customers and operating as a self-supporting utility while meeting regulatory requirements. The Authority is subject to federal and Guam regulations governing water supply and wastewater treatment. The drinking water standards promulgated in the federal Safe Drinking Water Act, as amended (the “SDWA”), are the primary requirements for water supply. Wastewater treatment and disposal must comply with the water quality standards in the federal Clean Water Act, as amended (the “CWA”). Historically, the Authority had experienced difficulty in complying with SDWA and CWA regulations. The Authority’s previous failure to meet all of the SDWA and CWA standards resulted in the United States Environmental Protection Agency (the “USEPA”) bringing suit against the Authority in the United States District Court of Guam (the “District Court”). On June 5, 2003, the Authority and the USEPA entered into a Stipulated Order for Preliminary Relief, which was subsequently amended in 2004 and in 2006 (collectively, the “2003 Stipulated Order”). The 2003 Stipulated Order required the Authority to make specified improvements to the System and to undertake certain planning measures by specific dates. The Authority did not meet all of the deadlines in the 2003 Stipulated Order, resulting in the Authority paying fines totaling \$389,750.

In 2010, the USEPA requested that the District Court order the Authority to address the then-remaining items in the 2003 Stipulated Order, as well as certain additional actions or improvements. On November 10, 2011, the District Court issued an Order for Preliminary Relief (the “2011 Court Order”) establishing new deadlines for the unfinished projects. The 2011 Court Order superseded the 2003 Stipulated Order and all prior orders. The Authority has made compliance with the 2011 Court Order a top priority. Since the issuance of the 2011 Court Order, the Authority has not been assessed any fines by the USEPA for missed deadlines or received any formal notification regarding such fines. See “REGULATORY ENVIRONMENT—Environmental Regulations—*The 2003 Stipulated Order and the 2011 Court Order.*” In November 2012, the USEPA issued to the Authority a notice of Findings of Significant Deficiencies under the SDWA identifying deficiencies in the Authority’s water system. See “REGULATORY ENVIRONMENT—Environmental Regulations—*Compliance with the SDWA – Water System—Findings of Significant Deficiencies.*” In May 2013, the USEPA issued to the Authority under the CWA a Request

for Information identifying several findings in respect of the Authority's wastewater system. See "THE SYSTEM—The Wastewater System—*Wastewater Collection System*" and "REGULATORY ENVIRONMENT—Environmental Regulations—*Compliance with the SDWA – Water System*—Request for Information."

The Authority has developed a capital improvement program (the "Capital Improvement Program" or the "CIP") focused on the rehabilitation and upgrade of the System. The estimated cost of necessary capital improvements for Fiscal Years 2016-2020 is approximately \$282.1 million. See "THE AUTHORITY," "REGULATORY ENVIRONMENT," "THE SYSTEM" and "FUTURE SYSTEM CAPITAL REQUIREMENTS—Capital Improvement Program."

Investment Considerations

There are important investment considerations and risks associated with the purchase of the 2017 Bonds. See "CERTAIN INVESTMENT CONSIDERATIONS" for a discussion of some of these considerations and risks. Any one or more of the considerations and risks discussed, and others, could lead to a decrease in the market value and/or the ability to sell the 2017 Bonds in the secondary market. Potential purchasers of the 2017 Bonds are advised to review this entire Official Statement carefully.

Continuing Disclosure

As a condition to the issuance and sale of the 2017 Bonds, the Authority will covenant for the benefit of the holders and beneficial owners of the 2017 Bonds to provide annually certain financial information and operating data and to provide notice of certain enumerated events to assist the Underwriters in complying with the Securities and Exchange Commission's Rule 15c2-12 under the Securities Exchange Act of 1934, as amended ("Rule 15c2-12"). See "CONTINUING DISCLOSURE" below and the proposed form of Continuing Disclosure Agreement included herein as APPENDIX E.

Forward-Looking Statements

Certain statements contained or incorporated by reference in this Official Statement are not intended to reflect historical facts but are estimates and "forward-looking statements." No assurance can be given that the future results discussed herein will be achieved, and actual results may differ materially from the expectations or forecasts described herein. In this respect, the words "estimate," "project," "forecast," "anticipate," "expect," "assume," "intend," "believe" and similar expressions are intended to identify forward-looking statements. All projections, forecasts, assumptions, expressions of opinion, estimates and other forward-looking statements are expressly qualified in their entirety by the cautionary statements set forth in this Official Statement. The Authority does not plan to issue any updates or revisions to such forward-looking statements whether or not its expectations, or any events, conditions or circumstances on which such statements are based, do or do not occur.

Miscellaneous

Brief descriptions of the 2017 Bonds, the Authority and Guam are provided below. Such descriptions do not purport to be comprehensive or definitive. All references to the 2017 Bonds and the Indenture are qualified in their entirety by reference to the forms thereof.

The information herein is subject to change without notice, and neither the delivery of this Official Statement nor any sale made with respect hereto shall, under any circumstances, create any implication that there has been no change in the affairs of the Authority or the System since the date hereof.

This Official Statement is not to be construed as a contract or agreement between the Authority and the purchasers or owners of any of the 2017 Bonds.

PLAN OF FINANCE

Authorization

The 2017 Bonds are authorized to be issued pursuant to the Act and are being issued pursuant to the Indenture. The CCU has approved the issuance, sale and delivery of the 2017 Bonds pursuant to Resolution No. 51-FY2017. The Board of Directors of GEDA has approved the issuance and sale of the 2017 Bonds in Resolution No. 17-001. Pursuant to Public Law No. 28-71, as amended by Public Law Nos. 31-1458 and 32-069, the Legislature of Guam has approved the issuance, terms and conditions of the 2017 Bonds. The terms of the Indenture and the aggregate principal amount and terms of the 2017 Bonds have been approved by the PUC pursuant to Docket No. 17-10.

Refunding Plan

The 2017 Bonds are being issued by the Authority (i) to refund a portion of the Authority's outstanding 2010 Bonds, as shown in the table below and (ii) to pay costs of issuing the 2017 Bonds.

Table 1
Refunded Bonds

Maturity (July 1)	Principal Amount	Expected Redemption Date	Redemption Price (% of Principal)	CUSIP Number (40065F)*
2025	\$11,030,000	July 1, 2020	100%	AR5
2030	14,325,000	July 1, 2020	100	AS3
2040	83,750,000	July 1, 2020	100	AT1

A portion of the proceeds of the 2017 Bonds, together with other available funds of the Authority, are to be deposited in an escrow fund (the "Escrow Fund") to be created and established by the Co-Trustee, in its capacity as Paying Agent for the refunded 2010 Bonds and as escrow agent (the "Escrow Agent"), pursuant to an escrow agreement (the "Escrow Agreement"). The amounts so deposited in the Escrow Fund will either be held as cash, uninvested, in an amount sufficient, or be used to purchase certain securities (the "Escrow Securities") in accordance with the requirements of the Indenture, the principal of and interest on which (together with any initial cash deposit), will be sufficient, to pay when due the scheduled principal and redemption price of the refunded 2010 Bonds and interest thereon to become due on or prior to the date fixed for redemption, including retirement in part by mandatory sinking fund installment, if applicable. Upon such deposit in the Escrow Fund in accordance with the provisions of the Escrow Agreement and satisfaction of certain other conditions, all liability of the Authority in respect of the refunded 2010 Bonds will cease, terminate and be completely discharged and the owners thereof shall thereafter be entitled only to payment out of the Escrow Fund.

The mathematical accuracy of certain computations relating to the adequacy of the cash and/or Escrow Securities and the interest thereon together with other available moneys to pay the scheduled principal, redemption price and interest on the refunded 2010 Bonds on and prior to the Redemption Date thereof will be verified at the time of delivery of the 2017 Bonds by Causey Demgen & Moore, P.C. See "VERIFICATION OF ESCROW."

* Copyright 2017, American Bankers Association. CUSIP® is a registered trademark of the American Bankers Association. The CUSIP data herein are provided by CUSIP Global Services, managed on behalf of the American Bankers Association by S&P Capital IQ. The CUSIP numbers are not intended to create a database and do not serve in any way as a substitute for CUSIP service. CUSIP numbers have been assigned by an independent company not affiliated with either the Authority or GEDA and are provided solely for convenience and reference. None of the Authority, GEDA or the Underwriters takes responsibility for the accuracy of the CUSIP numbers, and no representation is made as to their correctness on the applicable 2010 Bond certificates or in this Official Statement.

ESTIMATED SOURCES AND USES OF FUNDS

The proceeds of the 2017 Bonds are expected to be applied as shown below:

	Series 2017 Bonds
Sources:	
Principal Amount of 2017 Bonds	\$107,660,000.00
Original Issue Premium	13,854,832.75
Funds Released from Bond Reserve Fund and Bond Fund	2,532,528.10
Total Sources	<u>\$124,047,360.85</u>
Uses:	
Deposit to Escrow Fund	\$122,155,917.06
Costs of Issuance ⁽¹⁾	1,891,443.79
Total Uses	<u>\$124,047,360.85</u>

⁽¹⁾ Includes Underwriters' discount, Trustee and Co-Trustee fees, Escrow Agent fees, verification fees, legal fees and expenses, rating agency fees, printing costs and other miscellaneous costs of issuance.

THE 2017 BONDS

General

When issued, the 2017 Bonds will be dated their date of delivery and will bear interest at the rates per annum and mature, subject to prior redemption, on the dates and in the principal amounts set forth on the inside cover page of this Official Statement. Interest on the 2017 Bonds will be payable on January 1 and July 1 of each year, commencing July 1, 2018 (each an "Interest Payment Date"). Interest will accrue on the 2017 Bonds on the basis of a 360-day year of twelve 30-day months. Each 2017 Bond will bear interest from the Interest Payment Date next preceding the date of authentication thereof, except that: (1) 2017 Bonds authenticated during the period from the Record Date immediately preceding an Interest Payment Date to such Interest Payment Date, inclusive, will bear interest from such Interest Payment Date; and (2) 2017 Bonds authenticated on or prior to the Record Date for the first Interest Payment Date for the 2017 Bonds will bear interest from their date of delivery; provided, however, that if interest on the 2017 Bonds then Outstanding shall be in default at the time of authentication of any 2017 Bond, such 2017 Bond will bear interest from the Interest Payment Date to which interest has previously been paid or made available for payment on the 2017 Bonds then Outstanding. The 2017 Bonds of each series will be issued in denominations of \$5,000 and integral multiples thereof.

The 2017 Bonds when issued will be registered in the name of Cede & Co., as registered owner and nominee of The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository for the 2017 Bonds. Individual purchases may be made only in book-entry form, and purchasers will not receive certificates representing their interest in the 2017 Bonds purchased. Except as described below under "TAX MATTERS," so long as Cede & Co. is the registered owner of the 2017 Bonds, as nominee of DTC, references herein to "Bondholders" or to "registered owners" of the 2017 Bonds mean Cede & Co. and not the Beneficial Owners of the 2017 Bonds. In this Official Statement, the term "Beneficial Owner" means the person for whom a DTC participant acquires an interest in the 2017 Bonds.

So long as DTC, or its nominee Cede & Co. (or such other nominee as an authorized officer of DTC may request), is the registered owner of all 2017 Bonds, all payments of principal of, Redemption Price, if applicable, and interest on the 2017 Bonds are to be made directly to DTC, which, in turn, is to remit such amounts to the Direct and Indirect Participants for subsequent distribution to the Beneficial Owners of the 2017 Bonds. See APPENDIX F—"DTC AND ITS BOOK-ENTRY ONLY SYSTEM."

Redemption of the 2017 Bonds

Optional Redemption. The Series 2017 Bonds maturing on or after July 1, 2028 are subject to redemption prior to their respective stated maturities, at the option of the Authority, from any source of available moneys, on any date on or after July 1, 2027, as a whole, or in part by such maturities or portions of maturities as shall be determined by the Authority (or by lot within a maturity in the absence of such a determination), at a redemption price equal to the principal amount of each Series 2017 Bond called for redemption plus interest accrued to the date fixed for redemption, without premium.

Mandatory Sinking Account Redemption. The Series 2017 Bonds maturing on July 1, 2040 are subject to redemption prior to their stated maturity in part, by lot, on July 1 of each year from Mandatory Sinking Account Payments, commencing July 1, 2038, at a redemption price equal to their principal amount, plus accrued interest thereon to the date fixed for redemption, without premium, on the dates and in the amounts, as set forth below:

2040 Term Bond	
Date (July 1)	Amount
2038	\$12,630,000
2039	13,260,000
2040 [†]	13,925,000

[†] Maturity

Extraordinary Optional Redemption of the 2017 Bonds. The 2017 Bonds are subject to redemption on any date prior to their respective stated maturities, as a whole, or in part so that the reduction in Annual Debt Service for the 2017 Bonds for each Bond Year after such redemption shall be as nearly proportional as practicable, from and to the extent of proceeds received by the Authority due to a governmental taking of the System or portions thereof by eminent domain proceedings, if such amounts are not used for additions, improvements or extensions to the System, under the circumstances and upon the conditions and terms set forth in the Indenture, at the greater of par or Amortized Value (in the case of 2017 Bonds, if any, issued at an original issue premium), plus accrued interest to the date fixed for redemption, without premium. “Amortized Value” means on any Interest Payment Date, the then current value of the 2017 Bond, amortizing the original issue premium over the period ending on the first call date using the constant yield method.

Selection of 2017 Bonds for Redemption. If less than all of the 2017 Bonds of any maturity are to be redeemed at any one time, the 2017 Bonds or portions thereof to be redeemed shall be selected by the Authority or, in the absence of such a selection by the Authority, by the Registrar by lot in such manner that the Registrar may determine.

Notice of Redemption. Notice of redemption (except as otherwise provided in the Indenture) is required to be given, not less than 30 nor more than 60 days before the date fixed for redemption, by first class mail to each of the registered owners of 2017 Bonds designated for redemption at their addresses appearing on the Bond registration books of the Registrar on the date the 2017 Bonds to be redeemed are selected. Each notice of redemption is required to state the redemption date, the place or places of redemption, the Series and maturities to be redeemed, and, if less than all of any such maturity, the numbers of the 2017 Bonds of such maturity to be redeemed and, in the case of 2017 Bonds to be redeemed in part only, the respective portions of the principal amount thereof to be redeemed, and is required also to state that on said date there will become due and payable on each of said 2017 Bonds the Redemption Price thereof or of said specified portion of the principal thereof in the case of a 2017 Bond to be redeemed in part only, together with interest accrued thereon to the redemption date, and that from and after such redemption date interest thereon shall cease to accrue, and is also to require that such 2017 Bonds be then surrendered, with a written instrument of transfer duly executed by the registered owner thereof or by such registered owner’s attorney duly authorized in writing. No defect in or failure to give such mailed notice of redemption shall affect the validity of proceedings for the redemption of such 2017 Bonds. Each notice of redemption shall also state the CUSIP number, date of issue and interest rate on each 2017 Bond, or portion thereof, to be redeemed, and shall include the redemption agent name and address; provided, however, that failure to include

any of such information in any redemption notice, or any inaccuracy in any such information, shall not affect the sufficiency of the proceedings for redemption of any 2017 Bonds.

The Authority may, at its option, prior to the date fixed for redemption in any notice of redemption, rescind and cancel such notice of redemption.

Trustee, Co-Trustee, Registrar and Paying Agent

The Bank of Guam has been appointed to act as the Trustee for the Bonds, including the 2017 Bonds, and U.S. Bank National Association has been appointed to act as Co-Trustee, registrar (the “Registrar”) and paying agent (the “Paying Agent”) for the 2017 Bonds.

Book-Entry System

The 2017 Bonds will be delivered in fully registered form only, and when delivered will be registered in the name of Cede & Co., as nominee of DTC. DTC acts as securities depository for the 2017 Bonds. Ownership interests in the 2017 Bonds may be purchased in book-entry only form, in the denominations set forth above. The Indenture provides that, so long as DTC acts as securities depository for the 2017 Bonds, the Authority, the Trustee, the Co-Trustee, the Registrar and the Paying Agent may treat DTC as the absolute owner of such 2017 Bonds for all purposes and that none of the Authority, the Trustee, the Co-Trustee, the Registrar and the Paying Agent shall have any liability with respect to (i) the accuracy of the records of DTC or any Participant with respect to any beneficial ownership interest in the 2017 Bonds, (ii) the delivery to any Participant, any Beneficial Owner or any other person, other than DTC, of any notice with respect to the 2017 Bonds, (iii) the payment to any Participant, any Beneficial Owner or any other person, other than DTC, of any amount with respect to principal or redemption price of or interest on the 2017 Bonds, (iv) the selection by DTC or any Participant of any person to receive payment in the event of a partial redemption of the 2017 Bonds or (v) any consent given or other action taken by DTC as Holder of the 2017 Bonds. See APPENDIX F—“DTC AND ITS BOOK-ENTRY ONLY SYSTEM.”

(Remainder of Page Intentionally Left Blank)

DEBT SERVICE SCHEDULE

Table 2 sets forth the debt service schedule for all Bonds to be Outstanding after giving effect to the issuance of the 2017 Bonds and the defeasance of the refunded 2010 Bonds.

Table 2
Debt Service Schedule

Fiscal Year Ending September 30,	Prior Bonds ⁽¹⁾	Series 2017 Bonds		Total Debt Service
		Principal	Interest	
2018	\$ 23,882,938	--	\$2,855,981	\$ 26,738,919
2019	25,690,415	\$295,000	5,383,000	31,368,415
2020	28,806,938	--	5,368,250	34,175,188
2021	26,821,700	2,040,000	5,368,250	34,229,950
2022	26,823,100	2,145,000	5,266,250	34,234,350
2023	26,820,625	2,250,000	5,159,000	34,229,625
2024	26,823,513	2,365,000	5,046,500	34,235,013
2025	26,820,475	2,485,000	4,928,250	34,233,725
2026	26,815,763	2,610,000	4,804,000	34,229,763
2027	26,817,513	2,740,000	4,673,500	34,231,013
2028	26,821,013	2,875,000	4,536,500	34,232,513
2029	26,825,013	3,015,000	4,392,750	34,232,763
2030	26,822,638	3,170,000	4,242,000	34,234,638
2031	26,827,463	3,325,000	4,083,500	34,235,963
2032	26,817,700	3,495,000	3,917,250	34,229,950
2033	26,822,575	3,665,000	3,742,500	34,230,075
2034	26,824,800	3,850,000	3,559,250	34,234,050
2035	26,824,125	4,040,000	3,366,750	34,230,875
2036	19,616,175	11,455,000	3,164,750	34,235,925
2037	19,614,400	12,025,000	2,592,000	34,231,400
2038	19,614,450	12,630,000	1,990,750	34,235,200
2039	19,609,975	13,260,000	1,359,250	34,229,225
2040	19,614,875	13,925,000	696,250	34,236,125
2041	34,887,300	-	--	34,887,300
2042	34,886,050	-	--	34,886,050
2043	34,888,400	-	--	34,888,400
2044	34,885,000	-	--	34,885,000
2045	34,883,250	-	--	34,883,250
2046	34,055,625	-	--	34,055,625
2047	--	-	--	--
Total ⁽³⁾	\$787,263,803	\$107,660,000	\$90,496,481	\$985,420,284

⁽¹⁾ Excludes the 2010 Bonds to be refunded in part with proceeds of the 2017 Bonds. See "PLAN OF FINANCE—Refunding Plan."

⁽²⁾ Net of capitalized interest.

⁽³⁾ Totals reflect rounding.

SECURITY AND SOURCES OF PAYMENT FOR THE BONDS

Pledge of Revenues

The Bonds are limited obligations of the Authority and are payable solely from, and secured solely by a lien on and pledge of, the Revenues. Pursuant to the Indenture, the Authority has pledged all of the Revenues, subject only to the provisions of the Indenture permitting the application thereof for or to the purposes and on the terms and conditions set forth in the Indenture, to secure the payment of the principal of, premium, if any, and interest on the Bonds in accordance with their terms and the provisions of the Indenture and the payment of Credit Agreement Payments and Parity Payment Agreement Payments in accordance with their terms. The Indenture provides that such pledge constitutes a lien on and security interest in the Revenues and will attach, be perfected and be valid and binding from and after delivery of the first Series of Bonds issued under the General Indenture, without any physical delivery of such Revenues or further act.

As defined in the Indenture, "Revenues" include all gross income and other amounts received or receivable by the Authority as revenues of any kind from the ownership or operation of any part of the System, including all rates, fees and charges (including ground water, surface water and treated water charges and all wastewater service charges), received by the Authority for providing water and wastewater services (but excluding development charges and assessments and hook-up fees and other special charges such as penalties and fines), all Payment Agreement Receipts, and all proceeds of insurance or grants covering business interruption loss (and related losses and expenses) relating to the System, and all other income and revenue howsoever derived by the Authority from the ownership or operation of, or arising from, the System, together with all interest, profits or other income derived from the investment of amounts in the Revenue Fund, but not including: (1) amounts received as insurance proceeds (except as described above) or from the sale, transfer or other disposition of, or upon the taking by or under the threat of eminent domain of, all or any part of the System (which moneys shall be received and disposed of pursuant to the provisions of the Indenture); (2) proceeds from any securities issued by the Authority or proceeds from loans obtained by the Authority; (3) the proceeds of any court or arbitration award or settlement in lieu thereof received by the Authority; (4) amounts received by the Authority as gifts or as grants (except as described above), whether restricted or unrestricted; and (5) other amounts (except as described above), the use of which is restricted by the donor or grantor.

The Authority has covenanted in the Indenture that, so long as any Bonds are Outstanding, the Authority will not issue any bonds or obligations payable from Revenues or secured by a pledge, lien or charge upon Revenues prior to or on a parity with the Bonds, any Parity Agreement Payments and any Credit Agreement Payments (other than Additional Bonds, Parity Agreement Payments and Credit Agreement Payments).

The ability of the Authority to pay principal of and interest on the Bonds will depend upon the receipt by the Authority of sufficient Revenues. If Revenues and amounts available in the funds and accounts under the Indenture are insufficient to pay the principal of and interest on the Bonds, no other source of repayment exists. The Authority has no taxing power.

Allocation of Revenues

The Indenture requires the Authority to deposit all Revenues upon receipt in the Revenue Fund held by the Depositary. The Indenture provides that on or before the fifth day of each calendar month, the Depositary is required to transfer from the Revenue Fund (to the Trustee as necessary) for deposit into one or more of the following respective separate funds, the following amounts in the following order of priority, the requirements of each such fund or account (including the making up of any deficiencies in any such fund or account resulting from lack of Revenues sufficient to make any earlier required deposit) at the time of deposit to be satisfied, and the results of such satisfaction being taken into account, before any transfer is made to any fund subordinate in priority:

(A) into the Operation and Maintenance Fund, an amount equal to the amount of Operation and Maintenance Expenses budgeted by the Authority, pursuant to the budget, as revised, filed in accordance with the Indenture, to be paid from Revenues during the next succeeding calendar month (including any amount to be held as a reserve for transfer to the Rebate Fund) plus the amount of any Other Credit Agreement Payments then due and payable or to become due and payable during such month not otherwise included in such amount;

(B) into the Debt Service Fund held by the Co-Trustee, an amount equal to the amount necessary to increase the amount in the Debt Service Fund to the aggregate amount for all Outstanding Bonds of all unpaid interest, principal and Mandatory Sinking Account Payments and for all Outstanding Parity Payment Agreements of all Parity Payment Agreement Payments with respect thereto and for all Outstanding Credit Agreements of all Credit Agreement Reimbursement Payments due and payable to the extent not otherwise included in such amount which shall be required to have been transferred to the Debt Service Fund on the basis of the following transfer requirement rules (after taking into account amounts transferred and to be transferred from any Construction Account to pay Capitalized Interest):

(1) an amount equal to the amount of interest payable on each Bond on a current uncompounded basis on any Interest Payment Date shall be transferred in equal monthly amounts over the Interest Accrual Period for such Bond ending on such Interest Payment Date (or in the case of Variable Rate Bonds 110% of the amount of interest accrued during the next preceding calendar month less any excess deposited for the next preceding calendar month); provided that to the extent that a Qualified Counterparty is obligated to make payments to the Authority on or prior to such Interest Payment Date pursuant to an Outstanding Payment Agreement Related to any Bonds, an amount equal to the amount of any such payment obligation shall be transferred from the Revenue Fund to the Debt Service Fund on the date such payment is due and the amount of each monthly transfer with respect to such Bonds as described in this subparagraph (1) during the Interest Accrual Period (or portion thereof) over which such payment obligation accrues shall be reduced by an amount equal to the amount of such Qualified Counterparty's payment obligation accruing during the next preceding calendar month;

(2) the amount of interest payable on each Bond on a deferred compounded basis on any Interest Payment Date shall be transferred in substantially equal monthly amounts over the period during which such interest accrues on such basis;

(3) the amount of the principal of each Bond shall be transferred in equal monthly amounts over the Principal Payment Period for such Bond ending on the maturity date for such Bond;

(4) the amount of each Mandatory Sinking Account Payment for Bonds shall be transferred in equal monthly amounts over the Principal Payment Period for such Bonds ending on the date such Mandatory Sinking Account Payment is due;

(5) the amount of any Parity Payment Agreement Payment payable on any Payment Agreement Payment Date shall be transferred (a) in the case of such payments calculated based on a fixed rate, in equal monthly installments over the Payment Agreement Payment Accrual Period for such Payment Agreement Payment ending on such Payment Agreement Payment Date and (b) in the case of such payments calculated based on a variable rate, in monthly installments equal to 110% of the amount of such obligation accrued during the next preceding calendar month less any excess deposited for the next preceding calendar month;

(6) to the extent not otherwise included in amounts described in subparagraphs (1) through (5) above, the amount of any Credit Agreement Reimbursement Payment due and payable is to be transferred;

(C) into the Bond Reserve Fund held by the Co-Trustee, the amount, if any, needed to increase the amount in the Bond Reserve Fund to the Bond Reserve Fund Requirement (equal to the Maximum Annual Debt Service for the then current or any future Fiscal Year on all Outstanding Bonds) as of the date of such transfer;

(D) into the Subordinate Securities Fund (and any accounts therein), the amount, if any, needed to increase the amount in such Fund and each such account to its requirement (including any requirements for reasonable debt service reserves and requirements related to Payment Agreements that constitute Subordinate Securities (including Termination Payments)) established by each resolution, indenture or other instrument pursuant to which Subordinate Securities are issued and outstanding;

(E) into the Operation, Maintenance, Renewal and Replacement Reserve Fund, the amount, if any, needed to increase the amount in the Operation, Maintenance, Renewal and Replacement Reserve Fund to an amount equal to one-fourth (1/4) of the sum of the amounts of Operation and Maintenance Expenses and Renewal and Replacement Costs budgeted by the Authority, pursuant to the budget, as revised, filed in accordance with the Indenture, for the then current Fiscal Year;

(F) into the Rate Stabilization Fund, the amount specified for such month in a Certificate of the Authority which also certifies that such amount is consistent with the annual budget established by the Authority pursuant to the Indenture; and

(G) into the Capital Improvement Fund, the balance remaining in the Revenue Fund after the deposits described above.

The Indenture provides that, in the event that the amount in any Fund or Account is insufficient for the purposes for which such Fund or Account was established, the Trustee, the Co-Trustee or the Depositary upon the direction of the Trustee, is required to transfer to such Fund or Account the amount of such deficiency by withdrawing said amount from subordinate Funds and Accounts in reverse order of the priority described above and prior to any other claims upon such Funds and Accounts, subject only to the limitation that amounts in the Bond Reserve Fund shall only be used as provided in the Indenture.

See APPENDIX C—"SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE" for definitions of the capitalized terms used above and descriptions of certain of the Funds and Accounts referenced above.

Rate Covenant

The Authority has covenanted in the Indenture to at all times fix, prescribe and collect rates, fees and charges in connection with the services furnished by the System which will be sufficient to yield the sum of Net Revenues during each Fiscal Year equal to at least 1.25 times the Aggregate Annual Debt Service for such Fiscal Year and to yield Revenues during each Fiscal Year equal to at least the aggregate amount of all transfers required to be made pursuant to the provisions of the Indenture described above in (A) through (E) under "—Allocation of Revenues" (collectively, the "Rate Covenant").

"Net Revenues" is defined in the Indenture to mean, for any particular period, (a) the sum of (i) all of the Revenues (other than Payment Agreement Receipts) received during such period plus (ii) the aggregate amount of all transfers from the Rate Stabilization Fund to the Revenue Fund during such period, less (b) the sum of (x) all Operation and Maintenance Expenses incurred during such period plus (y) the amount of all transfers from the Revenue Fund to the Rate Stabilization Fund during such period.

The Indenture provides that if, at the end of a Fiscal Year, (i) the sum of Net Revenues for such Fiscal Year were less than 1.25 times Aggregate Annual Debt Service for such Fiscal Year, or (ii) Revenues were less than the aggregate amount of all required transfers described above in (A) through (E) under "—Allocation of Revenues" for such Fiscal Year, the Authority is required to promptly employ a Consulting Engineer to make recommendations as to a revision of rates, fees and charges or the methods of operation of the System, and promptly upon its receipt of such recommendations, to revise such rates, fees and charges or methods of operation and to take such other actions as will be in conformity with such recommendations, subject to applicable requirements or restrictions imposed by law, including approval of any rate increases by the PUC, and subject to a good faith determination of the CCU that such recommendations, in whole or in part, are in the best interests of the Authority, the Owners and each Credit Provider, if any. The Indenture provides that if the Authority complies in all material respects with the reasonable recommendations of the Consulting Engineer with respect to said rates, fees, charges and methods of operation or collection, or makes a good faith determination that such recommendations are not in the best interests of the Authority, the Authority will be deemed to have complied with the Rate Covenant for such Fiscal Year; provided, that Net Revenues are in no event less than Aggregate Annual Debt Service for such Fiscal Year.

See APPENDIX C—“SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE—DEFINITIONS” for definitions of the capitalized terms used above and “—CERTAIN COVENANTS—Rate Covenant.”

For discussions of additional requirements relating to rate-setting, see “REGULATORY ENVIRONMENT—Regulation of Ratemaking.”

Bond Reserve Fund

The Indenture establishes the Bond Reserve Fund to be used and withdrawn by the Co-Trustee solely for the purpose of paying debt service on the Bonds (including Payment Agreement Payments to the extent provided in any Supplemental Indenture) in the event of a deficiency in the Debt Service Fund, in the manner and to the extent set forth in the Indenture. So long as the Authority is not in default under the Indenture, any amount in the Bond Reserve Fund in excess of its Bond Reserve Fund Requirement is to be transferred to the Revenue Fund.

“Bond Reserve Fund Requirement” is defined in the Indenture to mean, as of any particular date of calculation, an amount equal to the Maximum Annual Debt Service for the then current or any future Fiscal Year on all Outstanding Bonds; provided, however, that if upon issuance of a Series of Bonds, such amount would require moneys to be credited to the Bond Reserve Fund from such Bond proceeds in an amount in excess of the maximum amount permitted from tax-exempt bond proceeds under the Code, the Bond Reserve Fund Requirement shall mean an amount equal to the sum of the Bond Reserve Fund Requirement immediately preceding issuance of such Bonds plus the maximum amount permitted under the Code to be deposited therein from the proceeds of such Bonds, as specified by Certificate of the Authority.

At the time of delivery of the 2017 Bonds, the Bond Reserve Fund Requirement is \$34,888,400. Upon the issuance of the 2017 Bonds, \$75.00 will be released from the Bond Reserve Fund and deposited to the Escrow Fund. See “PLAN OF FINANCE—Purposes of the 2017 Bonds” and “ESTIMATED SOURCES AND USES OF FUNDS.”

If and to the extent provided by a Supplemental Indenture, the Bond Reserve Fund Requirement may be wholly or partially satisfied by a Credit Facility. Notwithstanding anything to the contrary contained in the Indenture, such Supplemental Indenture may provide that a draw on such Credit Facility is to be made only after all cash in the Bond Reserve Fund been withdrawn and that if a drawing or other claim on such Credit Facility is honored, amounts available for deposit pursuant to the provisions of the Indenture relating to allocation of Revenues to the Bond Reserve Fund will be applied by the Co-Trustee to reimburse, as soon as practicable, the amount of each payment honoring such drawing or other claim.

See APPENDIX C—“SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE—REVENUES AND FUNDS—Application of Bond Reserve Fund.”

Additional Bonds

The General Indenture permits the Authority to issue Additional Bonds secured on a parity with the Outstanding Bonds, including the 2017 Bonds, upon the satisfaction of the requirements set forth in the Indenture, including, among other things, the filing of the documents described below, as applicable, with the Trustee.

If and to the extent that a Series of Additional Bonds is being issued to provide moneys for deposit in a Construction Account, the following certificates and reports are to be filed:

(A) a certificate of a Consulting Engineer setting forth (I) the projected Date of Completion for the Project or Projects for which such Series of Additional Bonds is being issued and for any other uncompleted Projects, and (II) an estimate of the cost of construction of such Projects;

(B) a written report of a Consulting Engineer setting forth for each Fiscal Year from the then current Fiscal Year through the later of (I) the first Fiscal Year commencing at least five years after the date of

original issuance of such additional Series, or (II) the first Fiscal Year commencing at least three years after the Date of Completion projected by the Consulting Engineer in the certificate described in (A) above, estimates of Revenues, Operation and Maintenance Expenses and Net Revenues; and

(C) a certificate of the Authority (I) setting forth (a) the estimates of Revenues, Operation and Maintenance Expenses, and Net Revenues, as set forth in the written report of a Consulting Engineer described in subparagraph (B) above, for each of the Fiscal Years covered by such report, and (b) the Aggregate Annual Debt Service and Capitalized Interest for each of such Fiscal Years, including Annual Debt Service and Capitalized Interest on all future Series of Bonds, if any, which such Certificate of the Authority shall estimate (based on the estimate of the Consulting Engineer of the cost of construction of such Projects) are required to complete payment of the cost of construction of such Projects, and (II) demonstrating that for each of such Fiscal Years (a) Revenues are projected to be at least equal to the aggregate amount of all transfers required to be made pursuant to the provisions of the Indenture described above in (A) through (E) under “—Allocation of Revenues,” and, to the extent applicable, otherwise required to provide for the payment of all obligations of the Authority to be paid from Revenues, and (b) Net Revenues are projected to be at least equal to 1.25 times Aggregate Annual Debt Service.

(D) In lieu of the certificates and reports required by the provisions of the Indenture summarized in subparagraphs (A), (B) and (C) above, the Authority may deliver to the Trustee a Certificate of the Authority to the effect that for the last complete Fiscal Year or any period of 12 consecutive calendar months out of the 18 calendar months next preceding the original issuance of such Additional Bonds, Net Revenues for such Fiscal Year or 12-month period equaled at least 1.25 times the Maximum Annual Debt Service on all Bonds then Outstanding plus the Series of Additional Bonds being issued.

In addition, a Series of Bonds may be issued for the sole purpose of depositing in a Construction Account the amounts necessary to complete any one or more Projects without filing with the Trustee the certificates and reports required by the provisions of the Indenture summarized in subparagraphs (B) and (C), if such certificates and reports demonstrating compliance with such provisions of the Indenture were filed in connection with the issuance of the prior Series of Bonds for each of such Projects and if the principal amount of such Additional Bonds to be issued for completion purposes does not exceed 10% of the principal amount of Bonds previously issued for and allocable to such Projects.

The General Indenture also provides that if and to the extent that a Series of Additional Bonds is being issued for the purpose of refunding Bonds, the Authority is required to file with the Trustee either (i) a certificate of an Independent Certified Public Accountant that Aggregate Annual Debt Service for each Fiscal Year thereafter will be less than or equal to Aggregate Annual Debt Service for each such Fiscal Year in the absence of such refunding, or (ii) the certificates and reports described in subparagraphs (A) (if any one or more of the Projects for which the Bonds being refunded is not then completed), (B) and (C) above; provided that in lieu of the certificates and reports described in subparagraphs (A), (B) and (C), the Authority may deliver to the Trustee the certificate described in subparagraph (D) above.

See APPENDIX C—“SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE—ISSUANCE OF BONDS; ISSUANCE OF A SERIES OF BONDS; PARITY PAYMENT AGREEMENTS—Issuance of Additional Series of Bonds” and “—Proceedings for the Issuance of a Series of Bonds; Parity Payment Agreements.”

Parity Payment Agreements

The Authority is permitted under the General Indenture to enter into one or more Parity Payment Agreements, the Authority payments of which are secured by a lien upon and pledge of Revenues equal to and on a parity with the lien and pledge securing the Bonds, provided the Authority complies with certain provisions of the Indenture. The Authority is not currently a party to any Parity Payment Agreements, nor does the Authority have any current plans to enter into any Parity Payment Agreements.

See APPENDIX C—“SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE—ISSUANCE OF BONDS; ISSUANCE OF A SERIES OF BONDS; PARITY PAYMENT AGREEMENTS—Additional Parity Payment Agreements” and “—Proceedings for the Issuance of a Series of Bonds; Parity Payment Agreements.”

Subordinate Obligations

The Indenture does not prevent the Authority from issuing or incurring any indebtedness secured by a lien or charge on Revenues that is junior and subordinate to the lien and charge of the Bonds.

In 2010, the Authority entered into a loan agreement, dated June 15, 2010 (as subsequently amended, the “Loan Agreement”), with the Bank of Guam (the “Bank”) pursuant to which the Bank made two loans to the Authority in the aggregate principal amount of \$30,000,000 to pay a portion of the costs of certain projects, to fund deficiencies in the Authority’s Operation, Maintenance, Renewal and Replacement Reserve Fund and Operations and Maintenance Fund and to pay up to \$5,000,000 of accounts payable and to pay other expenses of the Authority. In connection with the execution of the Loan Agreement, the Authority and the Bank entered into a pledge and assignment, dated June 15, 2010 (as subsequently amended, the “Pledge”), pursuant to which the Authority pledged to the Bank the Revenues on a basis subordinate to the pledge of the Bonds. The Authority repaid one of the loans in full on June 15, 2015. On June 11, 2015, the Authority and the Bank entered into a revision agreement (the “Revision Agreement”) with respect to the remaining loan, then outstanding in the principal amount of \$15 million (the “Subordinate Loan”), pursuant to which the terms of the Loan Agreement and the promissory note evidencing the Subordinate Loan were amended. Pursuant to the Revision Agreement, the rate of interest on the Subordinate Loan was reduced to 5.25% per annum, and the maturity date was extended to June 15, 2020, with the first payment coming due on July 15, 2015 (payments are due on the Subordinate Loan on a monthly basis). As of October 31, 2017, the Subordinate Loan is outstanding in the principal amount of approximately \$8.6 million. The Authority expects to repay the Subordinate Loan in full on or before June 15, 2020.

The Loan Agreement and the Pledge require that the Authority obtain the written consent of the Bank prior to issuing any Additional Bonds. The Bank has consented to the issuance of the 2017 Bonds.

The remedies available to the Bank in the event of a default under the Loan Agreement or the Pledge include, among other things, the ability to declare the outstanding balance of the Subordinate Loan to be immediately due and payable. Upon such acceleration, the Subordinate Loan would continue to be payable solely from amounts transferred to the Subordinate Securities Fund as described above under “—Allocation of Revenues.”

Previously, the Subordinate Loan was also guaranteed by the Government of Guam and was entitled to the full faith and credit of the Government of Guam. In connection with the amendment of the Loan Agreement, however, the guarantee was released.

Events of Default and Remedies; No Acceleration

The Indenture specifies a number of Events of Default and related remedies. The remedies granted to the Trustee and the Bondowners under the Indenture do not include any right to accelerate the payment of the Bonds, including the 2017 Bonds. The Trustee is authorized to take certain actions upon the occurrence of an Event of Default, including proceedings to enforce the rights of the Bondowners. See APPENDIX C—“SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE—EVENTS OF DEFAULT AND REMEDIES OF BONDOWNERS” for descriptions of the Events of Default and remedies under the Indenture.

Depositories for Funds and Accounts

The Co-Trustee has been appointed to act as Depositary for the Debt Service Fund and the Bond Reserve Fund. The Trustee has been appointed as Depositary for the Revenue Fund, the Operation and Maintenance Fund, the Subordinate Securities Fund, the Operation, Maintenance, Renewal and Replacement Reserve Fund, the Capital Improvement Fund, the Rate Stabilization Fund and the Rebate Fund, as well as for the 2017 Costs of Issuance Account within the Construction Fund. The Authority may enter into a Supplemental Indenture from time to time to provide for a different or additional Depositary for any fund or account established under the Indenture.

THE AUTHORITY

General

In 1950, the Legislature of Guam enacted Public Law 1-12 assigning responsibility for the public water supply to the Guam Department of Public Works. Shortly thereafter, in 1952, the Legislature of Guam enacted Public Law 1-88 creating the Public Utility Agency of Guam (the “PUAG”), which consisted of telephone, power, water and wastewater utilities. The PUAG remained responsible for the island’s water and wastewater systems for the ensuing 44 years. In 1996, the Authority was established as a new semiautonomous, self-supporting agency responsible for the island’s water and wastewater utilities, and began operations on February 1, 1997. In 2002, by virtue of the passage of Public Law 26-76, the Authority converted to its current status as a public corporation, organized and existing as a Guam public corporation under Chapter 14 of Title 12 of the Guam Code Annotated, and authorized to operate and maintain the System for the island of Guam.

The Authority’s System provides water to all of the civilian population of Guam and also provides sewer service to a large percentage of the civilian population, Andersen Air Force Base and several smaller United States Navy (the “Navy”) facilities. There is, however, a significant civilian population that does not have sewer service, particularly in the northern area of the island. In addition, there are currently two major military installations, Andersen Air Force Base and Naval Base Guam, which occupy large areas on the island. Andersen Air Force Base has its own water and wastewater collection system; however, it does not have a separate wastewater treatment plant and, therefore, the wastewater collected from Andersen Air Force Base is discharged into the Authority’s System and treated at the Northern District wastewater treatment plant (the “Northern District WWTP”). Naval Base Guam has its own water and wastewater collection system, as well as its own separate wastewater treatment plant. The Authority purchases some of its water supply from the Navy and, until 2010, the Authority purchased a very small portion of its water supply from the United States Air Force (“Air Force”). See “THE SYSTEM—The Wastewater System—*Wastewater Treatment Plants*.” During Fiscal Year 2017, the Authority served an average of 42,205 water customers and an average of 29,065 wastewater customers.

The Authority’s goals are directed towards providing more efficient and reliable service to its customers, and operating as a self-sufficient utility while meeting all USEPA and Guam Environmental Protection Agency (“GEPA”) requirements.

The Authority currently has four Operations and Maintenance divisions: (i) Water Production and Treatment Operation and Maintenance, (ii) Water Distribution Operation and Maintenance, (iii) Wastewater Collection Operation and Maintenance, and (iv) Wastewater Treatment Operation and Maintenance. See “THE SYSTEM—The Water System” and “—The Wastewater System.”

Consolidated Commission on Utilities

The Authority is governed by the CCU, a five-member board elected in a general election to four-year terms that is also charged with oversight of the GPA. The CCU makes decisions regarding policies, management, budgeting and financing of the Authority’s operations. Certain actions, however, such as issuing bonds for financing utility capital projects, also require the approval of the Legislature of Guam and the PUC. In addition, ratemaking by the CCU is subject to the approval of the PUC, as the regulatory ratemaking body. The Authority may not enter into any contractual agreements or obligations which could increase rates and charges without the prior written approval of the PUC. See “REGULATORY ENVIRONMENT—Regulation of Ratemaking.”

Upon taking office in January 2003, the original members of the CCU were faced with more than \$25 million in debt and pending federal lawsuits for violations of water quality and environmental standards that had accumulated over the previous several decades. Since 2003, a number of changes have been made to move the Authority’s operations towards a self-supporting economic model and environmental compliance. Currently, both the CCU and Authority staff are focused on meeting the requirements of the 2011 Court Order by refurbishing facilities to meet regulatory standards, to improve reliability, and to implement operational systems and procedures consistent with current utility practices in the continental United States. See “REGULATORY ENVIRONMENT.”

The current members of the CCU are:

Joseph (Joey) T. Duenas, Chairman. Mr. Duenas was elected as Chairman of the CCU in January 2015. Elected to the CCU and member since January 2009, Mr. Duenas's government and community service includes serving as Finance Officer for the Archdiocese of Hagåtña, Director of the Guam Department of Revenue & Taxation, President of the Guam Housing Corporation, Vice Chairman of the Guam Election Commission, PUC Chairman, Board of Directors Chairman for the American Red Cross, Vice Chairman of the Board of Trustees for Guam Community College, and former President of the Rotary Club of Guam. Mr. Duenas has a B.A. in Business Management from the Chaminade University of Honolulu.

Francis E. Santos, Vice Chairman. Mr. Santos has over 25 years of experience in the private and public sectors, specializing in health insurance and business management. He previously served as Chief Financial Officer at Guam Regional Medical City, Guam's newest private hospital, and as Plan Administrator for StayWell Health Plan and President/Chief Executive Officer of Island Home Insurance Company. Mr. Santos also served three terms as a Senator in the Guam Legislature. Mr. Santos served as chairman of the Guam Education Policy Board, chairman of the board of iLearn Academy Charter School, Guam's second public charter school, and as member/director of Global Health Systems, which specializes in wound care and hyperbaric medicine. Mr. Santos holds a Master of Business Administration in Health Care Administration from Loma Linda University and a Bachelor of Science Degree in Business Management from Seattle University.

J. George Bamba, Secretary. Mr. Bamba was elected to the CCU in November 2014 and was elected as Secretary in January 2015, and is Chairman of the CCU IT/Cybersecurity Committee. Mr. Bamba has served as Chief of Staff to two former Governors of Guam (Paul M. Calvo and Felix P. Camacho). Mr. Bamba served as Senator in the Guam Legislature for 10 years and as chairman of numerous boards and commissions while serving in the Executive Branch of the Government of Guam. He also served on the Council of State Governments Committee on Economic Development and International Affairs.

Dr. Judith (Judi) T. Guthertz, Ph.D., Treasurer. Dr. Guthertz is the newest of the recently elected commissioners. Dr. Guthertz was one of the initial members elected when the CCU was first established in 2003. She resigned her seat in 2004 to run for Senator. Dr. Guthertz has over 40 years of experience in the public and private sectors, specializing in public administration and as a former Public School Teacher within the Guam Department of Education. She is a former Senator of the Guam Legislature, former Acting Chief of Police of the Guam Police Department, and a former board member of the Guam Visitors Bureau where she focused on initiatives to safeguard tourists visiting Guam. She has served on numerous government and civic organization boards, including the Guam Organic Act Commemoration Task Force and the Government of Guam Executive Branch Reorganization Commission. She is currently the Chairperson for the Western Pacific Regional Fishery Management Council and is an adjunct professor at the University of Guam. She began teaching at the Academy of Our Lady of Guam for the 2017-2018 school year. Dr. Guthertz graduated from the University of the Philippines where she obtained a B.A. in Speech and Communications, an M.A. in Mass Communications, a master's degree in Public Administration and a doctorate degree in Public Administration and Public Policy.

Simon A. Sanchez II, Member. Originally elected to the CCU in 2003, Mr. Sanchez served as chairman from January 2003 until January 2015. He is a former Senator and former Vice Chairman, Public Utilities Commission 1988-1994. Mr. Sanchez has served as Vice President/General Manager of Guam Dry Cleaners since 1988. He has served on numerous government and civic organization boards including the Guam Chamber of Commerce, the Guam Visitors Bureau, the Guam Hotel and Restaurant Association and the Guam Memorial Hospital. Mr. Sanchez graduated from Harvard University in 1980 with an M.A. in City and Regional Planning and Stanford University in 1978 with a B.A. in history.

Key Management Personnel

Following are brief résumés of key management personnel of the Authority.

Miguel C. Bordallo, P.E., General Manager. Mr. Bordallo was selected by the CCU as the General Manager for the Authority, effective January 4, 2016. Mr. Bordallo has over 25 years of experience in environmental/mechanical engineering, and construction in California, Guam and Micronesia. Prior to joining the

Authority, Mr. Bordallo was a consulting engineer providing design and design-build services for water and wastewater infrastructure projects and was also vice president of a large construction company on Guam, where he oversaw the construction of John F. Kennedy High School. Mr. Bordallo was previously a partner at the local engineering firm Duenas, Bordallo and Associates. Mr. Bordallo holds a B.S. in Mechanical Engineering with honors from Marquette University in Milwaukee, Wisconsin, and is a licensed professional engineer in Guam.

Greg P. Cruz, Chief Financial Officer. Mr. Cruz has served as Chief Financial Officer for the Authority since his appointment in July 2007. Mr. Cruz served as Interim General Manager from November 1, 2015 until January 4, 2016. Mr. Cruz has over 25 years of experience in the accounting profession, including over 15 years in a management capacity. Prior to joining the Authority, Mr. Cruz held positions in the telecommunications industry, public accounting and various Government of Guam agencies. Mr. Cruz's background includes operating his own business serving clients primarily in the non-profit industry. Mr. Cruz holds a B.A. in Accounting from Western Washington University in Bellingham, Washington, and is a Certified Public Accountant and licensed to practice in Guam.

Paul J. Kemp, Assistant General Manager, Compliance and Safety. Mr. Kemp has 56 years of experience managing and teaching water quality chemistry for natural (ground and surface) waters, drinking water, water for industrial applications (e.g., manufacturing, food and dairy processing), ultra-high purity water, wastewater treatment, water recovery for reuse, and environmental and safety compliance and training. Mr. Kemp has been Assistant General Manager of Compliance at the Authority since 2003. Prior to joining the Authority, he held engineering and management positions in private laboratory, research and manufacturing companies as well as teaching and research positions in higher education. Mr. Kemp is currently a member of the Joint Editorial Board of "*Standard Methods for the Examination of Water and Wastewater*," the Hawaii Water Environment Association, Technical Director of the Sunset Terrace Homeowners Association (upgrading its wastewater treatment system) and Hawaii Section of the American Waterworks Association Member of Past Chairs Advisory Committee and Fuller Award Committee, the American Chemical Society, the Society of the Sigma Xi (Chemists Honorary Society), and the International Union of Pure and Applied Chemists and has published a number of technical articles in various journals. Mr. Kemp was trained as an analytical chemist specializing in spectroscopic methods and water analysis, and received a B.S. in chemistry from Iowa State University and an M.S. in Analytical Chemistry from Oregon State University. He also undertook postgraduate studies at the University of Hawaii.

Thomas F. Cruz, P.E., Chief Engineer. Mr. Cruz first joined the Authority in 2006 as a senior engineer supervisor and has subsequently held various other positions before becoming the Chief Engineer in August 2011. Mr. Cruz is a licensed Civil Engineer on Guam and has 20 years of engineering experience in projects ranging from roadway design and construction, water distribution and wastewater collection design as well as construction management. Mr. Cruz holds a Bachelor of Science (Civil Engineering) from Kansas State University and a Master in Business Administration from the University of Phoenix. As the Chief Engineer, Mr. Cruz's current task objectives are to deliver necessary capital improvements projects for the Authority. Mr. Cruz served as Interim General Manager for from August 2014 until March 2015.

Kelly O. Clark, General Counsel. Mr. Clark joined the Authority in July 2016, returning to Guam after a 20 year "intermission" in Colorado and Texas. Mr. Clark has 11 years of experience as a litigator in Colorado and Guam with 5 of those years as a partner in one of the larger firms on the island. Mr. Clark also has 20 years of experience serving as general counsel for firms in the communication and utility/energy sectors. He holds a BSBA in Marketing from the University of Denver and a JD from St. Mary's University School of Law where he earned the American Jurisprudence Award in International Business Transactions. Mr. Clark is admitted to practice before all courts of Guam and Colorado including the U.S. District Courts for both jurisdictions.

THE SYSTEM

The Authority has undergone significant transformation over the last several years by working to improve the management and operation of the System, including, among other things, decreasing expenditures, decreasing leak repair times, implementing a meter replacement program and launching a computerized maintenance management system as part of a comprehensive asset management program, which have all contributed to significantly improved operating results since Fiscal Year 2011. The Authority continues to work on making other needed improvements to the System, including those that remain under the 2011 Court Order and those necessary to

accommodate growth in the island's population centers, as well as normal renewals, improvements and replacements. See "REGULATORY ENVIRONMENT—Environmental Regulation." Table 3 below presents selected statistics regarding Authority operations for Fiscal Year 2017 based on unaudited financial information. See also "HISTORICAL AND PROJECTED OPERATING RESULTS."

Table 3
Selected Statistics
Fiscal Year 2017

	Fiscal Year 2017 ⁽¹⁾
Average Number of Water Customers	42,205
Average Number of Wastewater Customers	29,065
Annual Water Sales (million gallons)	5,636
Annual Wastewater Collection (million gallons)	4,034
Operating Revenues ⁽²⁾	\$104,250
Gross Investment in Utility Plant	\$608,923
Net Utility Plant Investment	\$450,377
Total Equity	\$221,337
Net Current Assets	\$52,379

⁽¹⁾ Based on unaudited financial information for Fiscal Year 2017.

⁽²⁾ Excludes SDC revenues.

Source: Guam Waterworks Authority; extracted from audited financial statements.

The Water System

The Authority's water supply system consists of 120 wells (96 of which are currently operating), one active production spring known as the Ugum Water Treatment Plant (the "Ugum WTP"), one "Maui" well, the Tumon Maui Well (as described below), 28 booster pump stations (25 of which are actively used), 25 reservoirs/tanks in service having a total active volume of 28.8 million gallons ("MG") and three additional reservoirs under construction with expected total active volume of six MG, approximately 586 miles (including some 2-inch distribution lines) of water distribution pipelines and approximately 3,814 fire hydrants. The Authority's water system does not include any lead pipes.

Water Supply

Water sources on Guam are groundwater, surface water and springs, all of which are replenished by rainfall on Guam. Trade winds blow over Guam throughout the year and are responsible for significant rainfall and a relatively constant temperature near 80 degrees throughout all seasons. Annual rainfall averages 80 inches in the western coastal area to 110 inches in the highest mountain locations in the south. Three quarters of the total annual rainfall occurs between the months of June and December. Rain is the only source of fresh water for the island.

Topographic features divide Guam into northern and southern areas. Because of the island's topography, potable water comes from groundwater in the northern portion of the island and primarily surface water in the southern portion of the island.

In the north a limestone plateau, bordered by steep cliffs, slopes southwesterly from an elevation of 600 feet to less than 100 feet at the midsection of the island. The plateau surface is generally flat and is interrupted by three hills: Barrigada Hill (El 665 ft.), composed of a limestone dome, Mount Santa Rosa (El 858 ft.) and Mataguac Hill (El 630 ft.) both composed of volcanic rock. There are no perennial streams within the northern area due to the permeability of the limestone. The main groundwater source is located under the plateau. The rainfall percolates through the limestone and forms a freshwater "lens" that floats at approximately sea level above deeper, higher density brackish and salt water. Previous studies of the Guam aquifers have concluded that the freshwater lens under the northern part of the island can provide a sustainable water supply of up to 80 million gallons per day ("MGD"). From May 2014 through April 2015, the Authority pumped approximately 28.3 MGD of groundwater, or about 35.4% of the sustainable yield, and the Air Force and other users pumped approximately 6.0 MGD of groundwater,

indicating total groundwater extraction of approximately 34.3 MGD, or 43.0% of the sustainable yield. In December 2013, the U.S. Geological Survey (the “USGS”) completed a study of the effect of withdrawals and droughts on groundwater availability in the northern lens aquifer to determine the effects of water withdrawals on Guam’s sole source aquifer during normal and drought conditions. The study also served as the basis for determining the impact resulting from the proposed U.S. military build-up. As currently contemplated, the proposed U.S. military build-up is expected to increase the demand for potable water by 1.7 MGD, and in the Record of Decision issued in August 2015 (“Record of Decision”), the Department of Defense (the “DoD”) acknowledged that this would result in a localized significant indirect impact on the lens. This demand is expected to be addressed through the development of up to 11 new wells to be constructed by the DoD at Andersen Air Force Base, the costs of which are expected to be funded by the federal government. The DoD has also provided support and funding to update and expand lens well monitoring efforts via a grant to the Authority for water and wastewater infrastructure projects. See “FUTURE CAPITAL REQUIREMENTS—Proposed U.S. Military Relocation and Installations.

The Authority’s groundwater wells provide approximately 89.5% of the Authority’s water supply. The Authority owns 120 wells, of which 96 are currently operating, nine of which are in standby mode or pending repair and 15 of which are inactive. The inactive wells are not considered necessary to meet the Authority’s daily water needs, and constitute 8.6% of the Authority’s 40.1 MGD of permitted well capacity. Most of the Authority’s wells are drilled to below sea level to “tap” the basal aquifer, a fresh water lens that extends below sea level. The capacity of individual basal aquifer wells averages approximately 230 gallons per minute (“gpm”) which is designed to avoid localized over-pumping of the aquifer. In 2013, the Authority completed an assessment of all 120 wells and identified several recommended improvements, including well and pump upgrades, safety equipment upgrades, pump pedestal upgrades, replacement discharge piping, new chlorination equipment, electrical improvements and site work. The Authority also determined that many of the production flow meters measuring output at the wells were not functioning properly and decided to replace all 120 production flow meters. The CIP includes these upgrades (including the replacement of the production flow meters), as well as the rehabilitation of 10 wells and the construction of three new wells. Of the 10 such wells, four are currently being rehabilitated, and the remaining rehabilitations are currently in design. See “Meter Replacement Programs—*Master Flow Meters and Production Meters.*”

The Authority has five springs located in the southern and central areas of the island, one of which is in active production. The Authority currently obtains water from one operating spring in the southern and central areas of the island, Santa Rita, which generates approximately 0.20 MGD, or approximately 1% of the Authority’s total water supply. The Authority’s CIP includes the rehabilitation of the currently inactive Asan spring. The Authority issued a notice to proceed for the development of a facilities plan, which was completed in April 2013. The facility plan is being used as the basis to develop 100% design plan and specifications, which is currently in progress. The Authority issued a notice to proceed for the design in August 2016 and currently expects construction to begin in 2018.

In July 2016, the Authority was granted a one-year license by the Navy to operate the Navy-owned Tumon Maui Well (“TMW”). A “Maui” well is a horizontal tunnel excavated at the groundwater surface for the collection of fresh potable water. As part of the One-Guam Initiative (as defined herein) between the Authority and the Navy to facilitate interoperability of Guam’s civilian and military water systems for increased reliability and sustainability, the Authority’s operation of the TMW was the initial proof-of-concept for the Authority’s ability to operate the Navy’s water system facilities. In July 2017, after one year of successful operation and passage of all quarterly inspections for operations and maintenance to the Navy’s standards, the Navy issued to the Authority a renewal of its license to operate the TMW. The TMW facility generates approximately 1.1 MGD, approximately 2.7% of the Authority’s total water supply, and affords the Authority more flexibility in the operation and maintenance of its other production facilities. See “THE SYSTEM—One-Guam Initiative.”

The southern portion of Guam is of volcanic origin and mountainous. A nearly continuous mountain ridge parallels the coastline from Piti (mid-island on the west side) to Guam’s southern tip. Several peaks in the ridge exceed 1,000 feet, with Mount Lamlam being the highest at 1,332 feet. Generally, surface water resources are available in the southern portion of Guam. The southern portion has more than 40 streams draining into the sea. The only large surface impoundment on the island for potable water, known as the Fena Valley Lake Reservoir, is located approximately 2.5 miles southeast of Santa Rita.

The Authority currently operates the Ugum WTP, which treats surface water collected from the Ugum River in southern Guam and supplies approximately 5% of the Authority's total water supply. The rated capacity of the Ugum WTP is four MGD; however, the Ugum WTP cannot always operate at full capacity when flows in the Ugum River are low or there is high turbidity in the Ugum River due to heavy rainfall. Although the Authority has upgraded some of the systems at the Ugum WTP, additional upgrades are needed. The CIP includes some of the contemplated upgrades, including upgrades to the Ugum WTP river intake structure and construction of an additional finished water storage tank.

To help supply its customers on the southern part of Guam, the Authority also purchases water from the Navy pursuant to the terms of a Memorandum of Agreement under which the Authority is permitted to purchase up to 4.39 MGD of water. After 2009, however, the Navy requested that the Authority work to reduce the total purchases to a maximum of 3.5 MGD. Although the Memorandum of Agreement has expired, the Authority and the Navy continue to operate in accordance with its provisions. The Navy collects surface water in the Fena Valley Lake Reservoir and obtains spring water from the Almagosa and Bona Springs. The surface water and spring water is then treated at the Fena Water Treatment Plant (the "Fena WTP") owned and operated by the Navy. The Authority has been able to reduce the amount of water purchased from the Navy over the past five Fiscal Years. In Fiscal Year 2017, the Authority purchased approximately 718 MG of water from the Navy, or approximately 4.9% of the Authority's total demand, as compared to approximately 1,124 MG, or approximately 7.3% of the Authority's total demand, in Fiscal Year 2012. Although the Authority intends to continue reducing the use of Navy water by repairing leaks and addressing flow and pressure issues within the System, for planning purposes, the Authority is conservatively projecting to purchase annually the same amount from the Navy in Fiscal Years 2018 through Fiscal Year 2020. See Table 4 below.

The rates paid by the Authority to purchase water from the Navy are subject to periodic adjustment. In Fiscal Year 2016, the Navy increased its rate for purchased water by approximately 14%, while the amount of water the Authority purchased from the Navy decreased by approximately 8%. In Fiscal Year 2017, the Navy increased its rate for purchased water by approximately 15% and the amount of water the Authority purchased from the Navy increased by approximately 2%. Although the rates for purchased water increased in Fiscal Year 2017, the amount of water purchased from the Navy in Fiscal Years 2016 and 2017 are still lower than the amount of water purchased from the Navy in prior Fiscal Years such that the total annual cost of Navy water has remained relatively flat. If the Navy were to significantly increase rates, the Authority would expect to reflect those increased rates in its annual rate review by the PUC; however, no assurance can be given that the PUC would increase rates sufficient to address all increased purchased water costs. See "REGULATORY ENVIRONMENT—Regulation of Ratemaking."

The actual average supply requirement for the Authority's System during Fiscal Years 2012 through 2017 was approximately 13,703 MG; however, actual water consumed in the System during the same period, based on the Authority's average water sales, was approximately 5,983 MG, meaning average annual unaccounted for (or non-revenue) water in the System during this time period was approximately 56.3% of the water delivered to the System. The difference between supply and consumption is due to leakage, malfunctioning production and/or customer meters, and water used for line flushing, hydrant tests and maintenance, fighting fires, and similar activities. Since 2012, the Authority has implemented an initiative to reduce its response time to identified leaks in the water supply system. In addition, in August 2012, the Authority implemented a program to replace defective meters, which has resulted in more accurate metering of water. See "—Leak Detection Program and Leak Management System" and "—Meter Replacement Program."

Table 4 below shows by sources and uses the Authority's historical water requirements for Fiscal Years 2012 through 2016, estimated water requirements for Fiscal Year 2017 (based on unaudited financial information) and projected water requirements for Fiscal Years 2018 through 2020.

Table 4
Historical, Unaudited Actuals and Projected Water Requirements
Fiscal Years 2012 through 2020
(gallons in millions)

	Historical					Unaudited Actuals	Projected		
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Sources									
Authority Production ⁽¹⁾	14,207	13,192	13,477	13,727	13,668	13,947	13,866	13,866	13,866
Purchases from Navy ⁽²⁾	1,124	964	911	653	707	718	744	744	744
Total Sources⁽⁶⁾	15,331	14,156	14,388	14,380	14,375	14,665	14,610	14,610	14,610
Uses									
Billed Water ⁽³⁾	5,796	6,266	6,032	6,037	6,062	5,636 ⁽⁴⁾	6,003	6,003	6,003
Non-Revenue Water	9,535	7,890	8,356	8,343	8,313	9,029 ⁽⁵⁾	8,607	8,607	8,607
Total Uses⁽⁶⁾	15,331	14,156	14,388	14,380	14,375	14,665	14,610	14,610	14,610

⁽¹⁾ Production per the Authority.

⁽²⁾ Historical Navy water purchases per Authority; projections through Fiscal Year 2020 are based on Fiscal Year 2016 data per the Authority.

⁽³⁾ Historical billed water per the Authority; estimates and projections assume no growth in water sales from Fiscal Year 2017 through Fiscal Year 2020.

⁽⁴⁾ The estimated amount of 5,636 MG of billed water for Fiscal Year 2017 reflects 38.4% of total water sources. The Authority estimates that faulty meters resulted in approximately 7.0% less billed water in Fiscal Year 2017; applying a correction of 7.0% more billed water would result in approximately 6,030 MG of billed water, or 41.1% of total water sources for Fiscal Year 2017. See also "—Meter Replacement Programs—Customer Meters."

⁽⁵⁾ The estimated amount of 9,029 MG of non-revenue water for Fiscal Year 2017 reflects 61.6% of total water sources. The Authority estimates that faulty meters resulted in approximately 7.0% more non-revenue water; applying a correction of 7.0% less non-revenue water would result in approximately 8,634 MG of non-revenue water, or 58.9% of total water sources for Fiscal Year 2017. See also "—Meter Replacement Programs—Customer Meters."

⁽⁶⁾ Totals may reflect rounding.

Source: Guam Waterworks Authority.

Water Distribution System

The Authority's water distribution system includes an extensive network of approximately 586 miles of transmission and distribution pipeline (including some 2-inch distribution lines), comprised primarily of ductile iron, polyvinyl chloride ("PVC"), cast iron, asbestos cement and galvanized steel pipe, 28 booster pump stations, 25 of which are currently active, 25 reservoirs/tanks in active use and having a total capacity of 28.8 MG, and approximately 3,814 fire hydrants.

Of the 25 reservoirs currently in service, seven have been recently repaired or replaced, six are either in design or in procurement for significant repair or replacement, and 12 are pending minor repair or assessment. In addition to the 25 reservoirs currently in service, there are three reservoirs currently under construction, five existing but inactive reservoirs pending repairs, and three planned new reservoirs. The Authority is required by the 2011 Court Order to take further action on nine remaining reservoirs out of the total active and inactive reservoirs which have not already been addressed. Of these nine reservoirs, the Authority expects to repair, replace or permanently abandon all but two by the end of 2020. The remaining two reservoirs are expected to be repaired during the period covered by the current CIP.

In 2013, the Authority completed an assessment of all water booster pump stations and developed plans for upgrading all systems, including pump and mechanical upgrades, site improvements and structural and electrical upgrades. The CIP includes projects to improve the booster pump stations to increase efficiencies and to decrease operating and maintenance costs, as well as to repair, replace or relocate components of the water distribution system, as required by the 2011 Court Order.

The Wastewater System

Unlike the Authority's water system, which serves essentially all of the civilian population of Guam, there is a significant percentage of the population that is not served by the Authority's wastewater system. This is particularly true in the northern area of Guam, where many homes rely on individual septic tanks or other on-site disposal systems. Based on a comparison of the average number of water customers and wastewater customers for Fiscal Year 2017, there are approximately 13,140 customers, or approximately 31.1% of water system customers, that do not have sewer service.

The Authority provides wastewater services for Guam's general population, as well as for Andersen Air Force Base and some U.S. Naval facilities in the northern end of the island. The main U.S. Naval base located in southern Guam is served by its own wastewater collection and treatment system. For planning purposes, Guam is divided into seven wastewater districts based on population distribution and the topography of the island: Northern District, Hagåtña, Agat-Santa Rita, Umatac-Merizo, Inarajan, Baza Gardens and Pago Socio. The Authority's wastewater system includes wastewater treatment plants and extensive collection systems in each of these districts.

Wastewater Collection Systems

The Authority's wastewater collection systems consist of approximately 314 miles of gravity sewers and force mains (pressure sewers) that collect sewage from the communities and transport it to the seven wastewater treatment plants. There are 78 wastewater pump stations in the collection systems.

The sewer pipe construction includes PVC, concrete, cast iron, epoxy coated ductile iron and high density polyethylene plastic. Most of the recent gravity sewer construction is PVC pipe. Some of the older sewer lines, such as those in Agat, are vitrified clay and are in poor condition. The pressure sewers (force mains) discharging from the pumping stations are epoxy coated ductile iron. The Air Force installed techite pipe to deliver wastewater from Andersen Air Force Base to the Northern District WWTP.

The Authority is continuing to conduct Infiltration and Inflow ("I/I") analyses and Sewer System Evaluation Surveys ("SSES") for the majority of the Authority's wastewater collection network to provide a current assessment of the wastewater collection system and to identify any areas of concern regarding capacity, condition and necessary improvements. The Authority has completed I/I analyses and SSES in the Southern sewer basins and

the Northern District sewer basins. Results from these analyses and sewer surveys have identified several areas subject to high I/I. As of October 17, 2017, the Authority is approximately 98% complete with I/I analyses and SSES in the Central District sewer basin. The Authority intends to incorporate all findings from these analyses and sewer surveys into its upcoming master plan update.

The CIP includes projects to rehabilitate or replace parts of the collection system to reduce high flow impacts to the wastewater treatment plants and the risk of system overflows, as well as improvements to the wastewater pump stations and continuation of an ongoing SCADA master plan project to provide centralized monitoring and reporting of the pump stations.

The Authority has met all of the 2011 Court Order requirements for sewer cleaning and closed circuit television (“CCTV”) system inspection, meeting or exceeding the requirement to clean at least 55 miles of gravity main sewer in each calendar year. In addition, the Authority recently completed improvements to its CCTV inspection program, including additional training, updated software and revised operating procedures. The Authority has also established a “hot spot” program to prevent spills.

Wastewater Treatment Plants

The Northern District WWTP and the Hagåtña wastewater treatment plant (the “Hagåtña WWTP”) are the Authority’s largest wastewater treatment plants and serve the northern and the central areas of Guam, respectively, and currently provide primary treatment.

The Northern District WWTP is designed for an average flow of 12 MGD, representing approximately 46% of Guam’s wastewater flow, but is currently permitted by the USEPA to discharge only 6 MGD. Upon the satisfaction of certain conditions under the 2011 Court Order, the Authority may request flow up to 9 MGD. In December 2012, the Authority completed upgrades to provide interim treatment improvements at the Northern District WWTP. The Authority received permission from USEPA to treat up to a total of 7.5 MGD in anticipation of increased flows on August 31, 2017. The Hagåtña WWTP is also designed for an average flow of 12 MGD, or approximately 46% of Guam’s wastewater flow. In June 2013 and February 2014, the Authority completed certain interim treatment improvements required under the 2011 Court Order at the Hagåtña WWTP. As of September 30, 2017, the Northern District WWTP and the Hagåtña WWTP continue to be in compliance with the 2011 Court Order. See “REGULATORY ENVIRONMENT—Environmental Regulations—*The 2003 Stipulated Order and the 2011 Court Order.*”

The Northern District WWTP has an ocean outfall, constructed in 2009, consisting of large diameter pipe extending approximately 1,958 feet away from shore to discharge the treated effluent into the Philippine Sea at a depth of approximately 140 feet. The Hagåtña WWTP also has an ocean outfall, constructed in 2008, consisting of large diameter pipe extending approximately 2,120 feet away from shore to discharge the treated effluent into the Philippine Sea at a depth of approximately 275 feet. The Authority previously operated the Northern District WWTP and the Hagåtña WWTP under secondary treatment variances issued by the USEPA, which permitted the Authority to discharge primary effluent into the Philippine Sea. Effective as of June 1, 2013, however, the National Pollutant Discharge Elimination System (“NPDES”) permits for both plants include secondary treatment requirements. Neither plant is equipped to provide secondary treatment, and the Authority estimates that the design and construction necessary to satisfy the secondary treatment requirements will take approximately five years for each plant at a combined total cost of approximately \$279 million. The Authority and the USEPA are currently negotiating secondary treatment compliance schedules for the Northern District WWTP and the Hagåtña WWTP. The CIP does not currently include the secondary treatment upgrade projects as the Authority expects to obtain compliance schedules that will permit it to delay implementation of the secondary treatment requirements until after the provisions and capital requirements of the 2011 Court Order have been satisfied. See “REGULATORY ENVIRONMENT—Environmental Regulations—*Compliance with the CWA—Wastewater System.*”

In connection with the proposed U.S. military build-up in Guam, it is expected that a new wastewater collection system will be constructed on property owned by the DoD, which will tie into the Authority’s wastewater collection system. The wastewater will then be conveyed to the Northern District WWTP for treatment and disposal. In the Record of Decision, issued in August 2015, the DoD acknowledged that the proposed military build-up is expected to increase wastewater flows by 1.2 MGD, which would have a significant indirect impact on the Northern

District wastewater system. As discussed above, the Northern District WWTP requires secondary treatment upgrades to comply with the NPDES Permit.

On August 26, 2016, the DoD, through the Office of Economic Adjustment (“OEA”), awarded the Authority grants totaling \$55.3 million to initiate projects associated with the design and construction of the improvements needed to bring the Northern District WWTP to full secondary treatment capability, which, at the time, was estimated to cost approximately \$173.9 million. The current estimated costs of these projects as of November 1, 2017, is approximately \$173.2 million and include (i) improvements for the Northern District WWTP, (ii) rehabilitation of the sewer interceptor serving northern military installations, and (iii) the Northern Guam Lens Aquifer (“NGLA”) well monitoring program. On November 7, 2017, the Authority received an additional grant award totaling \$117.9 million for construction of wastewater improvements related to the build-up. The CIP does not include these improvements or expected grant funding. See “REGULATORY ENVIRONMENT—Environmental Regulations—*Compliance with the CWA—Wastewater System*” and “FUTURE SYSTEM CAPITAL REQUIREMENTS—Proposed U.S. Military Relocation and Installations.”

Aside from the Northern District WWTP and Hagåtña WWTP, the remaining wastewater treatment plants are smaller plants that serve villages or platted subdivisions on other areas of Guam. The Agat-Santa Rita wastewater treatment plant, the Baza Gardens wastewater treatment plant and the Umatac-Merizo wastewater treatment plant (the “Agat-Santa Rita WWTP,” the “Baza Gardens WWTP” and the “Umatac-Merizo WWTP,” respectively) have historically been unable to consistently meet the requirements of their respective NPDES permits. Both the 2011 Court Order and the CIP include projects to address these issues. Construction of a new Agat-Santa Rita WWTP facility began in early 2016 and includes two phases. Phase 1 improvements enabling secondary treatment and compliance with the 2011 Court Order were completed in March 2017 and Phase 2 improvements are in progress and expected to be completed by the first quarter of 2018. Upon completion of the new Agat-Santa Rita facility, the Authority expects to convert the existing Agat-Santa Rita WWTP facility into a flow stabilization basin. The new Agat-Santa Rita facility is designed to handle the flows from both the existing Agat-Santa Rita WWTP and Baza Gardens WWTP facilities, as well as to accommodate additional capacity in the future. Consistent with an evaluation completed by the Authority in April 2014, the Authority is planning to convert the existing Baza Gardens WWTP to a flow stabilization facility and to convey flow by pumps to the new Agat-Santa Rita facility. The Authority completed design work for the conversion in 2016 and entered into contracts for the construction of the project in June 2017. Construction began in June 2017 and includes three phases. The Authority expects to complete the construction of the project in March 2018.

Upgrades to the Umatac-Merizo WWTP are expected to be completed by December 2018. The design-build project was awarded in June 2017 and design work is nearing completion. Permitting and regulatory coordination activities have begun, and the Authority is evaluating value-engineering proposals from the design-build team. Upgrades to the existing facility include improvements to the aeration basin and overland percolation fields, as well as new pump station, upgrades to the existing pump station, a new effluent storage tank and disinfection facility.

See “REGULATORY ENVIRONMENT—Environmental Regulation—*Compliance with the CWA—Wastewater System*” and “FUTURE SYSTEM CAPITAL REQUIREMENTS.”

One-Guam Initiative

On December 6, 2016, the Authority, the CCU, Naval Facilities Engineering Command Marianas and Joint Region Marianas executed a memorandum of understanding (the “2016 MOU”) to explore mutually beneficial opportunities for partnering and integration of water and wastewater utility systems (the “One-Guam Initiative”). The 2016 MOU establishes objectives relating to the implementation of water and wastewater utility service solutions devised to address the projected additional requirements and/or recapitalization efforts needed.

As a proof-of-concept for the One-Guam Initiative, the Navy granted a one-year license to the Authority to operate the Navy-owned Tumon Maui Well in July 2016 and the Authority agreed to provide a service connection for the planned Marine Corps base from the Authority’s northern water distribution system. In July 2017, after one year of successful operation and passage of all quarterly inspections for operations and maintenance to the Navy’s standards, the Navy issued a renewal of the license to operate the TMW to the Authority. See “—The Water

System—*Water Supply*.” The Authority’s successful operation of the TMW supports the pursuit of additional integration opportunities.

The One-Guam Initiative continues to be a vehicle through which the Navy and the Authority achieve coordinated cooperation for utility operations, training and capital improvements. The Authority and the Navy are currently discussing reservoir interconnections at key locations, joint drought response and management efforts, and a combined hydraulic model as the next integration and inter-operability initiatives. There has also been several shared training sessions amongst the respective staff of each entity, and a commitment to further pursue such activity going forward.

Leak Detection Program and Leak Management System

One of the Authority’s most challenging problems has been the amount of water that is unaccounted for by the Authority and for which the Authority is not compensated. One of the main sources of non-revenue water is water leaks in the System, which result in higher operating costs to the Authority.

As part of its efforts to reduce non-revenue water within the System, the Authority initiated a leak detection program in May 2004. As part of the leak detection program, a team of Authority employees searched Guam for significant System leaks. In January 2009, the Authority hired an engineering firm to conduct a three-year leak detection study of the Authority’s entire water system with definitive targeted goals, including discovering and reporting incidents of water theft, training Authority employees in modern leak detection techniques using state-of-the-art equipment, conducting a system audit and transferring the equipment at the conclusion of the contract. The Authority’s leak repair crews were tasked with repairing the leaks once discovered and significant resources, both in personnel and equipment, were dedicated to the task.

In December 2011, the Authority implemented a proactive leak management system (“Leak Management System”) substantially reducing the time to repair leaks. Since the implementation of the Leak Management System, the average leak repair time decreased from 38 days in Fiscal Year 2011 to 3.7 days in Fiscal Year 2013. After repairing the leaks that were easiest to address, the average leak repair time has increased to seven days in Fiscal Year 2016, which nevertheless represents a significant improvement from Fiscal Year 2011. The Authority continues to monitor opportunities to proactively manage leak repairs and recently received approval from the CCU to add personnel to its leak detection and leak repair units.

In 2012, the Authority also developed a pipeline prioritization and replacement model for costs of addressing leaks and rehabilitating or replacing pipelines, which projects are included in the CIP. As of August 1, 2017, the Authority has completed three line replacement projects and is currently constructing a fourth line replacement project. The four projects will result in the replacement of approximately 21 additional miles of service mains and valves. The Authority continues to monitor opportunities to replace additional service mains and valves. In August 2017, the CCU approved amendments to the SDC Implementation Guidelines, which included provisions for SDCs (as defined herein) to be utilized for the Utility Line Upgrade Program intended to replace problematic 2-inch mains and upgrade them to new 6-inch mains.

For additional information regarding historical and projected water supply requirements and non-revenue water, see Table 4 above under “—The Water System—*Water Supply*.”

The Authority's Largest Customers

Tables 5 and 6 below show the Authority's ten largest water customers and wastewater customers, respectively, by revenue for Fiscal Year 2016.

Table 5
Guam Waterworks Authority
Ten Largest Water Customers
for Fiscal Year 2017

Customer Name	Annual Revenue	Percent of Annual Gross Revenue
1. MDI Guam Corporation/Leopalace (hotel/resort)	\$1,316,123	2.00%
2. Pacific Islands Club (hotel/resort)	1,178,757	1.79
3. Hotels of the Marianas Inc. (hotel/resort)	995,330	1.51
4. Sheraton Laguna Guam Resort (hotel/resort)	851,904	1.30
5. Hyatt (hotel/resort)	847,386	1.29
6. Hotel Nikko Guam (hotel/resort)	813,085	1.24
7. Pacific Star Resort & Spa (hotel/resort)	649,388	0.99
8. MDI Guam Corporation/Westin (hotel/resort)	628,271	0.96
9. Guam Reef Hotel Inc. (hotel/resort)	592,583	0.90
10. Outrigger Guam Resort (hotel/resort)	591,248	0.90
Total:	\$8,464,075	12.87%

Source: Guam Waterworks Authority.

Table 6
Guam Waterworks Authority
Ten Largest Wastewater Customers
for Fiscal Year 2017

Customer Name	Annual Revenue	Percent of Annual Gross Revenue
1. Air Force DoD (government)	\$3,860,920	9.88%
2. Navy DoD (government)	1,684,854	4.31
3. Hotels of the Marianas Inc. (hotel/resort)	1,064,415	2.72
4. Sheraton Laguna Guam Resort (hotel/resort)	911,821	2.33
5. EIE Corporation/Hyatt (hotel/resort)	906,969	2.32
6. Hotel Nikko Guam (hotel/resort)	868,680	2.22
7. Pacific Star Resort & Spa (hotel/resort)	692,867	1.77
8. MDI Guam Corporation/Westin (hotel/resort)	671,635	1.72
9. Outrigger Guam Resort (hotel/resort)	633,320	1.62
10. Guam Reef Hotel Inc. (hotel/resort)	633,306	1.62
Total	\$11,928,786	30.54%

Source: Guam Waterworks Authority.

New Water and Sewer Installations; System Development Charge

Tables 7 and 8 below summarize the new water installations and new sewer installations, respectively, for the Fiscal Years 2013 through 2017.

Table 7
Guam Waterworks Authority
New Water Installations
Fiscal Years 2013-2017

Customer Type	2013	2014	2015	2016	2017
Residential	289	279	320	440	252
Irrigation	2	0	0	0	0
Hotel	0	3	0	0	0
Government	1	0	2	4	2
Federal	0	0	0	1	0
Commercial	51	38	46	51	53
Golf Course	0	0	0	0	0
Agricultural	21	11	1	12	2
Total	364	331	369	508	309

Source: Guam Waterworks Authority.

Table 8
Guam Waterworks Authority
New Sewer Installations
Fiscal Years 2013-2017

Customer Type	2013	2014	2015	2016	2017
Residential	74	87	84	133	60
Irrigation	0	0	0	0	0
Hotel	0	0	0	0	0
Government	1	0	3	1	1
Federal	0	0	0	0	0
Commercial	13	11	5	14	8
Golf Course	0	0	0	0	0
Agricultural	0	0	0	0	0
Total	88	98	92	148	69

Source: Guam Waterworks Authority.

Enacted in 2003, Public Law 26-164 required the Authority to develop and implement Water and Sewer System Development Charges (the “SDCs”). After approval by the CCU and the PUC in 2010, the SDCs were implemented in March 2010. The SDCs are one-time fees assessed on each user connecting property to the Authority’s water or wastewater systems, as applicable, for the first time or on each builder if the density of development on an existing connection is increased. The SDCs are payable at the time of construction permitting; however, certain qualified residential customers are allowed to amortize the SDCs over a specified time period. Although the SDCs may vary depending on water meter size, a typical combined water and wastewater SDC for a new residential connection is \$5,600, and a typical combined water and wastewater SDC for a new commercial connection is \$14,002 for a 1-inch meter size. The revenues generated by the SDCs are not included in the Revenues pledged under the Indenture, but are to be applied to the costs associated with the construction, expansion, upgrading and repair of water and wastewater facilities resulting from such connections or to pay the principal of, interest on and other financing costs related to, debt obligations incurred by or on behalf of the Authority. Table 9 below sets forth the SDC revenues billed by the Authority for the Fiscal Years 2013 through 2017.

Table 9
Guam Waterworks Authority
Water and Sewer System Development Charges
Fiscal Years 2013-2017

2013	2014	2015	2016	2017
\$1,369,778	\$1,632,755	\$1,181,254	\$1,428,332	\$874,072

Source: Guam Waterworks Authority.

The Authority expects to pay for a portion of the CIP with revenues generated from the SDC. See “FUTURE SYSTEM CAPITAL REQUIREMENTS,” and APPENDIX B—“FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS’ REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015,” Note 14.

Meter Replacement Programs

Customer Meters

To address historic problems with identifying and reading meters, irregular meter locations and aging meter stock, the Authority initiated the automated meter reading program. The Authority purchased radio read meters that could be read remotely based on a signal sent out from a transmitter attached to the meters and began meter installation in 2005. However, the Authority began to experience problems with these meters as early as 2007. The Authority began replacing meters in late 2007, and then in 2008 became aware that the reliability of the new meters of all sizes was substantially less than expected. In September 2009, the Authority established a meter task force to fix the problem. In late 2011, on the recommendation of the task force, the Authority’s General Manager decided to replace the meters.

In August 2012, the Authority began replacing the defective meters with new Badger meters. As of August 1, 2017, the Authority had replaced all but two meters out of approximately 41,300 defective meters. The meter replacement program has contributed to increases in the Authority’s operating revenues since Fiscal Year 2011. With over 40,000 Badger meters installed since August 2012, the successful electronic read percentage has consistently been maintained above 95%, resulting in more accurate and timely meter reads for monthly billing. The data logging features provided by the new Badger meters also allow for improved and timelier customer service.

In addition to the meter replacement program, the Authority completed the construction of a Meter Test Facility. The Meter Test Facility is used to verify proper meter operation and validate disputed billings when customers have meter concerns. The Meter Test Facility also provides verification to substantiate warranty claims on meters that may have prematurely failed during the warranty period, which may result in the replacement of such meters by the manufacturer without any additional costs to ratepayers. The Authority is also in the process of procuring mobile meter test equipment to provide additional capability for promptly resolving disputes. Furthermore, the Authority implemented a Meter Maintenance Program in 2016. A component of the Meter Maintenance Program is conducting regular quality control tests of the Authority’s meter inventory prior to field deployment.

In January 2017, a small percentage of accounts showed low to no water consumption as compared to previous usage. Based on a random sampling of accounts, the Authority determined that the irregular consumption patterns of such accounts were primarily due to a recurring defect in an internal part of a particular model of deployed water meters. The Authority initiated an action plan for identifying, testing and replacing defective meters and also coordinated with the manufacturer of the meters to secure replacement meters under warranty. The Authority also worked with the manufacturer of the meters to verify testing procedures at the Authority’s Meter Test Facility. In addition, the Authority implemented new business processes to better identify and respond to such problems. As of October 15, 2017, approximately 4,370 defective meters have been replaced under warranty with new meters. The Authority will continue to address problematic meters on an as-needed basis. Pursuant to its regulations governing the recovery of revenue in connection with defective meters, the Authority has started to back-bill accounts.

Master Flow Meters and Production Meters

The Authority has initiated a program to replace its master flow meters in the distribution system to assist in identifying water use and water loss. Because of the difficulty in reaching the water flow meters, many of which are underground, only approximately 10% of the master flow meters have been replaced. The Authority is currently updating a Pressure Zone Re-Alignment Plan, based on updated information from its water system hydraulic model. The plan is intended to properly balance storage capacity, production capacity, and flow control within the various pressure zones established within the distribution system. System flow meters are planned for installation with flow control valves between the identified zones. The Authority has also initiated a program to replace its production meters on wells to more accurately measure production pumping of groundwater. As of October 1, 2017, the Authority identified and replaced 20 defective production meters, or approximately 17% of its production meters. The Authority has also inspected and tested meter installations at 60 production well facilities which require piping modifications. The Authority anticipates that bid documents for such meter replacement and piping modifications will be issued in January 2018 and construction will be completed by August 2018.

Billing, Collections and Enforcements

Tables 10, 11 and 12 show a comparison of the Authority's typical monthly water, wastewater and combined water and wastewater bills, respectively, for selected residential, commercial and large commercial usage levels to bills charged by other water and wastewater utilities.

Table 10
Typical Monthly Water Bills

Utility	Residential 7,500 gal/mo. (3/4" meter)⁽¹⁾	Commercial 35,000 gal/mo. (1" meter)	Large Commercial 1,200,000 gal/mo. (4" Meter)
Guam Waterworks Authority⁽²⁾	\$66.29	\$512.44	\$16,769.66
American Samoa Power Authority	\$42.21	\$150.01	\$4,646.91
City and County of Honolulu Board of Water Supply	\$42.41	\$182.86	\$5,961.26
Commonwealth Utilities Commission – Saipan ⁽³⁾	\$48.75	\$224.06	\$9,853.09
County of Hawaii Department of Water Supply ⁽⁴⁾	\$40.90	\$162.25	\$4,729.15
County of Kauai Department of Water	\$59.03	\$203.10	\$6,093.25
County of Maui Department of Water Supply	\$38.75	\$208.00	\$7,222.50

⁽¹⁾ County of Hawaii and County of Maui are based on use 5/8-inch meters (the predominant meter size for single-family residences).

⁽²⁾ Uses monthly rates effective from October 2017.

⁽³⁾ Includes a water electric charge.

⁽⁴⁾ Includes a power cost charge and energy capital improvement project charge.

Source: Guam Waterworks Authority.

(Remainder of Page Intentionally Left Blank)

Table 11
Typical Monthly Wastewater Bills

Utility	Residential 7,500 gal/mo.⁽¹⁾	Commercial 35,000 gal/mo. ⁽¹⁾	Large Commercial 1,200,000 gal/mo. ⁽¹⁾
Guam Waterworks Authority⁽²⁾	\$27.54	\$213.81	\$17,858.28
American Samoa Power Authority ⁽³⁾	\$23.56	\$117.36	\$3,239.56
City and County of Honolulu Dept. of Environmental Services ⁽⁴⁾	\$105.33	\$463.24	\$14,784.80
Commonwealth Utilities Commission – Saipan ⁽⁵⁾	\$34.79	\$185.21	\$6,068.46
County of Hawaii Department of Environmental Management	\$27.00	\$103.00	\$3,877.60
County of Kauai Department of Public Works ⁽⁶⁾	\$60.09	\$127.95	\$13,366.70
County of Maui Department of Environmental Management ⁽⁷⁾	\$60.23	\$293.21	\$9,785.41

⁽¹⁾ Value shown is metered water consumption. The Authority, City and County of Honolulu and County of Hawaii base sewer bills on 80% of metered water consumption.

⁽²⁾ Assumes use of commercial 1 rate for Commercial Customer and commercial 2 rates for the Large Commercial customer.

⁽³⁾ Includes the American Samoa Power Authority groundwater protection fee.

⁽⁴⁾ Assumes a total suspended solids of 600 mg/L for the Large Commercial (hotel with restaurant).

⁽⁵⁾ Includes a wastewater electric charge.

⁽⁶⁾ Assumes use of group I commercial rate for the Commercial Customers and hotel with restaurant rate for Large Commercial customers.

⁽⁷⁾ Assumes dual meter hotel rates for commercial, and single meter industrial, food service and restaurants rate for Large Commercial.

Source: Guam Waterworks Authority.

Table 12
Typical Monthly Water and Wastewater Bills

Location	Residential 7,500 gal/mo.	Commercial 35,000 gal/mo.	Large Commercial 1,200,000 gal/mo.
Guam Waterworks Authority	\$93.83	\$726.25	\$34,627.94
American Samoa	\$65.77	\$267.37	\$7,886.47
City and County of Honolulu	\$147.74	\$646.10	\$20,746.06
Commonwealth Utilities Commission – Saipan	\$83.54	\$409.27	\$15,921.55
County of Hawaii	\$67.90	\$265.25	\$8,606.75
County of Kauai	\$119.12	\$331.05	\$19,459.95
County of Maui	\$98.98	\$501.21	\$17,007.91

Source: Guam Waterworks Authority.

On October 1, 2010, the Authority implemented an online and telephone payment system which provides its customers with the option of paying their bills using a credit card. As of August 31, 2017, there had been over 76,019 transactions totaling over \$8.1 million in online payments. The Authority has also implemented a late payment collection program. Under the program, all bills are due 15 days after the billing date, which has helped the Authority maintain a collection ratio above 96% since 2012. The Authority may discontinue service for non-payment upon providing advance written notice at least 10 days prior to the termination date. The program requires the Authority to make all reasonable efforts to collect all past due bills, including employing a collection agency.

As of September 30, 2017, Accounts Receivable were approximately \$27.9 million, of which approximately \$12.0 million or about 43% are considered by the Authority to be doubtful for collection. Table 13 below sets forth the collection data for the Authority for Fiscal Years 2013 through 2017. See also APPENDIX B—“FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS’ REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015,” Notes 2 and 4.

Table 13
Guam Waterworks Authority
Collection Data
Fiscal Years 2013 through 2017

	2013⁽¹⁾	2014⁽¹⁾	2015⁽¹⁾	2016⁽¹⁾	2017⁽²⁾
Amount Billed	\$73,791,724	\$81,088,329	\$92,930,050	\$104,986,717	\$104,250,091
Amount Collected	\$70,625,478	\$79,246,281	\$89,961,908	\$103,737,840	\$101,245,082
Collection Ratio	95%	98%	97%	99%	97%

⁽¹⁾ Based on the Authority's audited financial statements. Does not include SDCs and bad debt recovery.

⁽²⁾ Based on the Authority's unaudited financial statements. Does not include SDCs and bad debt recovery.

Source: *Guam Waterworks Authority*.

Uniform Disconnection Policy

In February 2003, the CCU mandated that a disconnection practice be established on a regular and ongoing basis and that all customers, including Government of Guam accounts, be subject to the same disconnection policy. Customers with verifiable health and/or age related issues, however, may qualify for an exception to this disconnection mandate. The Authority's disconnection target is to schedule disconnection when a customer becomes 30 days delinquent and to ensure all such customers are disconnected before they become 45 days delinquent.

Debt Service Coverage

As discussed above, the Authority has covenanted in the Indenture to at all times fix, prescribe and collect rates, fees and charges in connection with the services furnished by the System which will be sufficient to yield the sum of Net Revenues during each Fiscal Year equal to at least 1.25 times the Aggregate Annual Debt Service for such Fiscal Year (the "Debt Service Coverage Ratio"). Although the Authority did not satisfy the Debt Service Coverage Ratio in certain prior Fiscal Years, the Authority has satisfied the Debt Service Coverage Ratio since Fiscal Year 2010. See "SECURITY AND SOURCE OF PAYMENT FOR THE BONDS—Rate Covenant" and "HISTORICAL AND PROJECTED OPERATING RESULTS."

In October 2004, the PUC adopted a policy of providing rates sufficient to ensure that the Authority's debt service coverage ratio would not drop below 1.75x aggregate annual debt service (the "PUC DSCR"). The PUC established the policy to help ensure that the Authority would generate Net Revenues sufficient to meet the Rate Covenant and to provide sufficient ongoing equity in the System. The Authority generated Net Revenues sufficient to satisfy the PUC DSCR set forth in the PUC rate policy in Fiscal Years 2012 through 2016 and expects to meet the PUC DSCR in Fiscal Year 2017. For purposes of determining compliance with the PUC DSCR, the Authority is permitted to take into account Net Revenues, as well as other available funds of the Authority, including amounts on the deposit in the Working Capital Debt Service Reserve Account established in May 2014. See "THE SYSTEM – Debt Service Coverage" and "—Additional Operating Reserves," "REGULATORY ENVIRONMENT—Regulation of Ratemaking" and "HISTORICAL AND PROJECTED OPERATING RESULTS."

Funding of Required Reserves

The Authority covenants under the Indenture to maintain two funds: the Operation and Maintenance Fund, available for working capital purposes, and the Operation, Maintenance, Renewal and Replacement Reserve Fund, available for emergency renewals, replacements and other contingency items. At various times during Fiscal Years 2008 and 2009, the balances of those funds were lower than as required under the Indenture, and the Authority did not have sufficient Revenues to replenish them at the rate required under the Indenture. To address this issue, the Authority applied a portion of the proceeds received from the Subordinate Loan incurred in June 2010 to fill these two funds to the required levels. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS—Subordinate Obligations." Since June 2010, the Authority has maintained both of these funds at the required levels. The required balance for the Operation and Maintenance for Fiscal Year 2017 is \$9.09 million, and as of September 30, 2017, such amount is on deposit in the fund. The required balance for the Operation, Maintenance,

Renewal and Replacement Reserve Fund for Fiscal Year 2017 is \$17.4 million, and as of September 30, 2017, such amount is on deposit in the fund.

Additional Operating Reserves

In May 2014, the CCU adopted policies providing for establishing within the Capital Improvement Fund a Working Capital Reserve for O&M account (the “Working Capital O&M Reserve Account”) and a Working Capital Reserve Debt Service Account (the “Working Capital Debt Service Reserve Account”). The CCU authorized the Authority to implement the policies retroactive to October 1, 2013.

The Authority established the Working Capital O&M Reserve Account to provide additional liquidity to assist the Authority in addressing unforeseen obligations and unexpected, short-term cash flow demands. Amounts on deposit in the Working Capital O&M Reserve Account are available to pay Operation and Maintenance Expenses if the Authority’s then-current cash flow is insufficient to pay such expenses. The Chief Financial Officer is authorized to draw up to \$750,000, subject to the prior approval of the General Manager; prior CCU approval is required for any draw greater than \$750,000. The Working Capital O&M Reserve Account is to be funded in monthly installments over a five-year period such that at the end of 2018, the amount on deposit in the Working Capital O&M Reserve Account will be equal to 180 days of the Operation and Maintenance Costs for the then-current Fiscal Year, less depreciation expense. The Working Capital O&M Reserve Account requirement is subject to annual review and adjustment during the regular budgeting and rate-setting process. As of September 30, 2017, approximately \$13.5 million is on deposit in the Working Capital O&M Reserve Account. The Working Capital O&M Reserve Account is currently on track to be fully funded by the end of 2018.

The Authority established the Working Capital Debt Service Reserve Account to assist the Authority in complying with the additional debt service coverage requirement required under the PUC DSCR policy. Amounts on deposit in the Working Capital Debt Service Reserve Account are to be used solely to supplement Net Revenues for purposes of determining compliance with the PUC DSCR and may not be taken into account for purposes of determining compliance with the Debt Service Coverage Ratio required under the Indenture. The amounts in the Working Capital Debt Service Reserve Account may not be withdrawn for any purpose unless the CCU approves the withdrawal. The Working Capital Debt Service Reserve Account is to be funded in monthly installments over a five-year period such that at the end of 2018, the amount on deposit in the Working Capital Debt Service Reserve Account will be equal to the amount necessary, when combined with the Net Revenues for the then-current Fiscal Year, to satisfy or exceed the PUC DSCR. The Working Capital Debt Service Reserve Account requirement is subject to annual review and adjustment during the regular budgeting and rate-setting process. As of September 30, 2017, approximately \$11.2 million is on deposit in the Working Capital Debt Service Reserve Account. The Working Capital Debt Service Reserve Account is currently on track to be fully funded by the end of 2018. See “REGULATORY ENVIRONMENT—Regulation of Ratemaking.”

Security Measures

As required by the 2011 Court Order, the Authority timely completed and filed with the USEPA a vulnerability assessment on all of its public water systems and completed an emergency response plan, which is incorporated into the Guam emergency response plan (the “Guam Emergency Response Plan”). The Authority works closely with the Guam Homeland Security/Office of Civil Defense on emergency response planning coordination efforts and updates to the Guam Emergency Response Plan. In addition, the Authority has implemented a formal cyber security policy, has designated a cyber security coordinator for the utility and has recently completed cyber security training for all employees.

Labor and Employee Relations

As of September 30, 2017, the Authority had approximately 331 employees. A majority of the Authority’s employees are classified as employees of the Government and within the Guam Civil Service System. Certain management positions and key skilled supervisory personnel hold unclassified positions.

The Guam Federation of Teachers (“GFT”) regularly recruits non-management employees of the Authority. As of September 30, 2017, 51 employees, or approximately 15% of the Authority’s employees, had joined the union. In 2015, the GFT and the Authority negotiated a collective bargaining agreement, which was ratified in March 2016 and renewed for one year in April 2017. The GFT does not have the ability under Guam law to negotiate for wage and benefit adjustments and may engage in a strike only under very limited circumstances. The Authority’s management believes that relations with its employees are positive.

Employees’ Retirement Plan

General

The Government of Guam Retirement Fund (the “GGRF”) provides retirement annuities and other payments to retired Government employees, including employees of the Authority, and their dependents. Employees hired on or before September 30, 1995 are members of the Government of Guam Employees Retirement System, a defined benefit pension plan (the “DB Plan”). Employees hired after September 30, 1995 are members of the Defined Contribution Retirement System (the “DC Plan”) but may elect to become members of the Defined Benefit 1.75 Retirement System (the “DB 1.75 Plan”). Employees hired between April 1, 2017 and December 31, 2017 are members of the DC Plan but may also elect to become members of the DB 1.75 Plan. Eligible DC Plan members may elect to participate in the DB 1.75 Plan or the Guam Retirement Security Plan (the “GRSP”), a cash balance plan, during the established election periods between April 1, 2017 and January 31, 2018. A member’s election shall only apply to members who are employed by the Government as of January 1, 2018. Beginning January 1, 2018, the GRSP will be the default plan for all new employees whose employment commences on or after that date. These new employees will have 60 days from the date of hire to elect to participate in the DC Plan. The DB Plan, DC Plan, DB 1.75 Plan, and GRSP are administered by the GGRF.

DB Plan

The DB Plan is a single-employer (Government of Guam) defined benefit pension plan to which the Authority contributes based upon a fixed percentage of the payroll for those employees who are members of the DB Plan. A single actuarial valuation is performed annually covering all DB Plan members, and the same contribution rate applies to each employer, including the Authority. Members of the DB Plan are required to contribute a certain percentage of their annual covered salary. The DB Plan member and employer contribution requirements are established by statute.

The GGRF issues a publicly available financial report that includes financial statements and required supplementary information for the DB Plan. As of September 30, 2016 (the most recent date for which such information is publicly available), there were a total of 13,969 members (active, inactive and retirees) in the DB Plan, and 9,506 active employees and 4,463 inactive members with account balances under the DB Plan. As of September 30, 2016, 43 Authority employees were members of the DB Plan.

Based on the Government of Guam Retirement Fund Actuarial Valuation as of September 30, 2016 (the “2016 Valuation”), the DB Plan had an actuarial accrued liability of approximately \$2.905 billion, with an unfunded actuarial accrued liability of approximately \$1.249 billion, or a funded ratio of 57.0%.

Under Title 4, Chapter 8, Section 8137 of the Guam Code Annotated, as amended, the Government of Guam is required to completely fund the unfunded actuarial accrued liability by 2033, effective January 1, 2018. The annual actuarial valuations prepared for the DB Plan include actuarial employer contribution rates intended to satisfy this requirement. The actuarial employer contributions rates set forth in the annual valuations apply to the fiscal year beginning one year after the valuation date. Table 14 below sets forth the actuarial employer contribution rates of covered payroll for Fiscal Years 2012 through 2016 based on the information provided in the 2016 Valuation and in prior valuations:

Table 14
Actuarial Employer Contribution Rates of Covered Payroll
Fiscal Years 2012 through 2016

Fiscal Year	Rate
2012	30.03%
2013	29.85
2014	28.16
2015	27.41
2016	27.83

Source: Guam Waterworks Authority.

Although the actuarial contributions rates are provided to the Legislature of Guam by the GGRF in advance of each Fiscal Year and used for budget preparation, the Legislature of Guam is not required to adopt such rates. Table 15 sets forth statutory contribution rates of covered payroll for Fiscal Years 2012 through 2016. Statutory employee contribution rates for the DB Plan were 9.50% in each such Fiscal Year.

Table 15
Statutory Employer Contribution Rates of Covered Payroll
Fiscal Years 2012 through 2016

Fiscal Year	Rate
2012	28.30%
2013	30.09
2014	30.03
2015	29.85
2016	28.16

Source: Guam Waterworks Authority.

In addition, statutory employer contribution rates of covered payroll for Fiscal Years 2017 and 2018 are 27.41% and 27.83%, respectively, and statutory employee contribution rates for the DB Plan continue to be 9.50% in each such Fiscal Year.

Table 16 below sets forth the actual contributions made by the Authority to the DB Plan during the Fiscal Years 2014 through 2016. Such amounts were equal to the required actuarial contributions for Fiscal Years 2014 through 2016.

Table 16
Authority Contributions to DB Plan
Fiscal Years 2012 through 2016

Fiscal Year	Amount
2014	\$1,191,600
2015	1,096,069
2016	846,186

Source: Guam Waterworks Authority.

DC Plan

The DC Plan is a single-employer (Government of Guam) pension plan. As of September 30, 2016 (the most recent date for which such information is publicly available), there were a total of 8,858 members (active) in the DC Plan. As of September 30, 2016, 283 Authority employees were members of the DC Plan.

Contributions to the DC Plan by members are based on an automatic deduction of 5.0% of the member's regular base pay through December 31, 2017 and 6.2% of the member's regular base pay starting on January 1, 2018. Contributions are deposited into each individual employees' 401(a) account with the DC Plan. The statutory employer contribution rate for the DC Plan for Fiscal Years 2015, 2014 and 2013 were determined using the same employer statutory contribution rates as the DB Plan. Of such amounts contributed by the employers under the DC Plan, an amount equal to 5.0% of the DC Plan member's regular base pay through December 31, 2017 and 6.2% of the DC Plan member's regular base pay starting on January 1, 2018 is deposited into the member's individual annuity account; the remaining amount in excess of 5.0% through December 31, 2017 and 6.2% starting on January 1, 2018 of the DC Plan member's regular base pay is contributed towards the unfunded liability of the DB Plan. DC Plan members are fully vested upon the completion of five years of government service.

Table 17 below sets forth the Authority's contributions to the DC Plan, as well as the portion of such contributions that are applied to the unfunded liability of the DB Plan for Fiscal Years 2014 through 2016:

Table 17
Authority Contributions to DC Plan and DB Plan toward Unfunded Liability
Fiscal Years 2014 through 2016

Fiscal Year	DC Plan Amount	Portion of DC Plan Amount to DB Plan
2014	\$2,994,520	\$2,495,968
2015	3,199,900	2,667,022
2016	3,271,914	2,698,925

Source: Guam Waterworks Authority.

GASB 67 and 68

In June 2012, the Governmental Accounting Standards Board ("GASB") issued GASB Statement 68, *Accounting and Financial Reporting for Pensions* ("GASB 68"), requiring changes in how state and local governments calculate and report the costs and obligations associated with providing pension benefits. In October 2015, the GGRF published the Government of Guam Retirement Fund GASB 67 and 68 Disclosures as of September 30, 2014 (the "GASB 68 Report"), prepared by Milliman, Inc., the Government's actuary. The GASB 68 Report included schedules for the allocation of net pension liability by component unit, to be used by employers required to implement GASB 68, including the Authority. Based on the information included in the schedules to the GASB 68 Report, the Authority's share of the Net Pension Liability (the present value of the unfunded portion of future benefits which have accrued) as of September 30, 2014 was approximately \$39 million. The implementation of GASB 68 had a material effect on the Authority's financial statements, resulting in the restatement of the Authority's financial statements for Fiscal Year 2014 to reflect the reporting of deferred outflows of resources relating to its pension plan of \$3,687,568, deferred inflows of resources related to its pension plan of \$2,303,348 and a Net Pension Liability of \$38,536,384, which also resulted in the restatement of the Authority's net position for Fiscal Year 2014. For Fiscal Year 2015, the Authority reported deferred outflows of resources relating to its pension plan of \$4,015,691, deferred inflows of resources related to its pension plan of \$3,568,590 and a Net Pension Liability of \$34,047,740. For Fiscal Year 2016, the Authority reported deferred outflows of resources relating to its pension plan of \$4,668,010 and a Net Pension Liability of \$38,195,938.

See APPENDIX B—"FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS' REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015," Notes 2 and 8.

DB 1.75 Plan and Guam Retirement Security Plan

In September 2016, the Legislature of Guam overrode the Governor's veto and approved Public Law 33-186, which creates as alternatives to the DC Plan, upon timely election by applicable members in accordance with regulations to be promulgated, a new "Defined Benefit 1.75" retirement system (the "DB 1.75 Plan") and a new Guam Retirement Security Plan ("GRSP"), a cash balance plan.

The DB 1.75 Plan is a governmental defined benefit pension plan with an effective date of January 1, 2018. The DB 1.75 Plan is not a stand-alone and separate plan, but rather is an alternative benefit structure under GGRF. The DB 1.75 Plan is open for participation by certain existing employees, new employees, and reemployed employees who would otherwise participate in the DC Plan or the new GRSP (as described below) and who make a timely election on a voluntary basis to participate in the DB 1.75 Plan. New employees that commence employment between April 1, 2017 and December 31, 2017 may elect to become a member of the DB 1.75 Plan instead of participating in the DC Plan by filing a new employee election (a “New Employee Election”). A New Employee Election must be made during the window commencing on the date of employment and ending on December 31, 2017 (or January 31, 2018 if the date of employment commenced in the month of December 2017).

Employee contributions are made by mandatory pre-tax payroll deduction at the rate of 9.5% of the employee’s base salary. The employer makes contributions to the DB 1.75 Plan in accordance with reasonable actuarial methods and assumptions based on the determination of the GGRF. Members of the DB 1.75 Plan automatically participate in the Government deferred compensation plan, pursuant to which employees are required to contribute 1% of base salary as a pre-tax mandatory contribution.

The GRSP is a governmental defined benefit plan with an effective date of January 1, 2018. The GRSP is intended to be the primary retirement plan for new employees beginning January 1, 2018. Certain existing employees and members of the DC Plan are also provided limited opportunity to participate in the GRSP. Employee contributions are made by mandatory pre-tax payroll deduction at the rate of 6.2% of the employee’s base salary. The employer makes matching contributions at the same rate of 6.2% of the employee’s base salary.

In addition, Public Law 33-186 provides that if the Government is authorized to extend Social Security coverage to Government employees on a prospective basis, then all employees hired on or after the effective date or dates from which such coverage is extended shall be enrolled into Social Security and shall not be eligible for the DB 1.75 Plan or the GRSP. The provisions of Public Law 33-186 are not effective until January 1, 2018 and no actuarial valuation of the DB 1.75 Plan or the GRSP has been performed; however, it is possible that the unfunded actuarial accrued liability of the GGRF may increase if the Government authorizes to extend Social Security coverage to Government employees.

Other Post-Employment Benefits

The Government makes certain annual expenditures for certain postretirement healthcare benefits (“OPEB”) to retirees who are members of the GGRF. In 2008, the Government was required to account for and report OPEB under GASB Statement No. 45. The Government provides medical, dental, and life insurance coverage. The retiree medical and dental plans are fully-insured products provided through insurance companies. The Government shares in the cost of these plans with its contribution amount set each year at renewal. Current statutes prohibit active and retired employees from contributing different amounts for the same coverage. As such, the Government contributes substantially more to the cost of retiree healthcare than to active healthcare. For the life insurance plan, the Government provides retirees with \$10,000 of life insurance coverage through an insurance company. Retirees do not share in the cost of this coverage. As of Fiscal Year 2016 (the latest Fiscal Year for which such information is available), the OPEB unfunded actuarial accrued liability for the Government was approximately \$1.3 billion, of which \$31.8 million is allocable to the Authority.

The Governor’s Executive Budget transmitted to the Legislature of Guam typically includes provisions to appropriate sums from the General Fund to accommodate the cost of living allowances, supplemental annuities and the medical and dental benefits (generally, the Government’s share of the premiums for the retirees’ insurance) for Government of Guam retirees, which the Government is currently paying on a “pay-as-you-go” basis. The Authority is then required to reimburse the General Fund for the OPEB costs of the Authority’s retirees. The Authority applies revenues generated by the Legislative Surcharge to pay these costs. See “REGULATORY ENVIRONMENT—Regulation of Ratemaking.”

Table 18 below sets forth contributions made by the Authority for Fiscal Years 2014 through 2016 to reimburse the Government for the OPEB costs of the Authority’s retirees.

Table 18
Authority Contributions to Reimburse OPEB Costs
Fiscal Years 2014 through 2016

<u>Fiscal Year</u>	<u>Amount</u>
2014	\$2,518,851
2015	3,491,101
2016	3,348,262

Source: Guam Waterworks Authority.

See APPENDIX B—“FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS’ REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015,” Note 8.

In June 2015, GASB approved new accounting and financial reporting standards for state and local government OPEB. Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* (GASB 74), applies to OPEB plans. Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (GASB 75), applies to state and local employers that sponsor OPEB. Generally, the new OPEB standards parallel those applied to defined-benefit pension plans and participating employers by GASB 67 and 68, respectively. The new standards introduce new procedures for measuring OPEB liabilities and costs, require employers to report a net OPEB liability on their financial statements, and require more extensive disclosure in plan and employer financial statements. GASB 74 will be effective for plans with fiscal years beginning after June 15, 2016. GASB 75 will be effective for employers for fiscal years beginning after June 15, 2017. The Authority has not determined the potential impact of the new standards on its financial statements.

REGULATORY ENVIRONMENT

Environmental Regulations

General

The Authority is subject to federal and Guam regulations governing water supply and wastewater treatment. The drinking water standards promulgated in the SDWA are the primary requirements for water supply. Wastewater treatment and disposal must comply with the water quality standards in the CWA. GEPA is the local agency responsible for monitoring Authority operations for compliance. Generally, GEPA regulations are the same as the federal standards, although the agency can implement more stringent requirements if GEPA determines it is necessary. GEPA and the USEPA jointly enforce environmental regulations on Guam, except that GEPA has primacy for establishing and enforcing water quality standards under the SDWA, while the USEPA has retained NPDES permit authority under the CWA.

In the past, the Authority has experienced difficulty in complying with SDWA and CWA regulations. In 2002, the USEPA filed a complaint against the Authority in the U.S. District Court of Guam seeking to appoint a receiver to address the Authority’s inability to comply with the CWA and the SDWA. In part in response to concerns over continued non-compliance by the Authority, the Legislature of Guam created the elected CCU as the governing body of both the Authority and GPA, thereby removing the Authority, as well as GPA, from the direct control of the Government of Guam. Upon taking office in January 2003, the original members of the CCU were faced with more than \$25 million of debt and pending federal lawsuits for violations of water quality and environmental standards that had accumulated over the past several decades.

The 2003 Stipulated Order and the 2011 Court Order

In November 2002, the newly elected members of the CCU met with the U.S. Attorney General and representatives from the USEPA to discuss whether the CCU could play a role in the rehabilitation of the Authority. As a result of these discussions, the USEPA and the Authority agreed to enter into the 2003 Stipulated Order, pursuant to which the Authority was afforded the opportunity to comply with federal water and wastewater

regulations under the governance of the CCU. The 2003 Stipulated Order required the Authority to make specified improvements to the System and to undertake certain planning measures by specific dates. The Authority began implementing the specified projects, including, among other things, the completion in 2007 of the Water Resources Master Plan (“WRMP”) to serve as the basis for the Authority’s long-term planning. The WRMP evaluated the condition of the Authority’s facilities and outlined improvements over the subsequent 20 years necessary for regulatory compliance and System growth. The Authority did not meet all of the deadlines in the 2003 Stipulated Order, however, and the USEPA required it to pay fines in the aggregate amount of \$389,750 from 2004 through 2010.

In 2010, the USEPA requested that the District Court order the Authority to address the then-remaining incomplete items in the 2003 Stipulated Order, as well as certain additional actions or improvements, some of which were identified by the Authority in the WRMP. On November 10, 2011, the District Court issued the 2011 Court Order, which established deadlines for such projects and superseded the 2003 Stipulated Order and all prior orders. The 2011 Court Order contains a comprehensive list of management, operations, financial administration, facilities construction and rehabilitation and training requirements to be implemented in accordance with strict schedules. Many of those objectives have been established in the WRMP that was approved by the CCU and the USEPA. The 2011 Court Order is being administered directly by the USEPA through its Region 9 office in San Francisco. The Authority must submit all of the 2011 Court Order deliverables to the USEPA for review, and where noted, comment and approval. The Authority is required to provide quarterly progress reports to the USEPA and to the District Court covering all of the items stipulated in the 2011 Court Order. The Authority has made compliance with the 2011 Court Order a top priority and has, by and large, complied with the timelines set forth in the 2011 Court Order. As of August 1, 2017, for the 88 projects required under the 2011 Court Order, 72 projects were completed on time, eight projects were completed after the required deadlines, two projects are currently delayed and six projects remain on-schedule. In addition, the 2011 Court Order required five ongoing reporting requirements, which the Authority has consistently submitted on time. Since the issuance of the 2011 Court Order, the USEPA has not fined the Authority for missed compliance dates. The Authority also has not been required to conduct an updated status hearing with the District Court. The CIP includes projects required under the 2011 Court Order. The Authority currently expects to be in compliance with the scheduled requirements of the 2011 Court Order by 2021.

Compliance with the SDWA – Water System

General. As of August 1, 2017, treatment of the groundwater obtained by the Authority from its wells and from the Santa Rita spring and surface water from the Ugum Surface WTP complies with all SDWA requirements. In 2014, the Navy completed a study at the Fena WTP owned and operated by the Navy, which included a pilot project for an improved treatment process at the Fena WTP. During the course of the study, the Fena WTP was able to produce water in compliance with the Disinfection Byproducts Rule of the SDWA. The Authority is continuing to monitor the quality of the water from the Fena WTP in compliance with the SDWA.

Findings of Significant Deficiencies. On November 1, 2012, the USEPA issued a notice to the Authority pursuant to the SDWA that significant deficiencies (the “Findings of Significant Deficiencies”) were found in the Authority’s water system based on inspections and sanitary surveys conducted by the USEPA National Enforcement Investigations Center (the “NEIC”), including, among others, deficiencies in water sources, treatment systems, water quality monitoring, reporting and verification, compliance with the SDWA and water system management, operations and administration. The Authority submitted a formal response to the USEPA in April 2013, which formed the basis of a corrective action plan adopted by the Authority and the USEPA in 2014. Of the 40 items identified in the Findings of Significant Deficiencies, 29 have been addressed and no further action is required, 10 are already being addressed under the 2011 Court Order and one is part of long-term, continuous planning processes, including operator certification, training, asset management and preventative maintenance. The CIP includes projects to address items identified in the Findings of Significant Deficiencies. See “THE SYSTEM – Water System” and “FUTURE CAPITAL REQUIREMENTS.”

Compliance with the CWA – Wastewater System

National Pollutant Discharge Elimination System Permits. Until June 2013, the Authority’s two largest wastewater treatment plants, the Northern District WWTP and the Hagåtña WWTP, operated under secondary treatment variances issued by the USEPA under the CWA, which permitted the Authority to discharge

primary effluent into the Philippine Sea. Effective as of June 1, 2013, the NPDES permits for the Northern District WWTP and the Hagåtña WWTP include secondary treatment requirements; however, neither wastewater treatment plant is equipped to provide secondary treatment. The Authority and the USEPA are currently negotiating secondary treatment compliance schedules for the Northern District WWTP and the Hagåtña WWTP. The Authority estimates that the design and construction necessary to satisfy the secondary treatment requirements will take approximately five years for each plant and estimates the combined cost of upgrading both treatment plants to satisfy the secondary treatment requirements to be approximately \$279 million. The CIP does not currently include the secondary treatment upgrade projects as the Authority expects to obtain compliance schedules that will permit the Authority to delay implementation of the secondary treatment requirements until after the provisions and capital requirements of the 2011 Court Order have been satisfied.

On August 26, 2016, the DoD, through the OEA, awarded the Authority grants totaling \$55.3 million to initiate projects associated with the design and construction of the improvements needed to bring the Northern District WWTP to full secondary treatment capability, which, at the time, was estimated to cost approximately \$173.9 million. The current estimated costs of these projects as of November 1, 2017, is approximately \$173.2 million and include (i) improvements for the Northern District WWTP, (ii) rehabilitation of the sewer interceptor serving northern military installations, and (iii) the NGLA well monitoring program. On November 7, 2017, the Authority received an additional grant award totaling \$117.9 million for construction of wastewater improvements related to the build-up. See “THE SYSTEM—Wastewater System—*Wastewater Treatment Plants*” and “FUTURE SYSTEM CAPITAL REQUIREMENTS—Proposed U.S. Military Relocation and Installations.”

In addition, the Agat-Santa Rita WWTP, the Baza Gardens WWTP and the Umatac-Merizo WWTP have been unable to consistently meet the requirements of their respective NPDES permits. Both the 2011 Court Order and the CIP include projects that will help the Authority address these issues. The Authority submitted evaluations for capacity, performance and treatment alternatives for the Umatac-Merizo WWTP and the Baza Gardens WWTP to the USEPA in December 2013 and April 2014, respectively, for review and comment. The NPDES permit for the Umatac-Merizo WWTP was renewed effective September 2015. The Authority has prepared engineering studies and I/I analyses and SSES to address issues with lagoon overflow and collection systems, and improvements and repairs are included in the CIP. In June 2017, the Authority issued a design-build contract for the upgrade of the Umatac-Merizo WWTP. Work on the Umatac-Merizo WWTP project is currently underway and the Authority expects the project to be completed by December 2018. The Authority expects that the Umatac-Merizo WWTP project will help it achieve and maintain more consistent compliance under more extreme conditions.

As mentioned above, construction of a new Agat-Santa Rita WWTP facility began in early 2016 and includes two phases. Phase 1 improvements enabling secondary treatment and compliance with the 2011 Court Order were completed in March 2017 and Phase 2 improvements are in progress and expected to be completed by the end of 2017. The new Agat-Santa Rita WWTP facility has been designed to handle the flows from both the existing Agat-Santa Rita WWTP and Baza Gardens WWTP facilities, as well as to accommodate additional capacity in the future. The Authority has prepared engineering studies and I/I analyses and SSES to address issues with collection systems for both facilities and plans to begin repairs to address these concerns.

The USEPA is in the process of issuing a new NPDES permit for the new Agat-Santa Rita WWTP and the Authority expects to receive the NPDES permit in November 2017. The USEPA is also in the process of renewing the NPDES permit for Baza Gardens WWTP and has authorized continued operation of the plant while the new permit is being written. Although the Authority currently plans to remove the Baza Gardens WWTP from service by 2018, the Authority plans to retain the permit.

Request for Information. On May 30, 2013, the USEPA issued to the Authority a request for information under the CWA (the “Request for Information”), based on the inspection conducted by the NEIC in April and May 2012 of the Authority’s NPDES-permitted wastewater treatment plants, pumping stations and collection systems. As required by the Request for Information, the Authority acknowledged and confirmed the contents of such request, and the USEPA subsequently deemed the Request for Information to be completed. However, the Authority voluntarily chose to take action pursuant to the content of the Request for Information. Thirty-two of the 88 items identified in the Request for Information are already being addressed under the 2011 Court Order. Of the 32 items, the Authority has completed 13 items, anticipates completing eight items by April

2018 and six items by December 2018, and expects the remaining five items to be addressed as projects in connection with Infiltration and Inflow analyses and Sewer System Evaluation Surveys. The Authority has also completed 49 of the remaining 56 items referenced in the Request for Information and is continuing to work to address the seven other remaining items, which have been adopted into the Authority's asset management program as routine operations and maintenance. The Authority continues to meet regularly with the USEPA to discuss the remaining items and to develop a corrective action plan, if necessary. The CIP includes projects to address items identified in the Request for Information. See "THE SYSTEM—Wastewater System" and "FUTURE CAPITAL REQUIREMENTS."

Other Environmental Regulations

In addition to the water and wastewater regulations discussed above, the Authority must also comply with other applicable environmental requirements, including, but not limited to, air emission standards for standby diesel generators, regulations related to above-ground and underground petroleum storage tanks, regulations under the Clean Air Act and various health and safety regulations regarding work performed by the Authority's employees (including voluntary compliance with the Occupational Health and Safety Act).

Regulation of Ratemaking

The Authority's ratemaking is regulated by the PUC, which is comprised of a seven member board appointed by the Governor and confirmed by the Legislature of Guam. The Authority and the CCU establish water and wastewater rates and charges and present them to the PUC for review and approval. The laws of Guam require that the PUC set rates that are just and fair and are adequate to provide revenues sufficient to pay for all prudent acts of owning, properly maintaining and operating the System, and may require the Authority's rates to be adjusted upwards or downwards at any time to meet these conditions.

Pursuant to the Act and the Indenture, the Government has pledged to the holders of all Bonds while any Bonds remain outstanding and not fully performed or discharged, to, among other things, maintain the rights, powers and duties of the CCU and the PUC to fulfill the terms of the Bonds and the Indenture, and maintain the rights and remedies of bondholders provided in the Act and the Indenture.

In October 2004, the PUC adopted a policy of providing rates sufficient to ensure that the Authority's debt service coverage ratio would not drop below the PUC DSCR. The PUC established the policy to ensure that the Authority would generate Net Revenues sufficient to meet the Rate Covenant and to provide sufficient ongoing equity in the System. In Fiscal Years 2010 and 2011, the Authority did not generate Net Revenues sufficient to satisfy the PUC DSCR set forth in the PUC rate policy; however, the Authority did meet the PUC DSCR in Fiscal Years 2012 through 2016. For purposes of determining compliance with the PUC DSCR, the Authority is permitted to take into account Net Revenues, as well as other available funds of the Authority, including amounts on the deposit in the Working Capital Debt Service Reserve Account established in May 2014. See "THE SYSTEM – Debt Service Coverage" and "—Additional Operating Reserves" and "HISTORICAL AND PROJECTED OPERATING RESULTS."

Historical Rate Adjustments

Since April 1, 2004, the Authority has adjusted its basic and non-lifeline water and wastewater rates 14 times. During this time period, the PUC has granted all of the Authority's rate adjustment requests, although in some cases, not in the full amount requested. These rate adjustments, their effective dates and principal reasons for such adjustments are set forth in Table 19 on the following page.

Table 19
Historical Basic and Non-Lifeline Rate Adjustments

Effective Date	Rate Adjustment		Principal Reason for Adjustment
	Water	Wastewater	
April 1, 2004	7.50%	7.50%	Base rate increase to fund projects required under the 2003 Stipulated Order.
October 14, 2004	6.50%	6.50%	PUC increased rates to fund projects required under the 2003 Stipulated Order.
February 1, 2006	3.00%	3.00%	Future financial and legal obligations.
September 1, 2007	14.24%	14.24%	Debt service for the 2005 Bonds.
April 1, 2009	6.60%	6.60%	Base rate increase due to increases in power and water purchases costs.
August 1, 2009	14.00%	14.00%	Base rate increases to provide sufficient Net Revenues to satisfy PUC DSCR.
October 1, 2010	8.00%	8.00%	Base rate increases to cover employee health insurance, cost of living allowance and property insurance.
October 1, 2011	12.77%	12.77%	Base rate increases to provide sufficient Net Revenues to satisfy PUC DSCR.
February 1, 2013	6.10%	6.10%	Base rate increases to provide sufficient Net Revenues to satisfy PUC DSCR.
November 1, 2013	15.00%	15.00%	Base rate increase to finance projects required under the 2011 Court Order, to address items identified in the Findings of Significant Deficiencies and the Request for Information and to provide sufficient Net Revenues to comply with the Rate Covenant and the PUC DSCR.
December 1, 2014	14.50%	14.50%	Base rate increase to provide sufficient Net Revenues to comply with the Rate Covenant and the PUC DSCR.
October 1, 2015	16.50%	16.50%	Base rate increase to provide sufficient Net Revenues to comply with the Rate Covenant and the PUC DSCR.
October 1, 2016	3.50%	3.50%	Base rate increase to provide sufficient Net Revenues to comply with the Rate Covenant and the PUC DSCR.
October 1, 2017	4.00%	4.00%	Base rate increase to provide sufficient Net Revenues to comply with the Rate Covenant and the PUC DSCR.

Source: Guam Waterworks Authority.

In January 2004, the Authority filed its first rate petition with the PUC, which resulted in a 7.5% increase in basic and non-lifeline rates, effective in April 2004. The PUC agreed to continue to review information as it became available relative to the Authority's financing plans and the related costs. The continued review resulted in an additional rate increase of 6.5% that took effect in October 2004 and the creation of a rate plan that allows the Authority to incrementally increase rates in anticipation of the debt service associated with System rehabilitation. The PUC also granted an additional surcharge to fund health insurance benefits for the Authority's retirees ("Legislative Surcharge" or, as it is sometimes referred to, the "Retirement Benefits Surcharge"), effective April 1, 2004. See "THE SYSTEM—Other Post-Employment Benefits."

In July 2009, the PUC approved a five-year rate plan (the "2009-13 Rate Plan"), which included scheduled rate increases through Fiscal Year 2013, subject to annual review and approval by the PUC.

In February 2013, the CCU adopted the new five-year rate plan, which included proposed scheduled rate adjustments for basic and non-lifeline and lifeline water and wastewater rates for Fiscal Years 2014 through 2018 (the “2014-18 Rate Plan”), representing a compounded rate increase through Fiscal Year 2018 of approximately 71%. The 2014-18 Rate Plan also included rate adjustments for the Legislative Surcharge. On October 29, 2013, the PUC approved the scheduled rate adjustments set forth in the 2014-18 Rate Plan. The actual implementation of the annual rate adjustments was subject to the PUC’s annual review and prior approval, based on the Authority’s actual financial performance and needs. The PUC approved and implemented the proposed rate increases in full for Fiscal Years 2014, 2015 and 2017, and approved and implemented a lower rate increase than the proposed amount in Fiscal Year 2016. The adopted basic and non-lifeline rate adjustments for Fiscal Years 2014, 2015, 2016 and 2017 are set forth in Table 19 above.

In September 2016, the PUC approved a 3.5% rate increase for basic and non-lifeline rate adjustments for Fiscal Year 2017 and a Legislative Surcharge of 3.27%. In September 2017, the PUC approved a 4.0% rate increase for basic and non-lifeline rate adjustments for Fiscal Year 2018 and a Legislative Surcharge of 3.75%. The Authority expects development of the next rate plan to follow the completion of the master plan update, expected in early 2018.

The Authority expects that the revenues generated by the rate adjustments set forth in the 2014-18 Rate Plan will provide additional funds for the Authority to undertake revenue funded capital improvement projects, including projects required under the 2011 Court Order and to address items identified in the Findings of Significant Deficiencies and the Request for Information, to ensure compliance with the Rate Covenant and the PUC DSCR and to allow for more gradual increases in Authority rates in the future, thereby minimizing to the extent possible sudden rate increases for the Authority’s ratepayers. See “HISTORICAL AND PROJECTED OPERATING RESULTS.”

The PUC had previously granted a surcharge rate increase to the Authority (referred to as the “Navy/GPA Surcharge”) to enable the payment of a large debt owed to the GPA, amounts owed to the PUC and Guam Telephone Authority, to pay for ongoing regulatory fees to the PUC and, eventually, to pay the debt to the United States Treasury for amounts owed to the Navy. As of July 2012, the Navy/GPA Surcharge was discontinued, as the Authority’s obligations to the Navy and GPA had been paid in full.

FUTURE SYSTEM CAPITAL REQUIREMENTS

Capital Improvement Program

The Authority’s Capital Improvement Program for Fiscal Years 2016 through 2020, in compliance with the 2011 Court Order, is described below. The Authority estimates the capital cost of implementing the entire CIP for Fiscal Years 2016-2020 to be approximately \$282.1 million.

The Authority expects to finance the five-year CIP with a combination of proceeds of previously issued bonds and of Additional Bonds expected to be issued in Fiscal Year 2018, Authority operating revenues, System Development Charge revenues, USEPA State Revolving Fund grants and other grants. During the last few Fiscal Years, the Authority has received a significant amount of USEPA State Revolving Fund grants to help finance a portion of its Capital Improvement Program, as shown in the Table 20 below.

(Remainder of Page Intentionally Left Blank)

Table 20
USEPA State Revolving Fund Grants

Grant No.	Description	Award Date	Amount
96902611	Original Award	September 13, 2010	\$ 2,000,000
	Amendment #1	October 14, 2011	11,151,302
	Amendment #2	March 2, 2012	6,767,588
	Amendment #3	October 2, 2012	8,876,341
	Amendment #4	September 26, 2013	8,279,959
	Amendment #5	September 8, 2014	1,185,927
	Amendment #6	October 20, 2016	-- ⁽¹⁾
96902615	Original Award	September 8, 2014	8,138,073
	Amendment #1	October 2, 2015	9,261,700
	Amendment #2	October 19, 2016	-- ⁽¹⁾
96902617	Original Award	October 3, 2016	8,575,000
		August 21, 2017	8,948,000
Total			\$73,183,890

⁽¹⁾ Amendments reflect revisions to grant conditions and do not reflect any changes to award amounts.
Source: Guam Waterworks Authority.

See “CERTAIN INVESTMENT CONSIDERATIONS – Implementation of the Capital Improvement Program.”

Table 21 sets forth the allocation of projected CIP project costs among (i) water production, treatment, distribution and storage, (ii) wastewater collection and treatment, (iii) electrical, and (iv) general plant and miscellaneous, as well as the projected sources of funding for such projects.

Table 21
Capital Improvement Program and Sources of Funds
Fiscal Years 2016 through 2020
(\$000)

	2016	2017	2018	2019	2020	Total
Capital Improvement Program						
Water Production, Treatment, Distribution and Storage	\$44,421	\$36,490	\$55,518	\$28,250	\$10,000	\$174,679
Wastewater Collection and Treatment	12,335	63,179	12,246		-	87,760
Electrical, Including Monitoring and Control	3,911	3,150	2,914	-	-	9,975
General Plant and Miscellaneous	3,200	4,045	1,200	1,200	-	9,645
Totals	<u>\$63,867</u>	<u>\$106,864</u>	<u>\$71,878</u>	<u>\$29,450</u>	<u>\$10,000</u>	<u>\$282,058</u>
Sources of Funds						
Proceeds of the 2010 Bonds	5,074	-	-	-	--	\$ 5,074
Proceeds of the 2013 Bonds	\$11,922	\$383	-	-	-	12,305
Proceeds of the 2016 Bonds	34,149	63,986	\$23,378	-	-	121,513
Proceeds of the 2018 Bonds	-	-	29,000	\$28,250	\$10,000	67,250
USEPA State Revolving Fund Grants	3,475	17,000	8,000	-	-	28,475
SDCs	3,300	5,994	\$ 500	-	-	9,794
Other Grants	948	-	-	-	-	948
Internally Funded CIP	5,000	19,500	11,000	1,200	-	36,700
Totals	<u>\$63,867</u>	<u>\$106,864</u>	<u>\$71,878</u>	<u>\$29,450</u>	<u>\$10,000</u>	<u>\$282,058</u>

Source: Guam Waterworks Authority.

Major water production, treatment and distribution projects in the CIP include construction of additional reservoirs to increase water storage capacity, completion of the meter replacement program, replacement of failing, leaking and aging pipelines, possible adjustment of pressure zones, and development of new water production wells. Major wastewater collection and treatment projects in the CIP include construction of new wastewater treatment facilities that will incorporate provisions for redundancy to improve reliability, meet existing and future flow capacity and/or reliably achieve regulatory compliance. The CIP also includes electrical control and monitoring upgrades to the System and other miscellaneous improvements.

The CIP does not include (i) upgrades or projects to address the secondary treatment requirements under the NPDES permits for Northern District WWTP and the Hagåtña WWTP or (ii) any projects related to the proposed U.S. military build-up described below under “—Proposed U.S. Military Relocation and Installations.”

Proposed U.S. Military Relocation and Installations

In late July 2010, the Joint Guam Program Office of the Department of the Navy released its Final Environmental Impact Statement (the “EIS”) pertaining to the proposed U.S. military build-up on Guam, and in September 2010 the DoD issued its Record of Decision pertaining to the EIS. At the time the EIS was released, it was anticipated that the military build-up would have three major parts: relocation of part of the Third Marine Expeditionary Force from Okinawa, Japan, creation of the infrastructure for an aircraft carrier berthing, and installation of an Army Air and Missile Defense Task Force. Together, these were anticipated to add approximately 32,000 permanent residents to the island, and to create a peak population increase of approximately 79,000 people in 2014.

The proposed U.S. military build-up subsequently has been delayed and now is not expected to occur until after 2018. In addition, the expected size of the build-up has decreased. In particular, the relocation of part of the Third Marine Expeditionary Force from Okinawa, Japan, is now expected to result in the relocation of approximately 5,000 U.S. Marines with approximately 1,300 dependents over a 13-year period, rather than the approximately 8,600 U.S. Marines and 9,000 dependents originally expected. In April 2014, the DoD released a draft Supplemental Environmental Impact Statement (2012 Roadmap Adjustments), which identified potential impacts associated with several alternatives for the cantonment/family housing component of this relocation, as well as for the live firing training range complex. The final Supplemental Environmental Impact Statement was completed in July 2015, and the final Record of Decision was issued in August 2015. Even with the decreased numbers of U.S. Marines and dependents, the DoD estimates that the relocation will result in increased wastewater generation of approximately 1.2 MGD and increased demand for potable water of approximately 1.7 MGD. As discussed above, the Record of Decision acknowledges that these increases would result, respectively, in a localized significant indirect impact on the aquifer lens and in a significant indirect impact on the Northern District wastewater system. To help address these concerns, the DoD, through the OEA, has awarded the Authority a grant to update and expand aquifer lens monitoring efforts and provide secondary treatment and related improvements at the Northern District WWTP.

The Authority does not currently expect the proposed U.S. military build up to materially affect the Authority’s future capital requirements and has not included any capital improvements relating to the proposed U.S. military build-up in the CIP. Based on the Memorandum of Understanding (the “MOU”) entered into in 2010 by the Authority and the DoD, the Authority expects that the DoD will be responsible for all direct and indirect impacts resulting from any build-up in order to avoid rate pressure on the Authority’s civilian customers. Although the MOU does not bind either party to any financial commitments, the MOU does reflect that, among other things, the agreed-upon costs associated with meeting DoD requirements will be allocated to and paid for by the DoD through a utility agreement with the Authority. The cost of the projects described above is currently estimated to be approximately \$173.2 million. The DoD has offered to provide funding to initiate these projects and to meet the proposed schedule for the build-up. The receipt of such federal funding, however, is subject to a number of conditions, including appropriation. On August 26, 2016, the DoD, through the OEA, awarded grants totaling \$55.3 million to initiate projects described above and to meet the proposed schedule for the build-up. On November 7, 2017, the Authority received an additional grant award totaling \$117.9 million for construction of wastewater improvements related to the build-up.

See APPENDIX A—“CERTAIN INFORMATION REGARDING THE TERRITORY OF GUAM—Military Activity.”

HISTORICAL AND PROJECTED OPERATING RESULTS

Historical Operating Results

The historical operating results for Fiscal Years 2012 through 2016, unaudited operating results for Fiscal Year 2017 and projected operating results for Fiscal Years 2018 through 2020 are addressed in this section to allow a projection of debt service coverage in future years.

Table 22 below sets forth the Authority’s historical operating results and debt service coverage for Fiscal Years 2012 through 2016. The information in Table 22 has been extracted from the Authority’s audited financial statements. The Authority has elected to restate its financial statements for Fiscal Year 2014 to reflect the implementation of GASB 68. As presented in Table 22, the retiree and healthcare operating expenses for Fiscal Year 2012 reflect adjustments for certain costs related to retiree cost-of-living-adjustment payments that were not made previously in debt service coverage calculations for such Fiscal Years. See Note 5 to Table 22.

See APPENDIX B—“FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS’ REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015,” Note 2.

(Remainder of Page Intentionally Left Blank)

Table 22
Historical Operating Results and Debt Service Coverage
Fiscal Years 2012 through 2016 ⁽¹⁾
(\$000)

	2012	2013	2014	2015	2016
Operating Revenues:					
Water Revenues ⁽¹⁾	\$39,807	\$45,349	\$49,899	\$56,746	\$64,340
Wastewater Revenues ⁽¹⁾	23,935	25,828	27,904	32,679	37,229
Additional Revenues ⁽²⁾	3,115	2,153	2,712	2,798	2,898
Other Revenues ⁽³⁾	701	462	574	707	520
Total Operating Revenues	\$67,558	\$73,792	\$81,089	\$92,930	\$104,987
Operating Expenses:					
Water Purchases	\$5,263	\$4,571	\$5,179	\$5,099	\$6,374
Power Purchases	17,016	17,508	16,426	14,026	11,226
Salaries and Wages	18,891	20,059	19,176	19,720	18,559
Contractual ⁽⁴⁾	3,069	3,734	2,681	2,793	4,117
Retiree and Healthcare ⁽⁵⁾	1,958	2,098	1,995	2,907	2,764
Administrative and General ⁽⁶⁾	5,423	6,960	7,729	8,827	9,608
Total Operating Expenses	\$51,620	\$54,930	\$53,186	\$53,372	\$52,648
Amounts Available for Debt Service					
Net Operating Revenues	\$15,938	\$18,862	\$27,903	\$39,558	\$52,339
Other Income (Expense) ⁽⁷⁾	10	11	6	11	15
Current Revenues Available for Debt Service	\$15,948	\$18,873	\$27,909	\$39,569	\$52,354
Indenture Debt Service Coverage Covenant:					
Current Revenues Available for Debt Service	\$15,948	\$18,873	\$27,909	\$39,569	\$52,354
Debt Service on Outstanding Bonds ⁽⁸⁾	\$7,708	\$7,704	12,592	13,970	22,225
Debt Service Coverage (1.25x) ⁽⁹⁾	2.07	2.45	2.22	2.83	2.36
PUC DSCR Policy:					
Current Revenues Available for Debt Service	\$15,948	\$18,873	\$27,909	\$39,569	\$52,354
Working Capital Reserve Available for Debt Service	--	--	710	4,585	11,186
Transfer to Working Capital Debt Service Reserve	--	--	-	--	--
Adjusted Current Revenues Available for Debt Service	\$15,948	\$18,873	\$28,619	\$44,154	\$63,540
Debt Service on Outstanding Bonds ⁽⁸⁾	\$7,708	\$7,704	\$12,592	\$13,970	\$22,225
PUC DSCR (1.75x) ⁽¹⁰⁾	2.07	2.45	2.27	3.16	2.86

⁽¹⁾ Derived from the Authority's audited financial statements.

⁽²⁾ Includes Legislative Surcharge revenues.

⁽³⁾ Includes, among other things, revenues from illegal connection fees, installation fees, reconnection fees, insufficient fund check fees, meter tampering charges, direct service fees, miscellaneous fees, trouble report water, rent (GTA lease), miscellaneous administrative fees, special readings, inspection fees, verification time tests, bench tests, meter relocation, planning and specifications and miscellaneous sewer revenues.

⁽⁴⁾ Includes, among other things, audit, meter reading and computer maintenance, engineering, legal services, testing and miscellaneous other fees and expenses.

⁽⁵⁾ Includes supplemental retiree payments and cost of living adjustments.

⁽⁶⁾ Includes sludge removal, chemicals, materials and supplies, building and equipment rentals, transportation expenses, telephone and communications expenses, claims, insurance, training, insurance, regulatory and bad debt expenses.

⁽⁷⁾ Includes interest earnings on non-bond accounts.

⁽⁸⁾ Amounts shown are net of capitalized interest.

⁽⁹⁾ Represents the Authority's covenant to provide rates sufficient to ensure that its debt service coverage ratio equals to at least 1.25x the aggregate annual debt service. See "THE SYSTEM—Debt Service Coverage." Calculated based on Current Revenues Available for Debt Service divided by Debt Service on Outstanding Bonds.

⁽¹⁰⁾ Represents the PUC's policy of providing rates sufficient to ensure that the Authority's debt service coverage ratio equals to at least 1.75x the aggregate annual debt service. See "THE SYSTEM—Debt Service Coverage." Calculated based on Current Revenues Available for Debt Service divided by Debt Service on Outstanding Bonds. For purposes of determining compliance with the PUC DSCR, the Authority may take into account amounts on deposit in the Working Capital Debt Service Reserve Account.

Source: Guam Waterworks Authority.

Projected Operating Results

Table 23 below sets forth operating results and debt service coverage based on unaudited financial information for Fiscal Year 2017 and projected operating results and debt service coverage for Fiscal Years 2018 through 2020. Projected operating results for Fiscal Year 2018 are based on the 2014-18 Rate Plan approved by the PUC in October 2013.

The Authority does not as a matter of course make public projections as to future sales, earnings, or other results. However, the Authority has prepared the prospective financial information as set forth in Table 23 to provide projected water sales and wastewater revenues, cost of services, operating results and debt service coverage. The accompanying prospective financial information was not prepared with a view toward complying with the guidelines established by the American Institute of Certified Public Accountants with respect to prospective financial information, but, in the view of the Authority's management, was prepared on a reasonable basis, reflects the best currently available estimates and judgments, and presents, to the best of management's knowledge and belief, the expected course of action and the expected future financial performance of the Authority. However, this information is not fact and should not be relied upon as being necessarily indicative of future results, and readers of this Official Statement are cautioned not to place undue reliance on the prospective financial information. Neither the Authority's independent auditors nor any other independent accountants have compiled, examined, or performed any procedures with respect to the prospective financial information contained herein, nor have they expressed any opinion or any other form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, the prospective financial information. The assumptions and estimates underlying the prospective financial information are inherently uncertain and, though considered reasonable by the management of the Authority as of the date of its preparation, are subject to a wide variety of significant business, economic, and risks and uncertainties that could cause actual results to differ materially from those contained in the prospective financial information. Accordingly, there can be no assurance that the prospective results are indicative of the future performance of the Authority or that actual results will not differ materially from those presented in the prospective financial information. Inclusion of the prospective financial information in this Official Statement should not be regarded as a representation by any person that the results contained in the prospective financial information will be achieved.

(Remainder of Page Intentionally Left Blank)

Table 23
Actual and Projected Operating Results and Debt Service Coverage
Fiscal Years 2017 through 2020
(\$000)

	Actual		Projected	
	2017^(*)	2018^(**)	2019	2020
Operating Revenues:				
Water Revenues ⁽¹⁾	\$ 63,626	\$ 68,918	\$ 72,444	\$ 76,444
Wastewater Revenues ⁽¹⁾	37,005	38,739	40,806	42,692
Additional Revenues ⁽²⁾	3,188	3,503	3,630	3,795
Other Revenues ⁽³⁾	431	692	692	692
Total Operating Revenues	<u>\$104,250</u>	<u>\$111,852</u>	<u>\$117,572</u>	<u>\$123,623</u>
Operating Expenses:				
Water Purchases ⁽⁴⁾	\$ 7,309	\$ 8,653	\$ 8,783	\$ 8,915
Power Purchases ⁽⁴⁾	12,076	12,696	12,886	13,080
Salaries and Wages ⁽⁵⁾	22,043	26,215	26,696	27,186
Contractual ⁽⁶⁾	4,218	4,479	4,546	4,614
Retiree and Healthcare ⁽⁷⁾	2,783	2,880	2,969	3,061
Administrative and General ⁽⁸⁾	9,884	12,867	13,060	13,256
Total Operating Expenses	<u>\$58,314</u>	<u>\$67,791</u>	<u>\$68,941</u>	<u>\$70,112</u>
Amounts Available for Debt Service:				
Net Operating Revenues	\$45,936	\$44,061	\$48,631	\$53,512
Other Income (Expense) ⁽⁹⁾	120	106	106	106
Current Revenues Available for Debt Service	<u>\$46,056</u>	<u>\$44,167</u>	<u>\$48,737</u>	<u>\$53,618</u>
Senior Lien Debt Service: ⁽¹⁰⁾				
2014 Bond Refunding (2005 Bonds)	\$ 7,165	\$ 7,170	\$ 7,208	\$ 7,205
2010 Series Revenue Bonds	8,065	1,987	1,985	1,990
2013 Series Revenue Bond	9,332	9,332	9,332	12,027
2016 Series Revenue Bond	-	5,394	7,166	7,586
2017 Bond Refunding (2010 Bonds)	-	2,856	5,678	5,368
2018 Series Revenue Bond	-	-	-	3,194
Total Senior Lien Debt Service	<u>\$24,562</u>	<u>\$26,739</u>	<u>\$31,369</u>	<u>\$37,370</u>
Indenture Debt Service Coverage Covenant:				
Current Revenues Available For Debt Service	\$46,056	\$44,167	\$48,737	\$53,618
Indenture Debt Service Coverage (1.25x) ⁽¹¹⁾	1.88	1.65	1.55	1.43
PUC Debt Service Coverage Policy:				
Current Revenues Available for Debt Service	\$46,056	\$44,167	\$48,737	\$53,618
Working Capital Reserve Available for Debt Service ⁽¹²⁾	11,187	11,187	12,987	12,987
Transfer to Working Capital Debt Service Reserve	-	(1,800)	-	-
Adjusted Current Revenues Available for Debt Service	<u>\$57,243</u>	<u>\$53,554</u>	<u>\$61,724</u>	<u>\$66,605</u>
PUC Debt Service Coverage (1.75x) ⁽¹³⁾	2.33	1.82	1.97	1.78
Subordinate Debt Service:				
Bank of Guam \$15M Refinance	\$3,417	\$3,417	\$3,417	\$2,848
Total Subordinate Lien Debt Service	<u>\$3,417</u>	<u>\$3,417</u>	<u>\$3,417</u>	<u>\$2,848</u>
Amount Available Prior to Transfers	\$18,077	\$14,011	\$13,951	\$13,400
Transfers: ⁽¹⁵⁾				
Transfers to Working Capital Debt Service Reserve	-	\$(1,800)	-	-
Transfers to Working Capital O&M Reserve	\$(9,979)	(3,200)	\$(5,000)	\$(3,000)
Changes to Working Capital	(2,085)	(2,237)	(2,351)	(2,472)
Total Transfers	<u>\$ (11,064)</u>	<u>\$ (7,237)</u>	<u>\$ (7,351)</u>	<u>\$ (5,472)</u>
Interest Income	\$120	\$106	\$106	\$106
Amount Available for Capital Improvement	\$7,134	\$6,880	\$6,706	\$8,034
Internally Funded CIP	\$4,249	\$11,000	\$6,000	\$6,000

- (*) Information for Fiscal Year 2017 is based on actual unaudited data.
- (**) Fiscal Year 2018 is based on a 4% rate increase approved by the PUC effective October 1, 2017.
- (1) Fiscal Year 2019 through Fiscal Year 2020 rate increases are projected at 5% respectively. Fiscal Year 2019 also includes a 5% increase for the residential lifeline rate.
- (2) Includes Legislative Surcharge revenues based on approved rates of 3.70% and 3.75% in Fiscal Year 2017 and Fiscal Year 2018 respectively. Fiscal Year 2019 through Fiscal Year 2020 are projected at 3.70% and 3.65% respectively.
- (3) Includes, among other things, illegal connection, installation and reconnection fees. Assumed no growth in Fiscal Year 2019 through Fiscal Year 2020.
- (4) Fiscal Year 2019 through Fiscal Year 2020 are projected at 1.5% inflationary rate.
- (5) Assumed FTE count reaches 395 by Fiscal Year 2018. Fiscal Year 2017 through Fiscal Year 2020 assumed \$2.2 million additional pension adjustment (GASB 68).
- (6) Includes, among other things, audit, meter reading and computer maintenance, legal services, lab testing and miscellaneous other fees and expenses. Fiscal Year 2019 through Fiscal Year 2020 are projected at 1.5% inflationary rate.
- (7) Includes retirees' medical, dental and life insurance, supplemental payments and cost of living allowance.
- (8) Includes sludge cost, chemicals, materials and supplies, building and equipment rentals, transportation expenses, telephone and communications expenses, claims, insurance, training, insurance, regulatory and bad debt expenses. Fiscal Year 2019 through 2020 are projected at 1.5% inflationary rate.
- (9) Includes interest earnings on non-bond accounts.
- (10) Amounts shown are net of capitalized interest.
- (11) Represents the Authority's covenant to provide rates sufficient to ensure that its debt service coverage ratio equals to at least 1.25x the aggregate annual debt service. See "THE SYSTEM—Debt Service Coverage." Calculated based on Current Revenues Available for Debt Service divided by Debt Service on Outstanding Bonds.
- (12) For purposes of determining compliance with the PUC DSCR, the Authority may take into account amounts on deposit in the Working Capital Debt Service Reserve Account.
- (13) Represents the PUC's policy of providing rates sufficient to ensure that the Authority's debt service coverage ratio equals to at least 1.75x the aggregate annual debt service. See "THE SYSTEM—Debt Service Coverage." Calculated based on Adjusted Current Revenues Available for Debt Service divided by Debt Service on Outstanding Bonds.

Source: Guam Waterworks Authority.

CERTAIN INVESTMENT CONSIDERATIONS

The following discussion of considerations is not meant to be an exhaustive list of the risks associated with the purchase of the 2017 Bonds and does not necessarily reflect the relative importance of the various risks. Potential purchasers of the 2017 Bonds are advised to consider the following factors, among others, and to review all of the other information in this Official Statement in evaluating whether to purchase the 2017 Bonds. Any one or more of the risks discussed, and others, could lead to a decrease in the market value and/or in the ability to sell the 2017 Bonds in the secondary market. No assurance can be given that other risk factors will not become material in the future. The 2017 Bonds may not be suitable investments for all persons. Prospective purchasers should be able to evaluate the risks and merits of an investment in the 2017 Bonds and should confer with their own legal and financial advisors before considering a purchase of the 2017 Bonds.

General

The principal of and interest on the Bonds, including the 2017 Bonds, is payable pursuant to the Indenture solely from the Revenues. The ability to pay debt service on the Bonds, including the 2017 Bonds, will depend on the receipt of sufficient Revenues, pledged as payment for the Bonds. The Authority's ability to generate Revenues is dependent on a number of factors. To the extent the Authority is unable to make up for Revenue shortfalls, the Authority's ability to pay debt service on the Bonds, including the 2017 Bonds, may be adversely affected.

Limitations on Remedies

The 2017 Bonds are not subject to acceleration under any circumstances or for any reason, including without limitation on the occurrence or continuance of an Event of Default. Upon the occurrence or continuation of an Event of Default, a Bondholder would only be entitled to principal and interest payments on the 2017 Bonds as they come due. Under certain circumstances, Holders of the 2017 Bonds may not be able to pursue certain remedies or enforce covenants contained in the Indenture. The remedies available to the Holders of the 2017 Bonds upon an Event of Default under the Indenture are in many respects dependent upon judicial actions which are often subject to discretion and delay. Under existing law, the remedies specified by the Indenture and the Bonds may not be readily available or may be limited. The various legal opinions to be delivered concurrently with the delivery of the 2017

Bonds (including Bond Counsel's approving opinion) will be qualified, as to the enforceability of the various legal instruments, by limitations imposed by insolvency or other laws affecting the rights of creditors generally.

The federal Bankruptcy Code dictates which entities are eligible to seek relief as debtors under each chapter of that federal law. Neither the Government of Guam nor the Authority are legally able to seek bankruptcy relief under current federal law. No proposed debt restructuring legislation has been introduced in the Legislature of Guam, nor to the Authority's knowledge is any such legislation being contemplated or discussed, and the Governor is opposed to enacting any such legislation. The Authority can neither predict nor provide any assurances regarding any future changes in law or legislative proposals.

Uncertainties of Projections and Assumptions

This Official Statement contains certain assumptions, estimates, projections and other forward-looking statements. Demonstration of compliance by the Authority with certain of the covenants contained in the Indenture also may be based upon assumptions, estimates and projections. Actual results, however, may differ, perhaps materially, from those projected. In addition, certain assumptions with respect to future business and financing decisions, including the decision to undertake, or to postpone or cancel, future capital improvements of the System may not occur and are subject to change. No representation is made or intended, nor should any representation be inferred, with respect to the existence of any particular future set of facts or circumstances, and prospective purchasers of the 2017 Bonds are cautioned not to place undue reliance upon any forecasts, estimates, plans or projections or requirements for forecasts or projections. If actual results are less favorable than the results projected or if the assumptions used in preparing projections prove to be incorrect, the ability of the Authority to make timely payment of the principal of and interest on the Bonds, including the 2017 Bonds, may be materially and adversely affected.

Guam Economy; Impact of Tourism and Military Presence

The Authority's ability to generate Revenues depends in large measure, on the local economy, which is heavily dependent on tourism and the U.S. military presence, both of which are dependent on world economic, social and political events.

Tourism represents a significant share of the economic activity on Guam. Historically, the tourism industry, both worldwide and on Guam, has correlated closely with the state of the world's economies and levels of real disposable income. A weak economy, war, epidemic outbreaks, or the threat of terrorist activity, among other influences that are beyond the Government's control, can adversely affect the tourism industry. Also, currency exchange rates, trade balances, political relationships, and conflicts within and between countries are increasingly important influences on tourism. Economic conditions in Japan, South Korea and throughout the Pacific Rim, and the resulting effect on overseas travel from these countries, are a major determinant of tourism on Guam. The Japanese government has encouraged international travel as a means of reducing its trade surplus and Guam has benefited directly from this policy. Any change in Japan's international travel policy could affect tourism in Guam. Tourism, particularly from Japan and South Korea, where, in Fiscal Year 2017, approximately 43% and 42% of visitors, respectively, to Guam originate, represents a significant share of the economic activity on Guam. A significant downturn in tourism, including a downturn related to Japanese or South Korean economic conditions or social policies, could result in reduced revenues from hotels and other related tourist facilities. For example, following the earthquake and tsunami in Japan on March 11, 2011, the number of tourists visiting Guam from Japan in Fiscal Year 2011 dropped by approximately 7.2% compared to Fiscal Year 2010. Although visitor arrivals from Japan increased in Fiscal Year 2012, increasing 10.2% over Fiscal Year 2011, no assurance can be given that Guam will not experience a similar or greater reduction in the number of visitors from Japan, South Korea or other visitor markets as a result of other natural disasters or other economic, political or societal conditions. See "DEMOGRAPHIC AND ECONOMIC INFORMATION—Guam Tourist Industry" in APPENDIX A. In addition, lower levels of employment tend to reduce the revenue available to the Authority. To the extent the Authority is unable to make up for revenue shortfalls, the ability to pay debt service on the Bonds may be adversely affected.

The level of Revenues is also affected by the U.S. military presence on Guam. The U.S. military presence also affects economic activity on Guam in various ways, both directly, through individuals' demand for commercial, construction and other services, and expansions in the U.S. military presence, such as the expansions expected to

occur over the next several years, can have a direct, positive impact on the Guam economy by spurring new economic activity and attracting visitors to Guam. However, economic, geopolitical, and other influences that are beyond the Government's and the Authority's control might result in a decision by the U.S. government to reduce the existing presence of the U.S. military on Guam or forego some or all of the planned enhancements to its presence on Guam. For example, in late July 2010, the Joint Guam Program Office of the Department of the Navy released its Final Environmental Impact Statement (the "EIS") pertaining to the proposed U.S. military build-up on Guam. At the time the EIS was released, it was anticipated that the military build-up would have three major parts: relocation of part of the Third Marine Expeditionary Force from Okinawa, Japan, creation of the infrastructure for an aircraft carrier berthing, and installation of an Army Air and Missile Defense Task Force. Subsequent to 2010, however, Guam began to experience a decrease in military personnel as a result of the delay in the relocation of the Third Marine Expeditionary Force from Okinawa and Iwakuni, Japan to Guam. Concerns regarding the high cost of the relocation and delays in relocating U.S. military personnel and facilities currently within Japan, among other things, have extended the implementation timeframe for the relocation of the U.S. Marines from Japan. The proposed U.S. military build-up now is not expected to occur until after 2018. In addition, the expected size of the build-up has decreased. In July 2015, the Department of Defense released the Supplemental Environmental Impact Statement (the "SEIS"), which identified potential impacts associated with several alternatives for the cantonment/family housing component of this relocation. The Record of Decision, which identified the final locations for additional bases and facilities to accommodate the U.S. Marines, was issued in August 2015. In the event that the U.S. military changes its current plans with respect to staffing and other strategic improvements on Guam, expected benefits may not be realized and the economy could be adversely affected. In the event that the U.S. military elects to reduce or eliminate its presence on Guam, the economy could decline.

In addition, it is expected that the anticipated relocation of U.S. Marines from Okinawa, Japan, to Guam will generate a significant amount of additional construction activity. Although Guam's construction industry has time to develop its capacity in anticipation of this significant increase in activity, it is possible that much of the work will be awarded to outside developers and project managers. Although the relocation of U.S. Marines to Guam is expected to reap benefits for the Guam economy in the short-term, the long-term benefits are not likely to be as great if the construction activity is largely completed by non-local firms. Furthermore, the denial of nearly all H-2B visas in Fiscal Year 2017 has resulted in a labor shortage and a potential economic downturn for Guam.

See APPENDIX A—"CERTAIN INFORMATION REGARDING THE TERRITORY OF GUAM" for more information about the tourism industry, the U.S. military presence and the denial of H-2B visas.

Uncertainties Relating to Political and Military Actions

Guam is approximately 3,800 miles west-southwest of Honolulu, Hawaii, the nearest major city of the United States. The significant United States military presence on Guam, its distance from locations in the United States and its location in relation to potential sites of political and military conflict in Asia make Guam both a location of great value to the United States militarily and a potential site of military conflict. Political events in Asia may create the risk of conflict for the region in general and, in some cases, for Guam. In response to recent threats by North Korea to launch ballistic missile attacks against U.S. military targets, including targets on Guam, the U.S. military deployed a missile defense system to Guam in 2013. Although as of September 2017, these threats do not appear to have materially impacted the cumulative number of tourists visiting Guam, no assurance can be given that these threats and any future military actions will not have an adverse effect on Guam tourist activity and, as a result, the availability of Revenues sufficient to pay debt service on the Bonds, including the 2017 Bonds.

2011 Court Order with the USEPA

The 2011 Court Order, which is being administered directly by USEPA through its regional office in San Francisco, contains a comprehensive list of requirements, including management, operations, financial administration, facilities construction and rehabilitation and training requirements to be completed in accordance with a strict schedule. Failure of the Authority to meet the scheduled requirements may result in fines being assessed against the Authority. Since the issuance of the 2011 Court Order, the Authority has not been assessed any fines for missed deadlines or received any formal notification regarding any such fines. If the Authority misses any deadlines in the future, the USEPA may assess fines. See "REGULATORY ENVIRONMENT—Environmental Regulations—*The 2003 Stipulated Order and the 2011 Court Order.*"

Typhoons and Earthquakes

Because of its location on the southern end of the Marianas Islands chain, Guam is exposed to periodic typhoons, earthquakes and floods. Typhoons and floods have caused significant damage to the Authority's facilities in the past. Damage to the Authority's System from typhoons and flooding has included sewage spills at pump stations and collection piping, collapse of collection piping, and failure of treatment plant equipment. Damage from floods and typhoons have also damaged facilities of GPA, which provide electric power to the Authority's System. To mitigate weather related service outages due to power interruption, back-up generators have been installed at a majority of the Authority's water and wastewater pump stations. Typhoons and other significant storm events and other natural disasters occur periodically and can cause extensive damage to facilities and infrastructure, including to the Authority's System. The Authority has previously reported property losses resulting from storms damage.

Guam has established building codes that are specifically designed to ensure that structures be able to sustain strong typhoon winds and earthquakes. Existing Authority structures were designed to satisfy the building codes as then in effect; new structures, and existing structures undergoing structural rehabilitation, are designed or upgraded to comply with Guam's current building codes. The Authority's above-ground facilities are generally housed in concrete buildings designed to withstand typhoon conditions and its underground facilities are rarely affected by high winds or intense rain. Earthquakes have caused minimal damage to Authority facilities in the past, but damage to the underground pipe network may go unnoticed.

Although the United States Federal Emergency Management Agency ("FEMA") has historically provided disaster relief assistance after typhoon damage, there can be no assurance that future typhoons and/or earthquakes will not cause significant damage to the System, or that FEMA will provide disaster relief assistance if significant damage is experienced. There can also be no assurance that, even with FEMA assistance, damage that results from future typhoons or earthquakes will not adversely affect the operation of the System for an extended period of time and, as a result, Revenues.

Rates

The Authority has covenanted in the Indenture to at all times, fix, prescribe and collect rents, fees and charges in connection with the services and facilities funded by the System which will be sufficient to comply with the Rate Covenant. The Indenture provides that if Revenues and Net Revenues in a Fiscal Year are insufficient to satisfy the Rate Covenant for such Fiscal Year, the Authority is required to promptly employ a Consulting Engineer to make recommendations as to a revision of rates, fees and charges or the methods of operation of the System, and to revise such rates, fees and charges or methods of operation and to take such other actions as will be in conformity with such recommendations, subject to applicable requirements or restrictions imposed by law and subject to a good faith determination of the Board that such recommendations, in whole or in part, are in the best interests of the Authority, the Owners and each Credit Provider, if any. The ability of the Authority to increase rates is subject to limitation, including review and approval by the PUC. Rates for water and wastewater services are regulated by the PUC. The 2014-18 Rate Plan approved by the PUC included scheduled rate increases intended to provide sufficient Revenue to operate and maintain the System efficiently, to finance capital improvements necessary to comply with regulatory requirements, to meet the Authority's financial obligations and to satisfy the Debt Service Coverage Requirement and the PUC DSCR. Furthermore, although the Authority expects to develop a new rate plan following the completion of the Authority's master plan update (expected in early 2018), no assurance can be given that such rate plan will be completed and approved by the CCU and the PUC before the end of Fiscal Year 2018 or that the rates approved by the PUC pursuant to such rate plan will provide Revenues sufficient to operate and maintain the System efficiently, to comply with regulatory requirements, to meet the Authority's financial obligations and to satisfy the applicable debt service coverage requirements. Although the PUC has historically approved rate adjustments requested by the Authority, no assurance can be given that the PUC will approve future rate adjustments requested by the Authority. See "SECURITY AND SOURCES OF PAYMENT FOR THE BONDS—Rate Covenant," "REGULATORY ENVIRONMENT—Regulation of Ratemaking" and "—Historical Rate Adjustments," and "THE SYSTEM—Debt Service Coverage."

Self-Insurance

The Authority has historically had a policy of self-insuring potential risks relative to its property, plant and equipment, as well as for general liabilities claims. The Authority, with the assistance of a consultant, has assessed its insurance needs (for liability, property and vehicle) and has obtained insurance through a competitive bidding process and is no longer self-insured.

Government Regulation

The federal and local governments significantly regulate the operations of the Authority. Regulations and conditions affecting the acquisition, development, ownership and operation of the System could increase the operating expenses of the System or could otherwise have a material adverse effect on the operations and financial condition of the Authority.

Implementation of Capital Improvement Program

The Authority's CIP for the 2016-2020 Fiscal-Year period is estimated to total approximately \$282.1 million. Successful and timely implementation of the CIP will require careful planning and coordination as well as hiring additional experienced construction management and workers, and other staff and consultants, including off-island personnel and vendors. The Authority intends to enter into contracts with qualified construction management firms to manage most of the CIP projects.

The estimated costs of, and the projected schedules for, the CIP projects described under "FUTURE SYSTEM CAPITAL REQUIREMENTS" are subject to a number of uncertainties. The ability of the Authority to complete the CIP projects may be adversely affected by various factors including: (i) estimating errors, (ii) design and engineering errors, (iii) changes to the scope of the projects, (iv) delays in contract awards, (v) material and/or labor shortages, (vi) unforeseen site conditions, (vii) adverse weather conditions, earthquakes or other casualty events, (viii) contractor defaults, (ix) labor disputes, (x) unanticipated levels of inflation or significant increases in the costs of materials and (xi) environmental issues. No assurance can be made that the CIP projects will not cost more than the current budget for these projects. Any schedule delays or cost increases could result in the need to issue Additional Bonds.

Funding for the CIP is expected from various sources, including proceeds of Additional Bonds, USEPA State Revolving Fund grants, SDC revenue, Revenues and other grants. In the event one or more of these funding sources is not available to the Authority in the amount or on the schedule described above under "FUTURE SYSTEM CAPITAL REQUIREMENTS," the implementation of some of the CIP projects may be delayed.

Secondary Treatment Requirements Under NPDES Permits

The recently issued NPDES permits for the Northern District WWTP and the Hagåtña WWTP include secondary treatment requirements; however, neither wastewater treatment plant is equipped to provide secondary treatment. The Authority estimates that the design and construction necessary to satisfy the secondary treatment requirements will take approximately five years for each plant and estimates the cost of upgrading both treatment plants to satisfy the secondary treatment requirements to be approximately \$279 million. The Authority and the USEPA are currently negotiating secondary treatment compliance schedules for the Northern District WWTP and the Hagåtña WWTP. The Authority has requested schedules that will delay secondary treatment implementation until after the provisions and capital requirements of the 2011 Court Order are satisfied and is currently negotiating the compliance schedules with the USEPA. Although other agencies have successfully negotiated extended compliance schedules for implementing secondary treatment, no assurance can be given that the Authority will be able to successfully negotiate an extended schedule. In connection with the proposed military build-up in Guam, approximately \$170 million has been earmarked for civilian water and wastewater improvements in Guam, including for secondary treatment upgrades at the Northern District WWTP. Receipt of such funds, however, is contingent upon a number of factors, including proceeding with the actions identified in the SEIS and Record of Decision. The Authority's CIP does not currently reflect any improvements to the Northern District WWTP related to the proposed military build-up or the proposed federal funding. See "REGULATORY ENVIRONMENT—

Environmental Regulation” and “FUTURE SYSTEM CAPITAL REQUIREMENTS—Proposed U.S. Military Relocation and Installations.”

Limitation of Rights upon Insolvency

On June 30, 2016, former President Obama signed into law the Puerto Rico Oversight, Management, and Economic Stability Act (“PROMESA”). Despite its name, PROMESA contains provisions relating to other United States territories, besides Puerto Rico. PROMESA defines a “territory” as (A) Puerto Rico, (B) Guam, (C) American Samoa, (D) the Commonwealth of the Northern Mariana Islands, and (E) the United States Virgin Islands. PROMESA establishes a financial oversight and management board only for Puerto Rico. The stated purpose of an oversight board is to “provide a method for a covered territory to achieve fiscal responsibility and access to the capital markets.” There are provisions of PROMESA that contemplate that oversight boards could be established in the future for other territories, but PROMESA does not set forth a clear mechanism for doing so. It appears that action by Congress and the President would be required before an oversight board could be established for any other territory. An earlier version of the Congressional bill that became PROMESA included text providing that, except with respect to Puerto Rico, an oversight board “for a territory is established in accordance with this section only if the Legislature of the territory adopts a resolution signed by the Governor requesting the establishment.” That provision is not included in the final version of PROMESA.

PROMESA provides that the purpose of an oversight board is to provide a method for the territory to achieve fiscal responsibility and access to the capital markets. One of the powers that an oversight board can exercise is to file a petition in federal court that commences a case under PROMESA pursuant to which the territory can adjust its debts. The territory is not authorized to commence a case under PROMESA by itself. Before the oversight board files such a petition, the oversight board must determine that (i) the territory has made good-faith efforts to reach a consensual restructuring with creditors, (ii) the territory has (A) adopted procedures necessary to deliver timely audited financial statements and (B) made public draft financial statements and other information sufficient for any interested person to make an informed decision with respect to a possible restructuring, and (iii) the territory has adopted a fiscal plan that has been certified by the oversight board.

While the provisions of PROMESA regarding adjustment of debts include some of the provisions found in the Bankruptcy Code, the provisions of PROMESA regarding adjustment of debts are not the same as the provisions of the Bankruptcy Code. As part of such a case, the territory may be able, with the approval of the court, to alter the priority, interest rate, principal amount, payment terms, collateral, maturity dates, payment sources, covenants, and other terms or provisions of the bonds that it has issued. There may be other possible effects of such a case that could result in delays or reductions in payments on, or other losses with respect to, bonds issued by the territory.

PROMESA also establishes an out-of-court process, pursuant to which bondholders and the territory can agree, under the supervision of the oversight board, to modify the terms of bonds issued by the territory. Any such modification must be approved by two-thirds of the principal amount of bonds that vote on the proposal. If the modification is approved by at least a two-thirds vote, the court has the power to enforce the modification against the bondholders who did not vote to approve it.

LITIGATION

No Litigation Relating to the 2017 Bonds

There is no litigation or proceeding pending or, to the knowledge of the Authority, threatened and having merit (either in Guam, state or Federal courts) seeking to restrain or enjoin the execution, issuance, sale or delivery of the 2017 Bonds or the collection, pledge or payment of Revenues by the Authority under the Indenture, or in any way contesting or affecting the legal existence of the Authority or the titles of certain relevant officials of the Authority to their offices or the validity or enforceability of the 2017 Bonds or the Indenture.

Other Litigation Relating to the Authority and the System

Other than as disclosed elsewhere in this Official Statement, there are no pending claims or actions against the Authority arising from the operation and maintenance of the System that, if determinations or settlements were made adverse to the Authority, would have, in the opinion of the Authority's counsel, a material adverse effect on the Authority's financial position.

TAX MATTERS

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Authority ("Bond Counsel"), based upon an analysis of existing laws, regulations, rulings, and court decisions and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Series 2017 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the "Code"). Bond Counsel is of the further opinion that interest on the Series 2017 Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, nor is it included in adjusted current earnings when calculating corporate alternative minimum taxable income. Bond Counsel is also of the opinion that, under 48 U.S.C. Section 1423a, interest on the Series 2017 Bonds is exempt from taxation by the government of Guam, or by any state or territory or any political subdivision thereof, or by the District of Columbia. As discussed further below, legislation has been introduced which, if enacted, would repeal the alternative minimum tax for tax years beginning after December 31, 2017. A complete copy of the proposed form of Bond Counsel opinion is set forth in APPENDIX D hereto.

To the extent the issue price of any maturity of the Series 2017 Bonds is less than the amount to be paid at maturity of such Series 2017 Bonds (excluding amounts stated to be interest and payable at least annually over the term of such Series 2017 Bonds), the difference constitutes "original issue discount," the accrual of which, to the extent properly allocable to each Beneficial Owner thereof, is treated as interest on the Series 2017 Bonds which is excluded from gross income for federal income tax purposes and is exempt from income taxation by any state, territory or possession of the United States or any political subdivision of any of them. For this purpose, the issue price of a particular maturity of the Series 2017 Bonds is the first price at which a substantial amount of such maturity of the Series 2017 Bonds is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The original issue discount with respect to any maturity of the Series 2017 Bonds accrues daily over the term to maturity of such Series 2017 Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such Series 2017 Bonds to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity of such Series 2017 Bonds. Beneficial Owners of the Series 2017 Bonds should consult their own tax advisors with respect to the tax consequences of ownership of Series 2017 Bonds with original issue discount, including the treatment of Beneficial Owners who do not purchase such Series 2017 Bonds in the original offering to the public at the first price at which a substantial amount of such Series 2017 Bonds is sold to the public.

Series 2017 Bonds purchased, whether at original issuance or otherwise, for an amount higher than their principal amount payable at maturity (or, in some cases, at their earlier call date) ("Premium Bonds") will be treated as having amortizable bond premium. No deduction is allowable for the amortizable bond premium in the case of bonds, like the Premium Bonds, the interest on which is excluded from gross income for federal income tax purposes. However, the amount of tax-exempt interest received, and a Beneficial Owner's basis in a Premium Bond, will be reduced by the amount of amortizable bond premium properly allocable to such Beneficial Owner. Beneficial Owners of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

The Code imposes various restrictions, conditions and requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the Series 2017 Bonds. The Authority has made certain representations and covenanted to comply with certain restrictions, conditions and requirements designed to ensure that interest on the Series 2017 Bonds will not be included in federal gross income. Inaccuracy of these representations or failure to comply with these covenants may result in interest on the Series 2017 Bonds being included in gross income for federal income tax purposes, possibly from the date of original issuance of the Series 2017 Bonds. The opinion of Bond Counsel assumes the accuracy of these representations and compliance with these

covenants. Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken), or events occurring (or not occurring), or any other matters coming to Bond Counsel's attention after the date of issuance of the Series 2017 Bonds may adversely affect the value of, or the tax status of interest on, the Series 2017 Bonds. Accordingly, the opinion of Bond Counsel is not intended to, and may not, be relied upon in connection with any such actions, events or matters.

Although Bond Counsel is of the opinion that interest on the Series 2017 Bonds is excluded from gross income for federal income tax purposes and is exempt from income taxation by any state, territory or possession of the United States or any political subdivision of any of them, the ownership or disposition of, or the accrual or receipt of amounts treated as interest on, the Series 2017 Bonds may otherwise affect a Beneficial Owner's federal, state or local tax liability. The nature and extent of these other tax consequences depends upon the particular tax status of the Beneficial Owner or the Beneficial Owner's other items of income or deduction. Bond Counsel expresses no opinion regarding any such other tax consequences.

Current and future legislative proposals, if enacted into law, clarification of the Code or court decisions may cause interest on the Series 2017 Bonds to be subject, directly or indirectly, in whole or in part, to federal income taxation or to be subject to or exempted from state income taxation, or otherwise prevent Beneficial Owners from realizing the full current benefit of the tax status of such interest. Legislation has been introduced in Congress which, if enacted, would significantly change the income tax rates for individuals and corporations and would repeal the alternative minimum tax for tax years beginning after December 31, 2017. The introduction or enactment of any such legislative proposals or clarification of the Code or court decisions may also affect, perhaps significantly, the market price for, or marketability of, the Series 2017 Bonds. Prospective purchasers of the Series 2017 Bonds should consult their own tax advisors regarding the potential impact of any pending or proposed federal or state tax legislation, regulations or litigation, as to which Bond Counsel is expected to express no opinion.

The opinion of Bond Counsel is based on current legal authority, covers certain matters not directly addressed by such authorities, and represents Bond Counsel's judgment as to the proper treatment of the Series 2017 Bonds for federal income tax purposes. It is not binding on the Internal Revenue Service ("IRS") or the courts. Furthermore, Bond Counsel cannot give and has not given any opinion or assurance about the future activities of the Authority, or about the effect of future changes in the Code, the applicable regulations, the interpretation thereof or the enforcement thereof by the IRS. The Authority has covenanted, however, to comply with the requirements of the Code.

Bond Counsel's engagement with respect to the Series 2017 Bonds ends with the issuance of the Series 2017 Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend the Authority or the Beneficial Owners regarding the tax-exempt status of the Series 2017 Bonds in the event of an audit examination by the IRS. Under current procedures, parties other than the Authority and its appointed counsel, including the Beneficial Owners, would have little, if any, right to participate in the audit examination process. Moreover, because achieving judicial review in connection with an audit examination of tax-exempt bonds is difficult, obtaining an independent review of IRS positions with which the Authority legitimately disagrees may not be practicable. Any action of the IRS, including but not limited to selection of the Series 2017 Bonds for audit, or the course or result of such audit, or an audit of bonds presenting similar tax issues may affect the market price for, or the marketability of, the Series 2017 Bonds, and may cause the Authority or the Beneficial Owners to incur significant expense.

UNDERWRITING

The 2017 Bonds are to be purchased from the Authority by Citigroup Global Markets Inc. (the "Representative") and Barclays Capital Inc. (collectively, the "Underwriters") pursuant to the terms of a Bond Purchase Agreement (the "Bond Purchase Agreement") between the Representative and the Authority. The purchase price of the Series 2017 Bonds is \$120,589,766.67, representing the aggregate principal amount of the Series 2017 Bonds (\$107,660,000.00), plus original issue premium of \$13,854,832.75 and less Underwriters' discount of \$925,066.08. The Bond Purchase Agreement provides that the Underwriters will purchase all of the 2017 Bonds if any are purchased and that the obligation to make such purchase is subject to certain terms and conditions set forth in the Bond Purchase Agreement, including the approval by counsel of certain legal matters.

The Underwriters reserve the right to join with dealers and other Underwriters in offering the 2017 Bonds to the public. The Underwriters intend to offer the 2017 Bonds for sale at the prices or yields set forth on the inside cover page hereof. Such initial public offering prices or yields may be changed from time to time by the Underwriters without prior notice. The Underwriters may offer and sell the 2017 Bonds to certain dealers, unit investment trusts or money market funds at prices lower than or at yields higher than the public offering prices or yields stated on the inside front cover page.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the Authority, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the Authority.

FINANCIAL STATEMENTS

The financial statements of the Authority for the Fiscal Years 2016 and 2015 have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report dated January 13, 2017, except for Note 8 regarding OPEB as to which the date is November 3, 2017, appearing in APPENDIX B hereto. Reference should be made to the audited financial statements included in APPENDIX B for a complete understanding of the information provided therein.

CERTAIN LEGAL MATTERS

The issuance of the 2017 Bonds is subject to receipt of the approving opinion of Bond Counsel. The proposed form of opinion Bond Counsel with respect to the 2017 Bonds is included in this Official Statement as APPENDIX D. Bond Counsel undertakes no responsibility for the accuracy, completeness or fairness of this Official Statement. From time to time Orrick, Herrington & Sutcliffe LLP serves as counsel to the Underwriters on matters that do not relate to the Authority or to the 2017 Bonds.

Certain legal matters will be passed upon for the Authority by Kelly O. Clark, general counsel for the Authority. Certain legal matters will be passed upon by Orrick, Herrington & Sutcliffe LLP, as Disclosure Counsel to the Authority. Certain legal matters will be passed upon for the Underwriters by their counsel, Hawkins Delafield & Wood LLP.

VERIFICATION OF ESCROW

Causey Demgen & Moore, P.C. (the "Verification Agent") will verify from the information provided to them the mathematical accuracy as of the date of the closing on the 2017 Bonds of the computations contained in the provided schedules to determine that the anticipated receipts from the securities and/or cash deposits listed in the underwriters' schedules, to be held in escrow, will be sufficient to pay, when due, the principal or redemption price of and interest on the refunded 2010 Bonds. The Verification Agent will express no opinion on the reasonableness of the assumptions provided to them, the likelihood that the redemption price and principal of and interest on the refunded 2010 Bonds will be paid as described in the accompanying schedules, nor as to the exemption from taxation of the interest on the 2017 Bonds.

AVAILABLE INFORMATION

During the initial offering period for the 2017 Bonds, copies of the Authority's audited financial statements are available from the Authority at the Administration Office of the Guam Waterworks Authority, Gloria B. Nelson Public Services Building, 688 Route 15, Mangilao, Guam 96913, during normal business hours, Monday through Friday, excluding holidays, and copies of the Indenture may be obtained, upon written request, from the Underwriters.

RATINGS

Fitch Ratings ("Fitch"), Moody's Investors Service, Inc. ("Moody's") and S&P Global Ratings ("S&P") have assigned their ratings of "BBB-," "Baa2" and "A-," respectively, to the 2017 Bonds. The ratings reflect only the view of the rating agencies assigning such ratings at the time such ratings are given, and the Authority makes no representations as to the appropriateness of such ratings. Any explanation of the significance of such ratings may only be obtained from the rating agency furnishing the same. Certain information and materials not included in this Official Statement were furnished to the rating agencies concerning the 2017 Bonds. Generally, rating agencies base their ratings on such information and materials and on investigation, studies and assumptions by the rating agencies. There is no assurance that the ratings mentioned above will remain for any given period of time or that any or all of them might not be lowered or withdrawn entirely by any rating agency if in the judgment of any or all rating agencies, circumstances so warrant. Any such downward change in or withdrawal of such ratings might have an adverse effect on the market price for and marketability of the 2017 Bonds.

CONTINUING DISCLOSURE

The Authority will covenant for the benefit of the Bondholders to provide certain financial information and operating data relating to the Authority by not later than 270 days after the end of the Fiscal Year (currently September 30) to which such information pertains, commencing with the Fiscal Year 2017 (the "Annual Report") and to provide notices of the occurrence of certain enumerated events. The Annual Report and notices of enumerated events will be filed with the Municipal Securities Rulemaking Board, through its EMMA system. The specific nature of the information to be contained in the Annual Report or the notices of certain enumerated events is described in APPENDIX E—"PROPOSED FORM OF CONTINUING DISCLOSURE AGREEMENT" attached hereto. These covenants will be made in order to assist the Underwriters in complying with Rule 15c2-12.

In order to provide certain continuing disclosure with respect to the 2017 Bonds in accordance with Rule 15c2-12, the Authority has entered into a Master Continuing Disclosure Agreement, as supplemented, including as supplemented by the Supplemental Continuing Disclosure Agreement relating to the 2017 Bonds (collectively, the "2017 Continuing Disclosure Agreement"), with Digital Assurance Certification, L.L.C. ("DAC") for the benefit of the Holders of the 2017 Bonds under which the Authority has designated DAC as Disclosure Dissemination Agent. The Disclosure Dissemination Agent has only the duties specifically set forth in the 2017 Continuing Disclosure Agreement. The Disclosure Dissemination Agent's obligation to deliver the information at the times and with the contents described in the 2017 Continuing Disclosure Agreement is limited to the extent the Authority has provided such information to the Disclosure Dissemination Agent as required by the 2017 Continuing Disclosure Agreement.

The Authority has previously entered into continuing disclosure agreements in connection with the 2005 Bonds, the 2010 Bonds, the 2013 Bonds, the 2014 Bonds and the 2016 Bonds (the "Prior Continuing Disclosure Agreements") that require filing of a report (the "Annual Report") containing both the Authority's audited financial statements and certain financial and operating information, to the extent not contained in the audited financial statements. The Annual Report is due within 270 days of the end of the Authority's fiscal year. The Authority has complied in all material respects with its previous continuing disclosure undertakings within the past five years.

MISCELLANEOUS

The attached Appendices are integral parts of this Official Statement and should be read in their entirety. The Authority has reviewed the information contained herein and has approved all such information for use in this Official Statement.

The execution and delivery of this Official Statement has been duly authorized by the Authority.

GUAM WATERWORKS AUTHORITY

By: /s/ Miguel Bordallo, P.E.
Miguel Bordallo, P.E.
General Manager

CONSOLIDATED COMMISSION ON UTILITIES

By: /s/ Joseph T. Duenas
Joseph T. Duenas
Chairman

[THIS PAGE INTENTIONALLY LEFT BLANK]

APPENDIX A

CERTAIN INFORMATION REGARDING THE TERRITORY OF GUAM

[THIS PAGE INTENTIONALLY LEFT BLANK]

APPENDIX A

GENERAL INFORMATION REGARDING THE TERRITORY OF GUAM

Guam is the westernmost territory of the United States of America (the “U.S.”), as well as the largest and southernmost island of the Marianas archipelago, and the largest of the 2,000 islands in Micronesia. Located at 13 degrees north latitude, 144 degrees east longitude in the western Pacific Ocean, the island is about 30 miles long and varies from four to nine miles wide, with a total land area of approximately 212 square miles. Guam is approximately 3,800 miles west-southwest of Honolulu, Hawaii, 1,550 miles south-southeast of Tokyo, Japan and 1,600 miles east of Manila, Philippines. The Mariana Trench, which has the deepest known ocean depth (36,070 ft.), extends from northeast to southwest of Guam. According to the U.S. Census Bureau, Guam’s population as of April 2010, the most recent date for which such information is available, was estimated to be 159,358 and according to World Bank Group, Guam’s population in 2015 was estimated to be approximately 170,000.

Guam was first settled approximately 4,000 years ago. Its strategic location in the western Pacific has historically made it a desirable property for the world’s superpowers. The indigenous Chamorro people first came in contact with Europeans in 1521 when Ferdinand Magellan landed at Guam’s Umatac Bay. Miguel Lopez de Legazpi claimed the island for Spain in 1565. Spanish colonization of Guam began in 1668 and lasted until the end of the Spanish-American War in 1898. As outlined in the Treaty of Paris, signed in December 1898, Guam was ceded to the U.S. along with Cuba, Puerto Rico, and the Philippines. Guam has since remained under U.S. administration, except for two and a half years of Japanese occupation during World War II. On July 21, 1944, U.S. forces recaptured Guam and reestablished a naval government. In 1950, the U.S. Congress passed the Organic Act of Guam (the “Organic Act”) granting the Chamorro people U.S. citizenship and establishing a civilian government.

Guam’s current political status is that of an unincorporated territory of the U.S. The organization and powers of the Government of Guam (the “Government”) are determined by the Organic Act. The Government consists of three branches: executive, legislative and judicial. A governor (the “Governor”), elected at large every four years, heads the executive branch. The Government maintains a staff of approximately 11,890 employees (as of December 2015, the most recent date for which such information is available) under the direction of the Governor and the Governor’s department heads. The unicameral legislature consists of 15 senators elected at large every two years. The judicial branch consists of the Superior Court of Guam, which is the court of general trial jurisdiction, and the Supreme Court of Guam, the court of highest appeal, established in 1996. Guam also has a Federal District Court and is within the jurisdiction of the Ninth Circuit U.S. Court of Appeals and the U.S. Supreme Court. Guam has one non-voting representative to the U.S. House of Representatives elected at large every two years.

Tourism revenues and U.S. federal and military spending contribute to Guam’s economy. Guam’s location in the Pacific region, a short 3 to 5 hour flight from many Asian countries, greatly contributes to the diversity of the island’s population and the visitor industry. This geographic feature also provides U.S. military operations with significant flexibility compared to other locations in the Pacific and Asia.

On September 5, 2017, the Bureau of Economic Analysis of the U.S. Department of Commerce (“BEA”) released its estimates of gross domestic product (“GDP”) and gross domestic income (“GDI”) for Guam for 2016. As set forth in Table A-1, the BEA’s estimates indicate that Guam’s GDP grew from \$4.895 billion in 2010 to \$5.793 billion in 2016. The 2016 GDP figure consists of approximately \$3.255 billion of personal consumption expenditures, \$3.185 billion of government consumption expenditures and -\$1.841 billion in net exports of goods and services, and is offset by a decrease from approximately \$1.244 billion in 2015 to \$1.194 billion in 2016 of private fixed investment. The BEA also estimates that Guam’s real per capita GDP, measured in 2009 dollars adjusted for inflation, grew from \$30,621 in 2010 to \$31,961 in 2016.

Guam’s real GDP increased 0.4% in 2016 after increasing 0.5% in 2015. The increase in Guam’s real GDP in 2016 resulted primarily from an increase in consumer spending and exports of services. Consumer spending continued to increase in 2016 reflective of the growth in retail trade activity. The increase in exports of services grew for a third consecutive year in 2016, which consists of primarily spending by tourists. According to the BEA, the increase reflected growth in South Korean visitor arrivals and average spending by South Korean tourists. However, these increases were partially offset by decreases in investment spending, both in the government and the

private sector. Government spending on investment declined due to a decrease in Defense construction contracts and the completion of the Guam Port Authority's Port Investment Program in 2015. Moreover, business spending on construction and equipment decreased as major projects, to include the construction of a new private hospital, and a new luxury hotel in Tumon, have been completed in 2015.

TABLE A-1
GUAM GROSS DOMESTIC PRODUCT
CALENDAR YEARS 2012 – 2016
(Millions of Dollars)

<u>Calendar Year</u>	<u>Gross Domestic Product</u>
2012	5,199
2013	5,337
2014	5,531
2015	5,697
2016	5,793

Source: U.S. Department of Commerce Bureau of Economic Analysis.

Spending by tourists makes up the vast majority of Guam's exports of services. Guam's net real exports of services increased 2.0% in 2015 and increased 7.7% in 2016. Guam's real consumer spending on goods and services increased 0.6% in 2015 and increased 1.6% in 2016. According to the Government of Guam Bureau of Statistics and Plans, consumer prices increased 6.0% in 2016 over the same period in the previous year.

Average annual individual income for residents of Guam has increased from \$27,610 in 2005 to \$34,790 in 2016, a compound annual growth rate of 2.1%, according to the U.S. Department of Labor Bureau of Labor Statistics.

Most food and goods are imported, and approximately 70% of imports are from the U.S. mainland. Guam's commercial shipping port, the Jose D. Leon Guerrero Commercial Port (the "Port"), owns five cargo-handling piers along with two fuel piers and three marinas. The Port is the entry point for more than 90% of Guam's imports and also serves as a transshipment center for Micronesia. The Port handled approximately 2.1 million in cargo revenue tons, including the handling of over 103,000 twenty-foot-equivalent unit ("TEUs") containers in Fiscal Year 2016. The Port is located within Apra Harbor, a natural lagoon enclosed by a submerged coral bank and a barrier reef, and is operated by the Port Authority of Guam (the "Port Authority"), a public corporation and autonomous instrumentality of the Government.

The primary carrier at the Port is Matson, accounting for approximately 65 percent of all cargo. Matson's service currently employs five containerhips with a capacity of approximately 2,500 TEUs in a string that carries cargo from the U.S. Pacific Coast to Honolulu, then to Guam.

Seabridge has a U.S. flag tug and barge operation that provides transshipment services for Matson and Saipan Shipping, a sister company of Kyowa Shipping Co ("Kyowa"). The biweekly/monthly service primarily carries U.S. military cargo to Kwajalein via transshipment at Guam. The service transfers an average of about 10 containers per vessel call between Guam and the Commonwealth of the Northern Mariana Islands ("CNMI").

The foreign-flag carriers serving Guam include Kyowa, Marianas Express Lines Pte. Ltd. and Nippon Yusen Kaisha. These carriers not only serve the Guam-Asian market, they also provide the majority of transshipment services to other non-U.S. territory ports in the region.

DEMOGRAPHIC AND ECONOMIC INFORMATION

Geography and Climate

The island of Guam was formed by an uplift of undersea volcanoes. It is surrounded by coral reefs near the shore and consists of two distinct areas of about equal size. The northern region of Guam is a high coralline limestone plateau rising up 850 feet above sea level. It contains the northern water lens, which is the main source of fresh water on the island. The southern region of Guam is mountainous with elevations of 700 to 1,200 feet above sea level. Apra Harbor, one of the largest protected deep-water harbors in the world, is located on the western side of the island.

Guam's climate is pleasantly warm year-round. The mean annual temperature is 85 degrees Fahrenheit. The general temperature ranges from the low 70s to mid-80s degrees Fahrenheit. Annual rainfall averages 85 inches in the western coastal area to 110 inches in the highest mountain locations in the south. Three quarters of the total annual rainfall occurs between the months of June and December.

Like other Pacific islands, Guam is periodically subject to typhoons and tropical storms. From 1962 to date, the eyes of twelve tropical storms passed directly over or just south of the island. Eight typhoons caused damage great enough to result in federal disaster relief: Super Typhoon Karen in 1962, Typhoon Pamela in 1976, Typhoon Russ in 1990, Super Typhoon Omar in 1992, Super Typhoon Paka in 1997, Typhoon Chata'an and Super Typhoon Pongsona in 2002 and Typhoon Dolphin in May 2015. In 2002, Guam adopted the International Building Code, and has subsequently adopted the 2009 Edition, requiring all new construction to be designed to tolerate wind velocities of 155 miles per hour. Typhoon Dolphin struck the island with winds exceeding 100 miles per hour; Guam sustained damage from the storm primarily to its agriculture lands, but recovered quickly. Due to its location near the Mariana Trench, Guam also occasionally experiences seismic activity, including earthquakes and tsunamis. Other than a major earthquake of 8.1 magnitude on August 8, 1993, which also created a minor tsunami, no recent earthquakes or tsunamis have caused significant damage on Guam.

Economic Indicators

Population

Guam's residents originate from all parts of the Asia-Pacific region in addition to the U.S. mainland. In addition to Guam's indigenous Chamorro people, who comprise approximately 47% of the population, large numbers of mainland Americans, Filipinos, Chinese, Japanese, and South Koreans constitute the bulk of Guam's population. There are also substantial numbers of Micronesian islanders, Vietnamese and East Indians. Guam's diverse population makes it one of the most cosmopolitan communities in the western Pacific.

According to the 2010 U.S. Census, Guam's 2010 population was 159,358. This represents a 2.9% increase over the 2000 U.S. Census tabulation of 154,805, which was in turn a 16.3% increase over the 1990 population of 133,152.

Guam currently has 41 public schools, 24 private schools, four U.S. Department of Defense ("DoD") schools, two charter schools, one community college and one university. Approximately 31,000 students attend Guam's elementary and secondary schools. The construction of a new central high school, Tiyan High School, was completed in 2014 and welcomed over 1,400 students for the 2014-2015 school year. Expansion of the existing Okkodo High School was completed on July 2014 for the school year 2014-2015. Both Guam Community College and the University of Guam are accredited by the Western Association of Schools and Colleges. The University of Guam is the only accredited four-year institution of higher learning in the western Pacific, and it offers graduate programs in select areas of study.

Employment

Approximately 75% of Guam's workforce is employed in the private sector, with the remainder in government, both local and federal. Guam's individual and household incomes have fairly equal distributions, as compared to other nations, islands, or territories in similar stages of economic development.

As of March 2017, preliminary data shows the private sector jobs and total employment decreased slightly from the comparable period of one year ago. The total number of construction jobs over the year has declined by 260 while the number of non-construction jobs slightly increased by 80, barely offsetting the construction industry decline. These industry job gains over the year were made up of retail trade which was up by 340; finance, insurance and real estate up by 170; and hotels up by 140. The total employment over the year declined by 260 jobs or by 0.41%. Federal and Government employment both declined slightly over the year as well. There were 10 fewer Federal jobs and 90 fewer Government jobs in March 2017, primarily due to the completion of the federally funded National Dislocated Worker program.

The distribution of civilian employment in Guam based on payrolls as of December 31 for calendar years 2012 through 2016, including revised estimates for the year ending December 31, 2015, is listed by industry in Table A-2. Excluded from the civilian employment estimates in Table A-2 are self-employed individuals, active duty military personnel, proprietors, volunteers and unpaid family workers. The payroll survey in Table A-2 includes all civilian personnel on payroll, including multiple jobholders counted at each place of employment, and nonresident alien workers.

TABLE A-2
Civilian Employment ⁽¹⁾
(as of December for Calendar Years 2012-2016)

	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016⁽³⁾</u>
<u>Private sector:</u>					
Agriculture	140	160	180	280	270
Construction	6,540	7,120	6,070	6,770	6,440
Manufacturing	1,660	1,420	1,320	1,600	1,540
Transportation & Public Utilities	4,670	4,810	4,710	4,500	4,440
Wholesale Trade	2,320	2,250	2,370	2,490	2,370
Retail Trade	11,730	11,540	11,670	11,550	12,420
Finance, Insurance, and Real Estate	2,520	2,530	2,460	2,490	2,570
Services	16,520	16,490	17,750	18,150	18,050
Total private	<u>46,100</u>	<u>46,320</u>	<u>46,530</u>	<u>47,830</u>	<u>48,100</u>
<u>Public sector:</u>					
Federal Government	4,060	4,020	4,110	4,030	3,960
Government of Guam ⁽²⁾	11,730	11,570	11,730	11,890	11,600
Total public	<u>15,790</u>	<u>15,590</u>	<u>15,840</u>	<u>15,920</u>	<u>15,560</u>
Total Payroll Employment	<u>61,890</u>	<u>61,910</u>	<u>62,370</u>	<u>63,750</u>	<u>63,660</u>

⁽¹⁾ Data includes both full-time and part-time employees who worked during any part of the pay period, temporary alien workers and employees under 16 years of age. Data are based upon the number of paychecks issued by employers. Dual and multiple jobholders are counted once for each job held. Proprietors, unpaid family workers, domestic servants and military active duty personnel are excluded.

⁽²⁾ Includes temporary contractual employees, autonomous agencies, Agency for Human Resources Development Disaster Recovery, and senior/youth employment programs.

⁽³⁾ Preliminary as of December 2016

Source: *Current Employment Report, Department of Labor, Government of Guam*

Table A-3 shows the top 15 private employers by number of employees in Micronesia.

TABLE A-3
Top 15 Private Employers ⁽¹⁾
Calendar Year 2016

<u>Employer (and Type of Enterprise)</u>	<u>Number of Employees ⁽²⁾</u>
1. Imperial Pacific Intl. (CNMI) LLC (investments, casino resort)	1,307
2. Calvo Enterprises Inc. (insurance, various)	1,253
3. Triple J Enterprises Inc. (automotive, various)	950
4. DZSP 21 LLC (military support services)	880
5. Core Tech International Corp. (construction)	862
6. Pacific Islands Club Guam (hotel)	746
7. Docomo Pacific (telecommunications)	640
8. Bank of Guam (financial services)	621
9. Hilton Guam Resort & Spa (hotel)	600
10. GFS Group (support services)	550
11. GTA (telecommunications)	496
12. Pacific Islands Club Saipan (hotel)	396
13. Black Construction Corp. (construction)	395
14. Atkins Kroll Inc. (Guam and Saipan) (automotive)	330
15. Pacific International Inc. (construction)	326

⁽¹⁾ Companies selected by employee count from among top 30 by revenues, as compiled by the source.

⁽²⁾ Number of employees represents total number of employees in Micronesia.

Source: Guam Business Magazine 2016 Top Companies.

Unemployment

The Government reports employment and unemployment separately. Guam's unemployment was 5.4% as of September 2016, the most recent date for which information is available.

Table A-4 lists unemployment statistics for March 2012 to September 2016. Differences in the employment figures in Table A-2 and Table A-4 arise as a result of differences in the surveys' coverage and exclusions. For example, the household survey in Table A-4 excludes civilians living within military installations or in military housing, and employees under the age of 16 years.

TABLE A-4
Unemployment Statistics ⁽¹⁾
March 2012 - September 2016

<u>As of ⁽²⁾</u>	<u>Total Labor Force</u>	<u>Number of Unemployed</u>	<u>Unemployment Rate (%)</u>
March 2012	68,400	8,060	11.8%
June 2012	72,890	10,190	14.0%
September 2012	72,980	7,970	10.9%
December 2012	72,560	7,800	10.7%
March 2013	73,170	9,730	13.3%
June 2013	70,420	10,310	14.6%
September 2013	71,430	7,160	10.0%
December 2013	70,490	5,940	8.4%
March 2014	72,070	5,350	7.4%
June 2014	70,530	6,380	9.0%
September 2014	71,060	5,390	7.6%
December 2014	74,870	5,760	7.7%
March 2015	70,420	4,840	6.9%
June 2015	70,790	6,120	8.6%
September 2015	69,800	3,130	4.5%
December 2015	73,210	3,550	4.8%
March 2016	69,400	2,800	4.0%
June 2016	71,420	2,770	3.9%
September 2016 ⁽³⁾	71,960	3,910	5.4%

⁽¹⁾ Data include civilian non-institutional population 16 years of age and older, but exclude non-immigrant aliens and civilians living within military installations or in military housing. Individuals with one or more jobs or dual jobs are counted once.

⁽²⁾ Dates as of which data are provided reflect reported data available from the Guam Department of Labor, Bureau of Labor Statistics.

⁽³⁾ Latest available information.

Source: Guam Department of Labor, Bureau of Labor Statistics.

Construction

Guam's construction industry is generally measured by the number and value of building permits. Building permits constitute an important economic indicator of the type and level of construction activities planned as well as corresponding employment increases once the buildings are completed.

Table A-5 lists the dollar value of the construction permits issued during the period from Fiscal Years 2012 through 2016 and through the first two quarters of Fiscal Year 2017, the most recent information available. Values given include permits for new construction and additions.

TABLE A-5
Fiscal Year Building and Construction Permits
Fiscal Years 2012 - 2017
(Dollars in Thousands)

	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017⁽³⁾</u>
Residential	\$40,141	\$54,518	\$41,123	\$53,918	\$71,736	\$55,541
Commercial & Industrial	28,663	128,727	167,587	120,115	180,834	57,053
Government	113,389	81,061	162,221	45,967	145,564	277,107
Hotels	830	—	—	—	—	—
Condominiums	20,000	161	—	—	—	—
Apartments & Dormitories	11,374	30,160	—	—	—	—
Other ⁽¹⁾	149,535 ⁽²⁾	13,927	35,241	6,013	36,143	18,781
Total	\$363,932	\$308,554	\$406,172	\$226,013	\$434,277	\$408,482

⁽¹⁾ Includes permit renewals, demolitions, relocations and church buildings.

⁽²⁾ Includes \$120 million for Guam Regional Medical City.

⁽³⁾ Preliminary data as of July 2017.

Source: Bureau of Labor Statistics, Department of Labor.

During Fiscal Year 2012, approximately \$364 million of building and construction permits were issued, an increase of approximately 68% over Fiscal Year 2011. This increase was due primarily to permit renewals, demolitions, relocations, church buildings and the construction of the Guam Regional Medical City. During Fiscal Year 2013, approximately \$308.6 million in building permits were issued, representing a decrease of approximately 15.2% percent over Fiscal Year 2012. During Fiscal Year 2014, approximately \$406.2 million in building permits were issued, representing an increase of approximately 32% over Fiscal Year 2013.

In Fiscal Year 2015, approximately \$226 million of building and construction projects were in place based on the permits issued, representing a decrease of approximately 44% over Fiscal Year 2014, primarily due to a sharp drop in government projects. Although there was a delay in the planned relocation of U.S. Marines and military dependents from Okinawa and Iwakuni, Japan to Guam construction projects continued to increase since Fiscal Year 2012. The relocation of U.S. Marines to Guam has been revised to include approximately 4,700 to 6,000 service members and their families, about half the amount originally expected. Negotiations between the U.S. and Japan governments of the final terms and extent of the relocation are ongoing. A Record of Decision, which identifies the final locations for additional bases and facilities to accommodate the Marines, was released on August 29, 2015 (the "2015 Record of Decision"). See "—Military Activity—Military Personnel" and "—Military Expenditures."

During Fiscal Year 2016, approximately \$434 million of building and construction projects were permitted, almost doubling the amount from Fiscal Year 2015. This increase was primarily due to significant increases under government and commercial constructions. As for the first two quarters of Fiscal Year 2017, a total of approximately \$373.8 million of building and construction projects have already been permitted. Permits for

projects valued over \$233 million have been issued under government construction during this period causing the spike.

New shopping centers in Mangilao and Tumon were completed in 2010. Construction of an approximately \$2 million supermarket in the southern part of Guam was completed in October 2013, and the supermarket opened for business in November 2013. Construction of a proposed two-story Grandview Mall in Tumon has commenced, however no opening date has been released. Construction of phase one is now complete for the Guam Regional Medical City, a nonprofit, tertiary level medical facility and the first non-governmental facility of its type on the island. The private hospital held its grand opening in July 2015 and provides the island with 125 beds at a total cost of approximately \$250 million.

A new Medical Arts Center, costing approximately \$25 million, broke ground for the first phase of the project in April 2017. This project is as a result of a partnership between CW Holdings, LLC; Sterling Design, Inc.; and the Law Offices of Cabot Mantanona, LLP. The 50,000 square foot, three-story commercial building will be located across the Guam Regional Medical City to house doctors' offices, hospice care, senior care facilities, a hemodialysis center, a pharmacy, diagnostic and therapeutic services, and others. Plans for additional phases of the project include other health and wellness-related stores and services such as health food markets.

Major civilian projects are ongoing and include the Tsubaki Hotel which is a 26-story, 340 room five star hotel being constructed by P.H.R. Micronesia, Ken Corp. This new hotel, with total investment of approximately \$164 million, is being built adjacent to the Hotel Nikko Guam in Tumon. The ground breaking was held in March 2016 and is scheduled to be completed in October 2018. Another project is the Summer Towers, an approximately \$70 million four-tower development to house 260 luxury condominium units in Tamuning next to the Guam Memorial Hospital. Blue Ocean Investments, expected to be completed in 2020, is an approximately \$70 million 300-room hotel to be built adjacent to Tumon Sands Plaza. Bridge Capital LLC is also planning to develop an approximately \$421 million two-tower commercial facility with a total of 590 rooms at the site of the Guam Greyhound Raceway Park in Tamuning.

Two other hotel construction projects in Tumon are expected to begin in 2020 and these are Citta di Mare, an approximately \$128 million four-tower hotel expected to have a total of 500 rooms, and Yacht Ville Hotel, an approximately \$110 million 106-room hotel. Work is also continuing on the Tumon Bay Mall which is a two-story building and has 200,000 square-feet of floor space. Completed in the summer of 2017, the Camacho Landmark Center on Marine Corps Drive in Tamuning is now seeking tenants for its 21,000 square-foot two-story building costing approximately \$6.1 million. This building is designed for retail businesses, corporate and professional offices, and health care clinics. Lastly, the Fishermen's Co-Op project, estimated to cost approximately \$6 million, will include a 220-foot sea wall as docking area for larger vessels such as fishing, charter and dolphin watching vessels. It will also include 6,000 – 7,000 square feet for the operational facility.

Construction of a new commercial building was completed which houses Guam's new Applebee's franchise, which opened in July 2014, with the same developers that own Guam's first IHOP restaurant which opened in July 2015 and Pieology in May 2016. In May 2017, Pieology opened its second location in the northern part of Guam. Expanding their line of franchises in Guam, Apple Pacific LLC is near completion of the contract to construct and open Olive Garden in 2018. The Micronesia Mall underwent an approximately \$1.3 million renovation, which provides more than 27,000 square feet of retail space for Ross Stores Inc.'s newest storefront and opened in March 2017, providing jobs for approximately 200 employees. In addition, construction of 45,000 square feet of new retail space for Macy's department stores was completed in 2016.

A groundbreaking ceremony was held in May 2017 for the construction of a new 4,382 square foot McDonald's restaurant in Yigo, which is anticipated to be completed in 2018. In September 2017, Jollibee Foods Corp., a Manila-based fast food company, announced its plans to reopen in Guam in the latter part of 2018. As of September 2017, the project is in the pre-construction phase inclusive of bidding and contractor selection.

Summer Town Estates Phase III will have 66 units located at the old Lada Estates. This is a low-income housing tax credit financed project approved by GHURA. Villa Del Mar LLC is also planning on 50-unit housing off the Kanada-Toto Loop for low income families as well as homeless veterans on Guam. This is proposed to be funded by a federal tax credit program. These two housing projects are estimated to have a combined cost of

approximately \$50 million. Another ongoing project is the Wonderful Windward Hills Resorts, an approximately \$107 million investment for 488 single dwelling homes with an expected completion date of August 2019, since it broke ground in July 2017. Tracts of private, affordable housing, upscale gated communities and million-dollar ocean-vista homes are under construction. Housing developments under construction include Talo Verde Estates in Upper Tumon, Villa Pacita in Yigo, Quintas del Mar and Pago Bay Resort in Yona. The Government is providing incentives and assistance to developers and contractors to meet the Governor's goal to build 3,000 more affordable homes on Guam over a five-year period beginning in 2012, pursuant to Executive Order No. 2012-09.

Ongoing or recently completed Government construction projects include approximately \$167 million of new capital improvements, additions and extension to the Antonio B. Won Pat Guam International Air Terminal ("the Airport"), and \$260 million of capital improvement projects for the Port Authority master plan. In 2014, Guam Power Authority's capital improvement program consisted largely of on-going improvements and upgrades to existing generating and transmission and distribution facilities, extension of transmission lines and construction of associated substations, as well as new generation resources. These additions are expected to help Guam Power Authority meet system demand while maintaining system reliability.

GDOE plan for the reconstruction of another high school in Yigo is expected to be completed in 2019. In December 2016, the University of Guam closed on an approximately \$21.7 million USDA Community Facilities Direct Loan to finance the construction of a new Student Services Center and Engineering School Annex. The Guam Community College ("GCC") also closed on an approximately \$6 million USDA Community Facilities Direct Loan to finance the construction, expansion and/or hardening of the GCC Gregorio G. Perez Crime Lab and GCC Building #100 in December 2016.

In 2016, the Guam Waterworks Authority ("GWA") issued revenue bonds to fund \$143 million of capital improvements to the GWA's water and wastewater system that include water production, treatment, distribution and storage, wastewater collection and treatment. In August 2016, the DoD, through the OEA, awarded approximately \$55.3 million to GWA to assist with upgrades and expansions to their water and wastewater facilities related to the upcoming construction of a Marine Corp base in the northern part of the island. In November 2017, the DoD awarded GWA an additional \$117.9 million to assist with upgrades and expansions to their wastewater facilities related to upgrades to the Northern District Wastewater Treatment Plant. In addition, the \$7.0 million reconstruction and rehabilitation of the Old Guam Congress Building, the home of the Guam Legislature, was completed in 2016 and the \$23 million Guam Museum Project was completed and opened in May 2016.

The Department of Public Works (DPW) awarded a \$44 million contract to widen Route 3 between Route 28 and Chalan Kareta. Work will entail reconstructing and widening Route 3 from the current two-lane bidirectional roadway to a widened four-lane highway (two lanes in each direction plus a median lane). Construction is expected to begin in October 2017 with substantial completion anticipated in the fourth quarter of 2019.

The Impact of H2B Visa Denials on Guam

In December 2015, the United States Citizenship and Immigration Service (USCIS) started denying H-2B visa petitions which had, for the past 30 years, been routinely approved at a rate of about 95%. In FY2017, the island has experienced a 0% approval rate for all H2B visa petitions across the board and across all industries, regardless of the employers need, occupation or situation.

Governor Calvo has been working with the USCIS to resolve the H2B visa issues for current and future construction projects including the planned military build-up and the expected growth in the construction industry on Guam. The Government believes that the federal government has taken positive first steps with the proposal contained within the US Senate's FY 2018 Defense Budget Bill that would allow Guam to use more temporary foreign labor for the military projects associated with the build-up. On September 29, 2017, the Governor called for a pause on all military construction until a solution that will address Guam's request to augment local labor workforces with skilled laborers is addressed, referring to the Record of Decision and Programmatic Agreement concept of the "One Guam" tenet. The Government expects that continued dialog will ensure development with respect to H2B visas for both the local and military industries.

Other Economic Activity

The Government is seeking through legislative and regulatory efforts to streamline business and construction permitting processes, to obtain an exemption from the Jones Act which would expand the market for shipments to Guam and reduce the cost of imports, to develop the captive insurance market for the Asian market, and continued pursuit of the China visa waiver program.

Other developments being pursued by the Government, private enterprise or both include a bonded warehouse on Guam as a consolidation and customs clearance center, a hub for the collection and transshipment of recyclable materials in the region, a redevelopment of the *Hagåtña* area, light domestic manufacturing of construction materials, expanded eco and sports tourism, and television and commercial film production for Asian producers.

Guam Tourist Industry

Tourism has represented a primary source of income for Guam's economy for over 25 years. Visitor arrivals rose to over 1,000,000 travelers for the first time in, and have remained near or above that level ever since, 1994.

Table A-6 sets forth the annual number of visitors to Guam for Fiscal Years 2012 through 2017. The number of annual visitors to Guam increased from 1,270,161 in Fiscal Year 2012 to 1,559,395 in Fiscal Year 2017. Visitor arrivals for Fiscal Year 2017 increased by 3.2% over Fiscal Year 2016 which placed the most recent Fiscal Year at the top of Guam's charts for visitor arrivals. Fiscal Year 2017 set a new all-time record for visitor arrivals to Guam, exceeding the prior record for visitor arrivals set in Fiscal Year 2016.

TABLE A-6
Annual Visitor Arrivals to Guam
Fiscal Years 2012-2016

<u>Fiscal Year</u>	<u>Visitor Arrivals</u>
2012	1,270,161
2013	1,337,665
2014	1,341,171
2015	1,372,531
2016	1,511,065
2017	1,559,395

Source: Guam Visitors Bureau.

Table A-7 provides a comparison of cumulative visitor arrivals by month to Guam for calendar years 2012 through 2017. The global decline in Japanese travel (due to the Japan economy) has resulted in fewer Japanese tourists on Guam over the last several years. The decrease in Japanese tourists visiting Guam has not been unique to Guam and according to JTB Tourism Research and Consulting, total Japan resident visits abroad declined by more than 8% from 2012 to 2016. However, arrivals from South Korea, Taiwan and China have increased, mitigating the decline in Japan arrivals. Several factors account for the increase from these markets, such as the expanded number of airline flight routes to Guam, the favorable exchange rate for Asian visitors, preparations for the military expansion, and the relative improvement of the overall global economy.

TABLE A-7
Cumulative Visitor Arrivals to Guam by Month
2012-2017

	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017⁽¹⁾</u>
January	116,588	116,558	117,076	118,501	129,259	136,029
February	228,717	238,630	234,108	244,581	271,591	269,469
March	355,093	375,358	365,361	376,915	404,926	410,131
April	442,899	466,857	464,184	473,156	510,372	532,753
May	525,596	553,027	554,835	570,029	624,725	651,606
June	620,544	652,177	657,628	671,076	743,098	774,355
July	732,514	763,484	767,380	786,167	866,094	907,307
August	864,502	897,839	900,617	921,665	1,010,852	1,051,327
September	976,844	1,006,474	1,013,148	1,042,587	1,144,602	1,168,479
October	1,081,178	1,108,429	1,117,109	1,154,879	1,267,136	--
November	1,190,311	1,215,909	1,223,239	1,276,631	1,392,884	--
December	1,308,035	1,334,497	1,343,092	1,409,050	1,535,531	--

⁽¹⁾ Preliminary Data as of September 2017

Source: Guam Visitors Bureau

Guam Visitors Bureau ("GVB")

The GVB is a nonprofit membership corporation that has existed in its current form since 1984. Its mission is to efficiently and effectively promote and develop Guam as a safe and satisfying destination for visitors and to derive maximum benefits for the people of Guam. Policy for GVB is set by a twelve-member board of directors, consisting of five directors appointed by the Governor with the advice and consent of the Guam Legislature, two directors appointed by the Speaker of the Guam Legislature, four directors elected by the members, and one director selected by at least a two-thirds vote of the other eleven directors. The activities of GVB are administered by a board-appointed General Manager. Membership in GVB is not restricted to any particular group. Recent efforts to promote tourism include a Guam branding initiative; efforts to expand visitor markets through expansion of the visa waiver program and similar initiatives; the expansion of airline arrivals to Guam; and encouraging longer stays and repeat visits by enhancing and promoting tourist and cultural destinations and events on the island. Funding for GVB's operations is appropriated by the Guam Legislature from amounts available in the Tourist Attraction Fund.

Key Visitor Markets

Guam receives visitors from a variety of countries and GVB is intent on further diversifying Guam's visitor base. Guam's top four visitor markets include Japan, South Korea, U.S./Hawaii and Taiwan. Fiscal Year 2017 was unique in that, for the first time in history, visitors to Guam from Japan and South Korea were nearly the same with 674,343 visitors from Japan (43% of visitors to Guam) and 649,435 visitors from South Korea (42% of visitors to Guam). Guam's next largest tourist markets in Fiscal Year 2017 were the U.S./Hawaii (5%), Taiwan (2.3%), China (1.5%) and Philippines (1.3%). Total civilian air arrivals increased by 3.5%, while total sea arrivals decreased by 22.6% during Fiscal Year 2017 over the previous Fiscal Year 2016.

Based on data from the Guam Visitors Bureau, the total number of visitors to Guam for Fiscal Year 2016 was 1,511,065 compared to 1,372,531 for Fiscal Year 2015, representing an increase of approximately 10.1%. Of these visitors, 49.82% were from Japan, 34.38% from South Korea, 5.08% from the U.S., 2.75% from Taiwan and 1.74% from China, with the remaining 6.00% coming from other countries. The Russian visitor market, once a potential growth market, was greatly impacted by the falling oil price and the subsequent weakening of its currency and in Fiscal Year 2016 accounted for only 0.16% of visitors to Guam.

GVB continues to market to the South Korea, Taiwan, Hong Kong and China markets to further diversify and expand Guam's visitor base. From Fiscal Year 2016 to Fiscal Year 2017, visitor arrivals from South Korea grew 25% while Japan and Taiwan decreased about 10.4% and 12.7%, respectively. Based on data compiled by GVB, as of September 2016, visitors from South Korea stay an average of 3.65 nights and spend an average of \$423 per person on-island, as compared to visitors from Japan who stay an average of 3.09 nights and spend an average of \$442 per person on-island, and to visitors from China who stay an average of 4.27 nights and spend an average of \$999 per person on-island.

Total outbound travel from Japan continues to decline due to several factors including the weak Japanese yen, an increase in consumption taxes and a decrease in airline seat capacity to the island. Arrivals from Japan to Guam have decreased since 2012 which is consistent with the total Japanese outbound visitor market. The meetings, incentive group and school segments shows Fiscal Year 2016 having a total of 3,082 visitors. Both trends fit with Guam's Tourism 2020 core objectives which include "improve on quality and yield" and "focus on Meetings, Incentives, Conferences, Exhibitions."

One area of focus in recent fiscal years has been to stimulate consumer demand from Japan, to slow the negative arrivals trend and to recover market share. Guam's share of Japan's visitor market is expected to diminish further due to a consumption tax that has reduced disposable income and the continued devaluation of the Japanese yen. GVB initiatives include the Premium Guam advertising campaign, the Travel Agent Incentive Program, an aggressive public relations strategy, support for travel agent brochures and groups, and marketing co-ops. Attracting new flight service from Japan will also be an objective, especially from the Haneda (Tokyo) Airport. Lastly, reaching higher yield segments of the market, such as weddings and seniors, with targeted promotions are also planned.

Fiscal Year 2017 visitor arrivals from South Korea totaled 649,435, an increase of 25% compared to Fiscal Year 2016. Arrivals from South Korea continue to grow with much of the increase attributed to additional flight service from South Korea. Since Fiscal Year 2015, Guam has seen significant increase in service between Guam and South Korea. In 2015, Jin Air upgraded its equipment from a Boeing 737 (185 seats) to a Boeing 777 (355 seats), Jeju Air beginning service from Busan to Guam, T'Way Air began daily flight services from Incheon to Guam and in July 2015, Air Busan four times weekly service from Busan making it the fifth airline to provide regular service between Guam and South Korea. In September 2017, Air Seoul, a low-cost carrier based in South Korea, arrived on Guam with its inaugural flight.

The China market continues to represent the greatest opportunity for growth in Guam tourism. Although a visa waiver has not been granted for Chinese tourists to travel to Guam, the U.S. and China have agreed to extend visa validity from a one-year, single-use visa to a ten-year, multi-use visa. This greatly reduces time and cost required for a U.S. visa and removes one of the roadblocks to attracting Chinese tourists to Guam. GVB approved an airline incentive program in 2014 that was successful in spurring United Airlines to launch regular service from Shanghai and Dynamic Airways direct charter service from Beijing. Arrivals from China increased by 11.4% in Fiscal Year 2016, as compared to Fiscal Year 2015. Flight service in Fiscal Year 2016 also increased, totaling approximately 140 flights or approximately 24,958 seats as compared to 40 flights in Fiscal Year 2015. Dynamic Airlines has scheduled summer charter flights from Hangzhou, Nanjing and Tianjin.

Since 2012, Philippine visitor arrivals have grown more than 190%. In March 2016, Cebu Pacific Air began its four times weekly services between Manila and Guam. In Fiscal Year 2017, arrivals from the Philippines increased by 6% as compared to Fiscal Year 2016. This is after the number of Philippine visitors in Fiscal Year 2016 increased by approximately 52.3% with 18,704 visitors as compared to 12,278 visitors in Fiscal Year 2015.

Recent Events in Guam's Visitor Market

Following global political events in August 2017, as of October, 2017, Guam has experienced approximately 7,000 individual (group organized) visitor cancelations from Japan. Despite the decrease in planned Japanese arrivals to Guam, visitors from South Korea have largely filled most of the hotel capacity resulting from Japanese visitor cancelations. As a result, as of November 1, 2017, the GVB projects net visitor arrivals to be down approximately 1.2% for calendar year 2017. In order to proactively address the recent volatility in Guam's visitor market, in September 2017, Governor Calvo has created a task force with the GVB, GIAA and GEDA to continue its efforts to reassure investors and neighboring countries that Guam remains a safe destination to live, to visit and to invest. Recently the task force, led by Governor Calvo, visited Japan, South Korea and Taiwan.

(Remainder of Page Intentionally Left Blank)

Table A-8 sets forth a comparison of visitor arrivals to Guam by country for Fiscal Years 2012 through 2017.

TABLE A-8
Fiscal Year Visitor Arrivals by Country
Fiscal Years 2012-2017

	2012		2013		2014		2015		2016		2017	
	Arrivals	Percent of Total	Arrivals	Percent of Total	Arrivals	Percent of Total	Arrivals	Percent of Total	Arrivals	Percent of Total	Arrivals	Percent of Total
Japan	907,765	71.5%	912,093	68.19%	825,830	61.58%	779,405	56.79%	752,757	49.82%	674,343	43.24%
South Korea	165,143	13.0%	232,850	17.41%	293,437	21.88%	384,112	27.99%	519,430	34.38%	649,435	41.65%
U.S. Mainland/Hawaii	64,766	5.1%	58,546	4.38%	66,151	4.93%	69,745	5.08%	76,727	5.08%	76,296	4.89%
Taiwan	49,851	3.9%	47,904	3.58%	50,924	3.80%	42,315	3.08%	41,534	2.75%	36,270	2.33%
China, P.R.C.	9,040	0.7%	10,384	0.78%	14,547	1.08%	23,589	1.72%	26,271	1.74%	23,178	1.49%
CNMI	17,272	1.4%	15,905	1.19%	15,466	1.15%	13,757	1.00%	17,390	1.15%	18,494	1.19%
Micronesia ⁽¹⁾	14,884	1.2%	13,976	1.04%	13,019	0.97%	13,753	1.00%	17,201	1.14%	16,237	1.04%
Philippines	10,240	0.8%	10,564	0.79%	11,742	0.88%	12,278	0.89%	18,704	1.24%	19,818	1.27%
Australia	4,071	0.3%	3,265	0.24%	3,830	0.29%	2,987	0.22%	2,258	0.15%	2,227	0.14%
Canada	773	0.1%	961	0.07%	1,031	0.08%	960	0.07%	952	0.06%	991	0.06%
Europe	1,566	0.1%	2,101	0.16%	1,876	0.14%	1,686	0.12%	2,010	0.13%	2,026	0.13%
Hong Kong	8,396	0.7%	8,936	0.67%	8,605	0.64%	8,163	0.59%	8,397	0.56%	16,053	1.03%
Thailand	383	0.0%	382	0.03%	400	0.03%	459	0.03%	463	0.03%	445	0.03%
Vietnam	113	0.0%	92	0.01%	100	0.01%	166	0.01%	183	0.01%	128	0.01%
Russia	2,931	0.2%	6,134	0.46%	18,291	1.36%	3,539	0.26%	2,488	0.16%	3,151	0.20%
Others/Unknown	4,441	0.3%	6,394	0.48%	6,708	0.50%	4,174	0.30%	5,484	0.36%	5,735	0.37%
Total Air⁽²⁾	1,261,635	99.3%	1,330,487	99.5%	1,331,957	99.3%	1,361,088	99.2%	1,492,249	98.8%	1,544,827	99.1%
Total Sea⁽³⁾	8,526	0.7%	7,178	0.54%	9,214	0.69%	11,443	0.83%	18,816	1.25%	14,568	0.93%
Total Air & Sea	1,270,161	100.0%	1,337,665	100.0%	1,341,171	100.0%	1,372,531	100.0%	1,511,065	100.0%	1,559,395	100.0%

⁽¹⁾ Includes Palau, Federal States of Micronesia ("FSM") and the Republic of the Marshall Islands ("RMI").

⁽²⁾ Includes military air arrivals.

⁽³⁾ For Fiscal Year 2012, military vessel arrivals were not available.

Source: Guam Visitors Bureau.

Table A-9 highlights the percentage change in annual visitor arrivals to Guam by country for Fiscal Years 2012 through 2016.

TABLE A-9
Percentage Change in Annual Visitor Arrivals by Country
Fiscal Years 2012-2017

	2012	2013	% Change from 2012	2014	% Change from 2013	2015	% Change from 2014	2016	% Change from 2015	2017	% Change from 2016
Japan	907,765	912,093	0.5%	825,830	-9.5%	779,405	-5.6%	752,757	-3.4%	674,343	-10.4%
South Korea	165,143	232,850	41.0%	293,437	26.0%	384,112	30.9%	519,430	35.2%	649,435	25.0%
U.S. Mainland/Hawaii	64,766	58,546	-9.6%	66,151	13.0%	69,745	5.4%	76,727	10.0%	76,296	-0.6%
Taiwan	49,851	47,904	-3.9%	50,924	6.3%	42,315	-16.9%	41,534	-1.8%	36,270	-12.7%
China, P.R.C.	9,040	10,384	14.9%	14,547	40.1%	23,589	62.2%	26,271	11.4%	23,178	-11.8%
CNMI	17,272	15,905	-7.9%	15,466	-2.8%	13,757	-11.1%	17,390	26.4%	18,494	6.3%
Micronesia ⁽¹⁾	14,884	13,976	-6.1%	13,019	-6.8%	13,753	5.6%	17,201	25.1%	16,237	-5.6%
Philippines	10,240	10,564	3.2%	11,742	11.2%	12,278	4.6%	18,704	52.3%	19,818	6.0%
Australia	4,071	3,265	-19.8%	3,830	17.3%	2,987	-22.0%	2,258	-24.4%	2,227	-1.4%
Canada	773	961	24.3%	1,031	7.3%	960	-6.9%	952	-0.8%	991	4.1%
Europe	1,566	2,101	34.2%	1,876	-10.7%	1,686	-10.1%	2,010	19.2%	2,026	0.8%
Hong Kong	8,396	8,936	6.4%	8,605	-3.7%	8,163	-5.1%	8,397	2.9%	16,053	91.2%
Thailand	383	382	-0.3%	400	4.7%	459	14.8%	463	0.9%	445	-3.9%
Vietnam	113	92	-18.6%	100	8.7%	166	66.0%	183	10.2%	128	-30.1%
Russia	2,931	6,134	109.3%	18,291	198.2%	3,539	-80.7%	2,488	-29.7%	3,151	26.6%
Others/Unknown	4,441	6,394	44.0%	6,708	4.9%	4,174	-37.8%	5,484	31.4%	5,735	4.6%
Total Air⁽²⁾	1,261,635	1,330,487	5.5%	1,331,957	0.1%	1,361,088	2.2%	1,492,249	9.6%	1,544,827	3.5%
Total Sea⁽³⁾	8,526	7,178	-15.8%	9,214	28.4%	11,443	24.2%	18,816	64.4%	14,568	-22.6%
Total Air & Sea	1,270,161	1,337,665	5.3%	1,341,171	0.3%	1,372,531	2.3%	1,511,065	10.1%	1,559,395	3.2%

⁽¹⁾ Includes Palau, FSM and RMI.

⁽²⁾ Includes military air arrivals.

⁽³⁾ For Fiscal Years 2012 through 2014, military vessel arrivals were not available.

Source: Guam Visitors Bureau.

Hotels

Tumon Bay, located on Guam's west coast, is the heart of Guam's tourist industry. The hotels in Tumon Bay provide lodging to the majority of visitors to Guam. During the 1990s and early 2000s, Guam's inventory of hotel rooms increased over 100%, with substantial growth in the number of hotel rooms occurring from 1991 to 1993 and from 1995 to 2001. As of April 2017, there were 34 hotels in Guam, including many notable international hotel operators, with an inventory of approximately 9,244 rooms.

Table A-10 lists the weighted annual hotel occupancy and room rates from calendar year 2012-2016 and preliminary data for calendar year 2017 through July 2017.

TABLE A-10
Weighted Hotel Occupancy and Average Room Rates
Fiscal Year 2012-2017

Year	Annual Weighted Hotel Occupancy Rate	Weighted Average Room Rate
2012	81%	\$151
2013	82%	\$162
2014	83%	\$177
2015	78%	\$186
2016	80%	\$197
2017 ⁽¹⁾	86%	\$205

⁽¹⁾ FYTD as of August 2017.

Source: Guam Visitor's Bureau

Table A-11 lists the top fifteen hotel operators by number of existing rooms as of April 2017.

TABLE A-11
Top Fifteen Hotel Operations in Guam
As of April 2017

<u>Hotel/Resort</u>	<u>Year Opened</u>	<u>Location</u>	<u>Number of Rooms⁽¹⁾</u>
Pacific Islands Club	1980	Tumon	777
Hilton Guam Resort & Spa	1972	Tumon	694
Outrigger Guam Resort	1999	Tumon	600
Guam Plaza Hotel	1983	Tumon	505
Hotel Nikko Guam	1992	Tumon	460
Hyatt Regency Guam	1994	Tumon	450
Leo Palace Resort Guam	1993	Yona	450
Westin Resort Guam	1996	Tumon	432
Onward Beach Resort	1992	Tamuning	430
Guam Reef & Olive Spa Resort	1974	Tumon	420
Dusit Thani Guam	2015	Tumon	419
Pacific Star Resort & Spa ⁽²⁾	1987	Tumon	388
Sheraton Laguna Guam Resort	2007	Tamuning	318
Fiesta Resort Guam	2006	Tumon	314
Holiday Resort & Spa Guam	1996	Tumon	252
Total			6,909

⁽¹⁾ Numbers may not reflect actual capacity as hotel management may make rooms unavailable at any given time.

⁽²⁾ Formerly the Guam Marriott Hotel.

Source: Guam Visitors Bureau.

Pursuant to Section 30101(b), Title 11, Guam Code Annotated, the Hotel Occupancy Tax is an excise tax levied and imposed by the Government against transient occupants of a room or rooms in a hotel, lodging house or similar facility located in Guam. The Hotel Occupancy Tax has been levied at the rate of 11% of the rental price charged or paid per occupancy per day since April 1, 1995. Table A-12 below shows the amount of Hotel Occupancy Tax Revenues collected during each of the fiscal years shown.

TABLE A-12
Annual Hotel Occupancy Tax Revenues
Fiscal Years 2012 – 2017

<u>Fiscal Year</u>	<u>Taxes Collected</u>
2012	26,054,476
2013	29,331,058
2014	34,362,256
2015	36,988,454
2016	40,864,063
2017 ⁽¹⁾	44,016,780

⁽¹⁾*Source:* Bureau of Budget and Management Research. Preliminary information as of September 30, 2017.

Source: Tourist Attraction Fund Audited Financial Statements (FY2012-2016).

Over the past few years, several existing hotels have undertaken significant hotel renovations totaling approximately \$100 million including improvements at the Hilton Guam Resort and Spa, Pacific Islands Club, Pacific Star Resort & Spa (formerly the Guam Marriott Resort), Hotel Nikko Guam, Royal Orchid Guam, Sheraton Laguna Guam Resort, Hyatt Regency Guam and Westin Resort Guam. Under new ownership, the Guam Marriott Resort and Spa completed approximately \$25 million of renovations in 2014, with the resort now operating as the Pacific Star Resort & Spa. Leo Palace Resort has completed approximately \$2.4 million of hotel renovation projects. The Royal Orchid Hotel has indicated its plans to convert 200 rooms to 98 residential condo units. The Guam Reef Hotel & Olive Spa has completed the first phase of approximately \$12 million of renovations that started in October 2012. The Sherwood Hotel was sold in September 2011 and re-opened in 2012 as the new Verona Resort and Spa with 254 rooms. In addition, Lotte Hotels and Resorts (“Lotte Hotels”) completed its approximately \$20 million renovation and rebranding of the Guam Aurora Resort Villa & Spa, which encompasses 222 rooms, four restaurants, three banquet halls, an outdoor swimming pool, a spa and a chapel. The Lotte Hotels renovated and rebranded such hotel and re-opened in July 2014. In addition, the property developer Tanota Partners opened an approximately \$250 million, 419-room hotel tower, the Dusit Thani Guam, in July 2015. The Dusit Thani includes a ballroom with a 2,000 person seating capacity and stands between the Outrigger Guam Resort, the Hyatt Regency Guam and a commercial center filled with retail shops and restaurants in Tumon.

In support of Guam’s Tourism 2020 strategic plan, the Government has been aggressively marketing Guam to hotel developers. For the first time in nearly 20 years, Guam welcomed its first newly built hotel with property developer Tanota Partners opening an approximately \$250 million, 419-room hotel tower, the Dusit Thani Guam, in July 2015. The Dusit Thani includes a ballroom with a 2,000 person seating capacity and stands between the Outrigger Guam Resort, the Hyatt Regency Guam and a commercial center filled with retail shops and restaurants in Tumon. There are currently plans for and additional hotels under development including the Ken Corporation, a large Japan-based developer, which broke ground in March 2016 on a new \$164 million 340-room luxury hotel, Tsubaki Tower, planned in between the Hotel Nikko Guam and the Lotte Hotel. Blue Ocean Investments plans to break ground in the fourth quarter of 2018 for a 300-room hotel costing approximately \$70 million adjacent to Tumon Sands Plaza. A developer from South Korea has announced plans for a new approximately \$128 million hotel to be called Citta di Mare featuring four towers ranging from 13 to 18 stories with a total of 500 hotel rooms, located behind Acanta Mall in Tumon extending up to Marine Corps Drive. Construction is expected to begin in 2020 and would be completed in 2023. In addition, the same investors are also expected to finance a 106-room hotel in Tumon expected to be called the Yacht Ville Hotel with an estimated development cost of approximately \$110 million located on the Garden Villa Hotel grounds across the Fiesta Hotel. The Yacht Ville Hotel is expected to break ground in 2020. The owners of the Ladera Towers have announced an approximately \$134 million investments for the renovation and construction to transfer into a condo-hotel. However, Ladera Towers will now be renovating for condominiums only instead of the initial plan of transformation into a condo-hotel. CoreTech plans to turn the four towers located adjacent to the Guam Memorial Hospital into 100 hotel rooms and 90 long term condominiums called the Summer Towers Hotel. Bridge Capital announced plans for a two tower hotel with 590 hotel rooms on the old Greyhound Park property in Tamuning. Additionally, Bridge Capital plans to develop an 800,000 square foot upscale retail complex with a water park adjacent to the hotel totaling an investment of approximately \$421 million for the Guam Pacific Plaza Hotel & Mall.

Airlines

Guam has an international airport, the Antonio B. Won Pat Guam International Air Terminal, operated by the A. B. Won Pat International Airport Authority, a public corporation and autonomous instrumentality of the Government. The Airport is centrally located in Guam’s business district on a 1,800 acre parcel of land and has 768,000 square feet of terminal space along with hangars, maintenance facilities, warehouse space, storage facilities, office space and expansive ground space.

The Airport is the only commercial air carrier airport serving Guam and is the principal air carrier airport serving the surrounding Micronesian islands. According to the Federal Aviation Administration (the “FAA”), approximately 1,774,590 enplaned passengers were processed through the Airport for Fiscal Year 2016, making the Airport the 75th busiest primary airport within the FAA system. According to data published by U.S. Department of Commerce Office of Travel and Tourism Industries, for calendar year 2015 (based on data released June 2016), the Airport was the 10th busiest port of entry to the U.S. for Overseas Visitors (excluding arrivals from Canada and Mexico), and for calendar year 2016 (based on preliminary data for September 2016), the Airport was the 8th

busiest port of entry to the U.S. for non-U.S. resident arrivals (excluding arrivals from Canada and Mexico). The Airport's passenger base is over 90% international from all originating markets served.

Sixteen passenger airlines currently provide service at the Airport, including two major U.S. airlines, ten flag air carriers, three regional/community airlines that provide interisland service, and three air cargo service providers. In addition, the Airport is served by other charter flights, including military charter flights, and those operated by various airline carriers. As of April 2017, the signatory airlines at the Airport provided service to 35 destinations in Asia and the U.S.

Airline service at the Airport is still provided principally by major flag carriers such as United Airlines, Delta Airlines, China Airlines, Japan Airlines, Korean Airlines and Philippine Airlines, however, low-cost carriers, including Jin Air, Jeju Air, Air Busan, T'Way Airlines and Cebu Pacific Airlines have introduced service at the Airport. Commuter air services to the CNMI are provided by Cape Air dba United Connections, Star Marianas Air, and Arctic Circle. Air Cargo service providers include Asia Pacific Airlines, FedEx and United Parcel Service (UPS).

United Airlines, a wholly owned subsidiary of United Continental Holdings Inc. and the successor to Continental Micronesia, is the largest air carrier serving the Airport and provides service to 15 destinations accounting for an estimated 41.40% of the total enplaned passengers at the Airport in Fiscal Year 2016. The Airport serves as a hub in United Airlines' global route network, although passenger traffic remains predominantly origination and destination. United Airlines' Guam hub is designed to serve: (1) regional origin-destination passengers on short-haul flights to and from Guam, (2) origin-destination passengers on long-haul flights, primarily tourists visiting Guam, and (3) transit passengers on connecting or through flights.

In response to a growing demand from airline operators utilizing aircraft weighing 12,500 pounds or less on a scheduled or charter basis for inter-island passenger/cargo service, a Light Aircraft Commuter Facility opened for operations on October 1, 2015, and Star Marianas and Arctic Circle airlines began operations between Guam and the Marianas. The principal commuter airline providing inter-island passenger flight service to and from Guam and the CNMI is Cape Air dba United Airlines.

A number of service changes have occurred at or been announced for the Airport in the last several years. Cebu Pacific began its four-times weekly services between Manila and Guam in March 2016. As of May 2017, China Airlines operates four flights per week on its Guam-Taipei route. Korean Air has started operating a second daily flight to and from Incheon. T'way Air began service in the 3rd quarter of 2015 providing daily flights to Incheon, and three times weekly service on the Daegu/Kansai/Guam routes.

Jeju Air applied for ten charter flights to Guam between May and June 2017 with the U.S. Department of Transportation using a Boeing 737-800. The South Korean low-cost carrier has provided daily flights between Incheon and Guam since September 2012 and regular Busan-Guam service since 2015. A new airline, Air Seoul Inc., is a South-Korea-based low-cost carrier that began operating scheduled service between Incheon, South Korea and Guam in September 2017. Air Seoul is the sixth carrier to offer nonstop service between Guam and South Korea, adding 60,349 of new annual airseats to Guam. The airline plans to provide service year-round, scheduled foreign air transportation of persons, property and mail between Incheon and Guam utilizing an Airbus 321-200 with a capacity of 195 passengers. It is privately and wholly owned by Asiana Airlines Inc. and was established in April 2015 launching its first international service in October 2016.

With the new airlines providing services for the South Korea-Guam route, Guam air seat capacity for fiscal year 2018 is projected at 804,355 seats, an 8.8% growth over fiscal year 2017 of 739,626 air seats.

Eva Air ceased service on the Guam-Taipei route as of June 2017. HK Express launched a four time weekly Hong Kong-Guam service on December 15, 2016 and three time weekly Hong Kong-Saipan service on January 17, 2017. However, the airline suspended flight services between Guam and Hong Kong effective June 26, 2017 due to space limitations at the Hong Kong International Airport. In September 2017, the Guam-Nagoya route, which was expected to begin in October 2017, was delayed until summer of 2018.

In September 2017, Delta Airlines announced that they will suspend service to Guam on January 8, 2018. Based on Delta's service to Guam as of October 1, 2017, this is expected to result in a reduction of 56,000 annual seats to Guam from Japan. Delta's decision to suspend service to Guam was a result of reduced seat demand out of Japan, network rerouting and the entry of competitive airlines in the Guam market, particularly from South Korea. United Airlines has also announced that they will be reducing flights out of Japan, South Korea and the Philippines due to reduced demand and higher competition from low cost carriers. United has stated that the cutbacks reflect current demand but that they are not reducing staff or removing flights out of Guam as they position themselves for a resurgence in air travel early next year.

Air service development remains a priority. Diversification is a key objective and the largest and essentially untapped visitor base is the Chinese market. Regional resort destinations such as Guam are capitalizing on the increasing Chinese outbound market due to visa waiver authority or more liberal entry requirements. As a result, the Airport intends to take a more active and aggressive role in the years long quest for China visa waiver parole authority.

Political Self-Determination

Guam's political status and ability to self-govern has been discussed for decades. In the 1970s, Guam's leaders created special commissions to discuss political status. These commissions recognized the desires of the island's people, examining the island's political conditions and the status options available to Guam. There have been no change to the island's political status yet and Guam remains an unincorporated territory of the U.S.

In 1997, the Commission on Decolonization was established "for the implementation and exercise of Chamorro Self-Determination." The Commission was tasked with educating Guam on the three status options available: free association, independence and statehood. However, the Commission was inactive for most of the early 2000s, until Governor Eddie Calvo relaunched it in 2011. Since then, more native inhabitants have been registered to vote. Governor Calvo also dedicated local funding for political status education - the first such funding provision in about 20 years.

The Commission received \$300,000 in federal funding from the U.S. Department of Interior for an education campaign necessary to help ensure native inhabitants (as defined by law) are able to make an informed decision when they vote in a plebiscite. However, the U.S. District Court has ruled that a vote by the native people of Guam on their political status is unconstitutional; the plebiscite is on hold. In light of this, the Commission on Decolonization will continue with its educational outreach. Several proposals for education and outreach have been introduced including a museum exhibit, a Department of Education curriculum framework, and a social media plan. The Commission is expected to finalize its educational plans in the latter part of 2017.

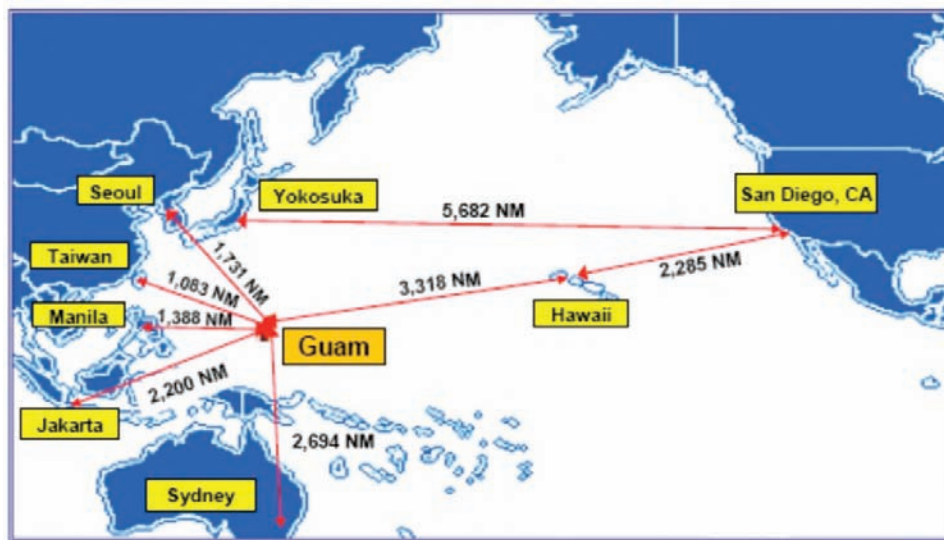
Military Activity

Recent world events have increased recognition of Guam's strategic military value and could result in increased military presence in Guam and its contribution to the Guam economy. A strong U.S. presence in the Pacific demonstrates active support for Japan, South Korea, Australia and other Pacific Rim allies and supports U.S. economic and security interests. Guam is positioned geographically to constitute an extended homeland defense perimeter, protecting the U.S. west coast and Hawaii from acts of aggression. Military bases on Guam can support forward deployed capabilities in Asia and allow rapid response to any threat to the stability of the Asian region or any threat to the U.S. originating in the Asian region. Other advantages of Guam's military activity include:

- Geographic Location: Closer to potential flashpoints of conflict in Asia and the Middle East.
- U.S. Sovereign Territory: No need for host nation consent to pre-position war munitions, to deploy weapons or to conduct operations.
- Air Force, Navy and Marine Corps, Coast Guard, National Guard and Reserve facilities with substantial munitions, fuel supply, communications, command and control capabilities.

- Unencumbered air and sea space for live fire and special operations training including EOD, SEALs and other joint war fighting and operational readiness initiatives.
- Deep-water harbor with 17,000 linear feet of wharfage with ability to handle three million pounds of ordnance (net explosive weight).
- Significant airfield capability including dual, two mile long runways with contingency, mobilization and surge capable civilian airfields on Guam and CNMI.
- Repair capabilities for surface vessels, submarines, aircraft and combat equipment at the Intermediate Maintenance Facility, the privatized ship repair facility, the submarine tender, Naval Base Guam, Andersen Air Force Base and civilian facilities.

The map below shows Guam's location in the Pacific and relative distances between major cities in the Pacific Rim.



The map below identifies major ports that can be reached from Guam via sea in five days or less.



Military Personnel

In late July 2010, the Joint Guam Program Office of the Department of the Navy released its Final Environmental Impact Statement (EIS) pertaining to the proposed U.S. military build-up on Guam, and in September 2010 the DoD issued its Record of Decision (ROD) pertaining to the EIS. At the time the EIS was released, it was anticipated that the military build-up would have three major parts: (i) Relocation of part of the Third Marine Expeditionary Force from Okinawa, Japan, (ii) Creation of the infrastructure for an Aircraft Carrier Berthing, and (iii) Installation of an Army Air and Missile Defense Task Force.

Together, these were anticipated to add approximately 32,000 permanent residents to the island, and to create a peak population increase of approximately 79,000 people in 2014.

In the years following 2010, Guam began to experience a decrease in military personnel as a result of the delay in the relocation of the Third Marine Expeditionary Force from Okinawa and Iwakuni, Japan to Guam. Concerns regarding the high cost of the relocation, delays in relocating U.S. military personnel and facilities currently within Japan, and the U.S. budget deficit extended the implementation timeframe for the relocation of the U.S. Marines from Japan. The proposed U.S. military build-up now is not expected to occur until after 2018. In addition, the expected size of the build-up has decreased. In particular, the relocation of part of the Third Marine Expeditionary Force from Okinawa, Japan, originally was expected to result in the relocation to Guam of approximately 8,600 Marines with approximately 9,000 dependents over a 5-year period. Now, the new plans for the build-up are expected to relocate approximately 5,000 Marines and 1,300 dependents to Guam over a 12-year period and, as discussed below, those plans are underway.

In July 2015, the DoD released the Supplemental Environmental Impact Statement (SEIS), which identified potential impacts associated with several alternatives for the cantonment/family housing component of this relocation, as well as for the live firing training range complex. The 2015 Record of Decision, which identifies the final locations for additional bases and facilities to accommodate the Marines, was released on August 28, 2015. According to the Navy, the SEIS showed a significantly decreased footprint and a significant decrease in the potential strain on Guam's infrastructure. Rather than the seven years of construction, the SEIS stated there would be 13 years of moderate construction with a gradual phase-out to follow. It is expected that the costs related to the

development and construction of facilities accommodating the build-up will be funded by the federal government and the government of Japan.

The expected impact from the military build-up on Guam's population is highlighted in Table A-13.

TABLE A-13
Estimated Total Population Increase ⁽¹⁾
2015-2028

Year	<u>Direct</u> <u>DOD</u>	<u>Indirect and</u> <u>Induced</u>	<u>Off island</u> <u>Construction</u>	<u>Civilian Military</u> <u>workers</u>	<u>Dependents</u>	<u>Total</u>
2015	33	89	161	4	60	347
2016	46	254	1,071	5	348	1,724
2017	46	531	2,301	38	702	3,618
2018	46	663	3,227	75	910	4,921
2019	505	686	2,871	113	767	4,942
2020	3,898	897	2,587	150	660	8,192
2021	4,327	1,082	3,175	188	814	9,586
2022	4,327	1,046	2,978	225	810	9,386
2023	5,582	915	2,205	263	756	9,721
2024	5,582	716	1,350	300	636	8,584
2025	6,079	612	618	338	499	8,146
2026	6,300	513	46	338	335	7,532
2027	6,300	455	0	338	320	7,413
2028	6,300	453	0	338	320	7,411

⁽¹⁾ Estimates shown are not additive from year to year; they represent the aggregate project related increase as of any given year relative to Base Year of 2014.

Source: 2015 Final Supplemental Environmental Impact Statement (SEIS), Guam and CNMI Military Relocation Report.

The U.S. government may choose to relocate military fleets, equipment and personnel from time to time in ways that either increase or decrease the U.S. military presence on Guam, and the Government cannot predict whether or when such adjustments may occur. However, military presence on Guam is generally expected to increase.

The U.S. Air Force hosts a rotating presence of bomber, tanker and fighter aircraft and permanently stationed RQ-4 Global Hawk unmanned aerial reconnaissance assets in addition to a variety of aircraft and contingency response training events. The U.S. Navy has home-ported three fast attack submarines in Guam: the USS Oklahoma City, the USS Chicago and the USS Key West.

Table A-14 Lists active duty military personnel on Guam from 2012 through 2016.

TABLE A-14
Active Duty Military Personnel on Guam
2012-2016

<u>Year</u>	<u>Air Force</u>	<u>Army</u>	<u>Coast Guard</u>	<u>Marines</u>	<u>Navy</u>	<u>Total</u>
2012	2,007	260	223	13	2,812	5,315
2013	2,010	257	216	18	3,318	5,819
2014	2,074	257	206	16	3,453	6,006
2015	2,074	253	184	21	3,583	6,115
2016	1,852	240	195	28	3,257	5,572

Source: COMNAVMAR; Bureau of Statistics and Plans, Military Active Duty and Family Members on Guam.

Table A-15 lists military dependents on Guam from 2012 through 2016.

TABLE A-15
Military Dependents on Guam
2012-2016

<u>Year</u>	<u>Air Force</u>	<u>Army</u>	<u>Coast Guard</u>	<u>Marines</u>	<u>Navy</u>	<u>Total</u>
2012	2,319	600	281	11	2,170	5,381
2013	2,099	2,384	348	36	2,385	7,252
2014	1,846	2,498	211	36	2,057	6,648
2015	1,847	2,916	200	31	2,217	7,211
2016	1,786	3,110	213	50	2,076	7,235

Source: COMNAVMAR; Bureau of Statistics and Plans, Military Active Duty and Family Members on Guam.

The Federal Procurement Data System – Next Generation (FPDS-NG) website updates its procurement data such that expenditures reported for any one year changes approximately every ninety (90) days for DoD Contracts, usually increasing the amounts previously published. To obtain a more current data of military contract awards, GEDA maintains a database of contracts awarded by the DoD for Guam as reported on various military websites supplemented with data from the Naval Facilities Engineering Command Contracting Office. This database indicates that \$264 million was awarded in Fiscal Year 2012; \$189 million in Fiscal Year 2013; \$249 million in Fiscal Year 2014; \$204 million in Fiscal Year 2015; \$309 million in Fiscal Year 2016 and \$137 million in Fiscal Year 2017. Given that not all DoD contract awards are reported on the source websites, it is believed that the database maintained by GEDA understates total contract awards for these years.

Table A-16 reflects US Department of Defense Procurement Contracts from 2012 through 2017.

TABLE A-16
U.S. Department of Defense Procurement Contracts for Guam
Fiscal Years 2012-2017

Fiscal Year	U.S. Department of Defense Procurement Contracts
2012	\$264,553,000
2013	\$189,727,000
2014	\$249,310,000
2015	\$204,436,000
2016	\$309,587,000
2017 ⁽¹⁾	\$137,680,000

⁽¹⁾ Values as of August 2017

Source: Federal Procurement Data System-Next Generation (FPDS-NG), Link <https://www.fpds.gov>

Congressional authorizations for appropriations for military construction and family housing projects are depicted in Table A-17 below. In July 2015, the DoD released the SEIS, which identified potential impacts associated with several alternatives for the cantonment/family housing component of this relocation, as well as for the live firing training range complex. The 2015 Record of Decision identified the final locations for additional bases and facilities to accommodate the Marines. The National Defense Authorization Act for federal Fiscal Year 2015 authorized \$162 million for military construction in Guam, subject to the satisfaction of certain requirements, and set the maximum cost of moving the Marines from Japan to Guam at \$8.7 billion.

The National Defense Authorization Act for federal Fiscal Year 2016 amends restrictions on the development of public infrastructure on Guam to support the military build-up and authorized the use of funds for a public infrastructure project to improve water and wastewater systems on Guam if (i) the project is identified in a specified DoD report and (ii) funds have been appropriated or made available by the DoD for the project. Fiscal Year 2016 projects approved by Congress include: Live-Fire Training Range Complex NW Field (\$125.6 million); Municipal Solid Waste Landfill Closure (\$10.7 million); Sanitary Sewer System Recapitalization (\$45.3 million); APR Dispersed Maintenance Spares & SE Storage Facilities (\$19.0 million); APR Installation Control Center (\$22.2 million); APR South Ramp Utilities Phase 2 (\$7.1 million); and PRTC Roads (\$2.5 million).

The National Defense Authorization Act for federal Fiscal Year 2017 includes approximately \$248.6 million for military construction on Guam. Fiscal Year 2017 projects approved by Congress include: Munitions Storage Igloos Phase 2 (\$35.3 million); SATCOM C41 Facility (\$14.2 million); Global Hawk Block 40 Maintenance Hangar (\$31.1 million); Harmon Power Upgrade (\$62.2 million); Hardening of Guam POL Infrastructure (\$26.9 million); and Replace Andersen Housing Phase 1 (\$78.8 million).

Fiscal Year 2018 projects submitted for Congressional approval includes: Aircraft Maintenance Hangar #2 (\$75.2 million), Corrosion Control Hangar (\$66.7 million), MALS Facilities (\$49.4 million), Navy Commercial Tie-In Hardening (\$37.1 million), Water Well Field (\$56.0 million), Construct Truck Load & Unload Facility (\$23.9 million), Reserve Medical Training Facility (\$5.2 million) and the Replacement of Andersen Housing Phase 2 (\$40.8 million).

TABLE A-17
U.S. Military Construction Authorizations for Guam
Fiscal Years 2012-2017

<u>Year</u>	<u>Total Authorizations</u>
2012	\$100,977,000
2013	\$101,904,000
2014	\$494,607,000
2015	\$162,451,000
2016	\$232,568,000
2017 ⁽¹⁾	\$248,658,000

⁽¹⁾ Fiscal Year 2017 Military Construction Authorization for Guam, as passed by House Armed Services Committee (HASC).

Source: The Committee on Armed Services, National Defense Authorization Acts

Recent Military Project Awards

In December 2014, Naval Facilities Engineering Command Marianas awarded a \$52 million contract for construction of a new fuel transfer pipeline and upgrade of an existing fuel transfer pipeline. In May 2014, the Navy awarded task order projects for the construction/engineering of modular storage magazines and for the design and construction of an aircraft maintenance hangar, an undertaking of \$42 million and \$53.7 million respectively.

Congress has authorized approximately \$106.4 million for military-funded civilian water and wastewater projects in Guam. In August 2016, the DoD, through the OEA, awarded GWA approximately \$55.3 million in grants to fund civilian water and wastewater projects linked to the military build-up, including \$30.6 million to be applied to build and refurbish the sewer line that supports Andersen Air Force Base and the site of the new Marine Corps base, \$21.0 million for improvements to the Northern District Wastewater Treatment Plant, \$3.7 million for improvements to the Northern Guam Lens Aquifer Monitoring System Expansion and Rehabilitation and \$350,000 to be used by the U.S. Environmental Protection Agency to analyze water and wastewater projects. In November 2017, the DoD, through the OEA, awarded GWA approximately \$117.9 million in additional grants to fund the construction of civilian wastewater projects linked to the military build-up, including upgrades to the Northern District Wastewater Treatment Plant.

Recent construction awards further demonstrate that the military build-up, twelve years in the planning stages, is now ready to move forward, the Naval Facilities Engineering Command (NAVFAC) Pacific, awarded a \$164.89 million contract in August, 2017, to Granite-Obayashi for the design and construction of utilities and site improvements for the future Marine Corps Base. The contract includes utilities, roads and other infrastructure in anticipation of follow-on projects in FY 2020. Also in August, a \$78 million contract to design and build a live-fire training range complex at Northwest Field was awarded to a Guam based company, Black Construction Corp. The project is expected to be complete by November 2020.

Other military projects awarded include a \$41.16 million contract to Contrack Watts, Inc. for upgrades to the sewer system at Naval Base Guam (estimated completion date of January 2020), a \$28.5 million contract to Hensel Phelps Construction Co. for the construction of a power upgrade at the Joint Region Marianas, Guam (March 2020 estimated completion date) and a \$7.2 million contract to Tikigaq Construction LLC to build a landfill closure capping system at Anderson Air Force Base (estimated completion date of February 2019).

APPENDIX B

**FINANCIAL STATEMENTS, ADDITIONAL INFORMATION AND INDEPENDENT AUDITORS'
REPORT FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2016 AND 2015**

[THIS PAGE INTENTIONALLY LEFT BLANK]

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

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

YEARS ENDED SEPTEMBER 30, 2016 AND 2015

INDEPENDENT AUDITORS' REPORT

Commissioners
Consolidated Commission on Utilities:

Report on the Financial Statements

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

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

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

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

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

Opinion

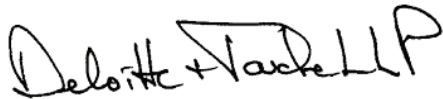
In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Guam Waterworks Authority as of September 30, 2016 and 2015, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles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

Other Matters

Required Supplementary Information

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

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

A handwritten signature in black ink that reads "Deloitte + Tuck LLP". The signature is stylized, with the "D" being large and the "LLP" being written in a cursive-like font.

January 13, 2017 (except for Note 8 regarding OPEB as to which the date is November 3, 2017)

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

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

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

Overview of the Financial Statements

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

Proprietary Fund Financial Statements

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

Notes to the Financial Statements

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

Other Information

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

Financial Condition and Results

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

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

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

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

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

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

Summary Statement of Net Position

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Annual Water Revenues (Excluding System Development Charges)

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

Annual WasteWater Revenues (Excluding System Development Charges)

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

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

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

Capital Assets

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

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

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

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

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

WASTE WATER

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

WATER

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

Capital Assets, Net of Accumulated Depreciation

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

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

Debt

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

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

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

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

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

Long-Term Debt

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

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

Looking Forward

Outlook, Challenges, and Opportunities

GWA has undergone significant transformation. However, it continues to face challenges from the USEPA and other regulatory agencies, as well as from customers, to make needed improvements to the System on a timely basis. Considerable capital needs remain, much like previous years, for water supply reliability, water quality, leak detection, line repair, as well as improvements needed to accommodate growth in the island's population centers and normal renewals and replacement. Complying with requirements of the 2011 Federal Court Order will continue to be one of GWA's principal focus in 2017 and ensuing years.

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

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

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

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

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

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

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

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

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

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

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

Request for Information

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

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

Statements of Net Position
September 30, 2016 and 2015

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

See accompanying notes to financial statements.

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

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

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

See accompanying notes to financial statements.

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

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

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

See accompanying notes to financial statements.

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

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

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

See accompanying notes to financial statements.

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

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

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

See accompanying notes to financial statements.

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

Notes to Financial Statements
September 30, 2016 and 2015

(1) Reporting Entity

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

(2) Summary of Significant Accounting Policies

Basis of Accounting

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

Net Position

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

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

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

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

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

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

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

All of GWA's restricted net position is expendable.

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

Notes to Financial Statements
September 30, 2016 and 2015

(2) Summary of Significant Accounting Policies, Continued

Estimates

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

Risk Management

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

Allowance for Doubtful Accounts

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

Materials and Supplies Inventory

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

Property, Plant and Equipment

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

Noncurrent Restricted Cash and Cash Equivalents

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

Deferred Outflows of Resources

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(2) Summary of Significant Accounting Policies, Continued

Deferred Inflows of Resources

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

Compensated Absences

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

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

Pensions

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

Bond Premiums and Discounts

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(2) Summary of Significant Accounting Policies, Continued

Revenue Recognition

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

Cash and Cash Equivalents

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

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

Capitalization of Interest

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

Capitalized Labor Costs

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

Operating and Non-Operating Revenue and Expenses

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

Grants and Contributions

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

Income Taxes

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(2) Summary of Significant Accounting Policies, Continued

New Accounting Standards

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

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

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

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(2) Summary of Significant Accounting Policies, Continued

New Accounting Standards, Continued

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

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

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

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

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

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

Reclassifications

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(3) Cash and Cash Equivalents

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

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

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(3) Cash and Cash Equivalents, Continued

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

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

(4) Receivables

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(4) Receivables, Continued

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

(5) Property, Plant and Equipment

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

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

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(6) Long-Term Debt

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(6) Long-Term Debt, Continued

Revenue Bonds, Continued:

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

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

Note Payable:

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

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(6) Long-Term Debt, Continued

2010 Series Revenue Bonds

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

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

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

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

2013 Series Revenue Bonds

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

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

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(6) Long-Term Debt, Continued

2014 Series Refunding Bonds

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

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

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

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

2016 Series Revenue Bonds

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

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

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(6) Long-Term Debt, Continued

Bank Loan

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

Prior-Year Defeasance of Debt

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

(7) Change in Long-Term Liabilities

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(7) Change in Long-Term Liabilities, Continued

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

(8) Employees' Retirement Plan

Defined Benefit Plan

A. General Information About the Pension Plan:

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(8) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

A. General Information About the Pension Plan, Continued:

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

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

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

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

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

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

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(8) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

A. General Information About the Pension Plan, Continued:

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

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

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

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(8) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

A. General Information About the Pension Plan, Continued:

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

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

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

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

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

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(8) Employees' Retirement Plan, Continued

Defined Benefit Plan, Continued

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

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

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

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

Year Ended
September 30

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

Defined Contribution Plan

Contributions into the Defined Contribution Retirement System (DCRS) plan by members are based on an automatic deduction of 5% of the member's regular base pay. The contribution is periodically deposited into an individual investment account within the DCRS. Employees are afforded the opportunity to select from different investment accounts available under the DCRS.

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(8) Employees' Retirement Plan, Continued

Defined Contribution Plan, Continued

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

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

Other Post Employment Benefits

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

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

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

GWA's net OPEB obligation at September 30, 2016, 2015, 2014 for the above mentioned Plan is as follows:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
	<u>\$ 31,786,350</u>	<u>\$ 27,236,000</u>	<u>\$ 23,950,000</u>

(9) Real Estate Property Transferred by Government of Guam

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(10) Agreements with the United States Navy

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

(11) Commitments and Contingencies

Merit System

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

Claims

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

Contract Commitments

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

Program Management Office Services

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

Operating Lease

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(11) Commitments and Contingencies, Continued

Medicare

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

Court Order

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

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

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

Primary Treatment Permits

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(12) Contributions Received

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

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

(13) Supplemental/COLA Annuities

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

(14) System Development Charge (SDC)

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

(15) Related Party Transactions

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

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

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

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

Notes to Financial Statements
September 30, 2016 and 2015

(16) Subsequent Events

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

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

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

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

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

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

See Accompanying Independent Auditors' Report.

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

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

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

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

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

See Accompanying Independent Auditors' Report.

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

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

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

See Accompanying Independent Auditors' Report.

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

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

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

See Accompanying Independent Auditors' Report.

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

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

ASSETS

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

LIABILITIES AND NET POSITION

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

REVENUES, EXPENSES AND CHANGES IN NET POSITION

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

See Accompanying Independent Auditors' Report.

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

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

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

See Accompanying Independent Auditors' Report.

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

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

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

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

See Accompanying Independent Auditors' Report.

[THIS PAGE INTENTIONALLY LEFT BLANK]

APPENDIX C

SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

[THIS PAGE INTENTIONALLY LEFT BLANK]

APPENDIX C

SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

DEFINITIONS

The following are summaries of definitions of certain terms used in this Summary of the Indenture. All capitalized terms used but not defined in the Official Statement will have the meanings set forth in the Indenture.

“Account” means each account established and given a designation pursuant to the Indenture.

“Accreted Value” means, with respect to any particular Bonds as of any given date of calculation, an amount equal to the sum of the principal amount of such Bonds plus accrued and unpaid interest on such Bonds as of such date, but not including interest payable on a current basis at least annually.

“Act” means Chapter 14 of Title 12 of the Guam Code Annotated, as amended, and as it may from time to time hereafter be amended or supplemented.

“Additional Bonds” means bonds, notes or other obligations of the Authority payable from Revenues and ranking on a parity with the Bonds then outstanding and authorized to be issued under and pursuant to the Indenture.

“Aggregate Annual Debt Service” means, for any year, Annual Debt Service for such year on all Bonds.

“Annual Debt Service” means, for any year, and with respect to any Bonds (A) the sum of (1) the interest falling due on such Bonds then Outstanding (assuming that all then Outstanding Serial Bonds are retired on their respective maturity dates and that all then Outstanding Term Bonds are retired at the times of and in amounts provided for by the Mandatory Sinking Account Payments applicable to such Term Bonds), but not including Capitalized Interest, plus (2) the principal amount of such Bonds then Outstanding that are Serial Bonds falling due by their terms, plus (3) the aggregate amount of all Mandatory Sinking Account Payments falling due with respect to such Bonds then Outstanding that are Term Bonds, plus (4) the aggregate amount of Payment Agreement Payments under Related Parity Payment Agreements then Outstanding falling due, minus (B) the aggregate amount of Payment Agreement Receipts under Related Payment Agreements then Outstanding falling due; all as calculated for said year and provided that for purposes of determining the interest payable on Variable Rate Bonds, any obligation of the Authority to make Payment Agreement Payments based on a variable rate under Parity Payment Agreements and any obligation of a Qualified Counterparty to make payments under a Payment Agreement to the Authority based on a variable rate, the following assumptions shall be made:

(i) for purposes of determining the interest payable on Variable Rate Bonds, the interest rate used in making such determination shall be (a) for periods for which such rate has been determined, the actual interest rate on such Bonds; (b) for purposes of calculations relating to issuance of refunding Bonds for any other period, a rate equal to 1.1 times the highest rate of interest borne by such Bonds, or if such Bonds were not Outstanding during any portion of any such period bonds with similar ratings and terms, during the next preceding twelve months; or (c) for any other period or purpose, the prevailing interest rate on such Bonds as of the date of such determination;

(ii) for purposes of determining the amount of Payment Agreement Payments based on a variable rate under Parity Payment Agreements, the rate used in making such determination shall be assumed to be (a) for periods for which such rate has been determined, the actual rate used to calculate such payments, (b) for purposes of calculations relating to issuance of refunding Bonds for any other period, a rate equal to 1.1 times the highest such rate during the next preceding twelve months, and (c) for any other period or purpose, the prevailing rate being used to determine such payment obligation as of the date of such determination; in each such case without regard to the occurrence of any event that, under the provisions of such Payment Agreement, would permit or require the Authority to make payments on any basis other than such rates;

(iii) for purposes of determining the amount of payments by a Qualified Counterparty under a Payment Agreement to the Authority based on a variable rate, the rate used in making such determination shall be (a) if such Payment Agreement obligates a Qualified Counterparty to make payments to the Authority based on a variable rate that is equal to the actual rate on the Related Bonds, the actual rate on such Bonds; and (b) if such Payment Agreement obligates a Qualified Counterparty to make payments to the Authority based on a variable rate other than the actual rate on the Related Bonds (1) for periods for which such rate has been determined, the actual rate used to calculate such payments, (2) for purposes of calculations relating to issuance of refunding Bonds for any other period, a rate equal to 1.1 times the highest such rate during the next preceding twelve months, and (3) for any other period or purpose, the prevailing rate being used to determine such payment obligation as of the date of such determination; in each such case without regard to the occurrence of any event that, under the provisions of such Payment Agreement, would permit or require the Qualified Counterparty to make payments on any basis other than such rates.

“Authority” means the Guam Waterworks Authority, a public corporation of the Government of Guam, or any successor to the rights, powers, functions and duties with respect to the management, administration and control of the System which are now or hereafter vested in the Authority.

“Authorized Officer” of the Trustee means and includes the chairperson of the board of directors, the president, every vice president, every assistant vice president, every trust officer and any other officer or assistant officer of the Trustee, other than those specifically above mentioned, designated by a certificate of an Authorized Officer of the Trustee as an Authorized Officer for purposes of the Indenture.

“Board” means the Consolidated Commission on Utilities established in Chapter 79 of Title 12 of the Guam Code Annotated or any other governing board of the Authority hereafter provided for pursuant to law.

“Bond Counsel” means an attorney or firm of attorneys designated by the Authority and having a national reputation for expertise in matters relating to governmental obligations the interest on which is excluded from gross income for federal income tax purposes under Section 103 of the Code.

“Bond Reserve Fund Requirement” means, as of any particular date of calculation, an amount equal to the Maximum Annual Debt Service for the then current or any future Fiscal Year on all Outstanding Bonds; provided, however, that if upon issuance of a Series of Bonds, such amount would require moneys to be credited to the Bond Reserve Fund from such Bond proceeds in an amount in excess of the maximum amount permitted from tax-exempt bond proceeds under the Code, the Bond Reserve Fund Requirement shall mean an amount equal to the sum of the Bond Reserve Fund Requirement immediately preceding issuance of such Bonds plus the maximum amount permitted under the Code to be deposited therein from the proceeds of such Bonds, as specified by Certificate of the Authority.

“Bond Reserve Fund” means the fund by that name established pursuant to the Indenture.

“Bond Year” means, with respect to any Series, the period of twelve consecutive months ending on the day in each year specified in the Supplemental Indenture authorizing the issuance of such Series if Bonds are or will be Outstanding in such twelve-month period, and, with respect to the Series 2017 Bonds, the first Bond Year shall commence on the date of delivery of the Series 2017 Bonds.

“Bondowner or Owner or Holder” means any person who shall be the registered owner of any Outstanding Bond, or, if such Outstanding Bond shall have a maturity of one year or less and shall have been issued in bearer form, shall mean the bearer of such Bond.

“Bonds” means the Guam Waterworks Authority Water and Wastewater System Revenue Bonds authorized by, and at any time Outstanding pursuant to, the Indenture, including any Additional Bonds authorized by, and at any time Outstanding pursuant to, the Indenture.

“Business Day” means any day other than a Saturday, Sunday or other day upon which banks in the cities in which the Principal Offices of the Trustee, the Co-Trustee, each Depositary, each Paying Agent and each Credit Provider are located are authorized or required to be closed.

“Capital Improvement” means any addition, betterment, improvement or extension of the System having costs in excess of \$100,000 and a useful life in excess of five years.

“Capital Improvement Fund” means the fund by that name established pursuant to the Indenture for the purposes provided in the Indenture.

“Capitalized Interest” means interest to be paid from the original proceeds of Bonds (including proceeds constituting accrued interest on the Bonds) and from income derived from the investment of such proceeds.

“Certificate of the Authority” means an instrument in writing signed by the Chairperson or by the General Manager or by any other officer of the Authority duly authorized by resolution of the Board for that purpose. Any such instrument and supporting opinions or representations, if any, may, but need not, be combined in a single instrument with any other instrument, opinion or representation, and the two or more so combined shall be read and construed as a single instrument. If and to the extent required by relevant provisions of the Indenture, each Certificate of the Authority shall include the statements provided for in such provisions.

“Certified Public Accountant” means (i) any nationally recognized U.S. certified public accountant or accounting firm or (ii) any other U.S. certified public accountant or accounting firm approved by each Credit Provider, if any, not then in default of its obligations under a Credit Facility.

“Chairperson” means the chairperson of the Board.

“Chief Financial Officer” means the Chief Financial Officer of the Authority.

“Code” means the Internal Revenue Code of 1986 or any similar or successor federal law.

“Construction Account” means an account by that name established pursuant to the Indenture.

“Construction Fund” means the Guam Waterworks Authority Construction Fund established pursuant to the Act.

“Consulting Engineer” means an Independent architect, engineer, consultant, or architectural, engineering, or consulting firm experienced in water and sewer system design, construction, or operation, having a favorable reputation with respect thereto and retained by the Authority to perform the acts and carry out the duties of a Consulting Engineer under the Indenture and, in any case, nationally recognized as being experienced in the preparation of feasibility studies for use in connection with the financing of water and sewer systems.

“Costs of Issuance” means all items of expense directly or indirectly payable by or reimbursable to the Authority and related to the authorization, issuance, sale and delivery of the Bonds, including but not limited to advertising costs, Bond and official statement printing costs, costs of preparation and reproduction of documents, filing and recording fees, initial fees and charges of the Trustee, the Co-Trustee, and any Depositary, Paying Agent or Registrar, legal fees and charges, fees and disbursements of consultants and professionals, fees and expenses of any Credit Provider, rating agency fees, fees and charges for preparation, execution, transportation and safekeeping of Bonds and any other cost, charge or fee in connection with the original issuance of Bonds.

“Co-Trustee” means U.S. Bank National Association, appointed by the Authority as Co-Trustee and acting as an independent trustee with the duties and powers provided in the Indenture, its successors and assigns, and any other corporation or association which may at any time be substituted in its place as provided in the provisions of the Indenture relating to the Co-Trustee.

“Credit Agreement” means any agreement between the Authority and a Credit Provider pursuant to which such Credit Provider agrees to provide a Credit Facility or pursuant to which the Authority agrees to reimburse a Credit Provider for draws or advances under or claims made against a Credit Facility.

“Credit Agreement Payments” means Credit Agreement Reimbursement Payments and Other Credit Agreement Payments.

“Credit Agreement Reimbursement Payments” means any payment obligation of the Authority pursuant to a Credit Agreement designated as such in a Supplemental Indenture.

“Credit Facility” means any letter of credit, insurance policy, surety bond or other instrument designated by a Supplemental Indenture as providing supplemental credit support for a Series of Bonds (including by substituting for a deposit in a Bond Reserve Fund).

“Credit Provider” means any person, firm or entity designated in a Supplemental Indenture as providing a Credit Facility for a Series of Bonds, and any successor thereto.

“Date of Completion” means, for any particular Project, the date on which such Project is projected to be available for use by the Authority for the purposes for which it is intended to be used.

“Debt Service Fund” means the fund by that name established pursuant to the Indenture.

“Depository” means, with respect to any particular fund or account, the bank or trust company or other financial institution with similar powers designated by a Supplemental Indenture or a Statement of the Authority to act as the Depository under the Indenture for such fund or account, its successors and assigns, and any other bank or trust company or financial institution which may at any time be substituted in its place, as provided in the provisions of the Indenture relating to the Depository.

“DTC” means The Depository Trust Company, New York, New York, and its successors and assigns.

“Event of Default” means an event of that name described in the Indenture.

“Federal Securities” means (1) direct obligations of the United States of America for which the full faith and credit of the United States of America are pledged for the payment of principal and interest (including obligations issued or held in book-entry form on the books of the Department of the Treasury of the United States of America); (2) obligations for which the payment of principal and interest is guaranteed directly by the full faith and credit of the United States of America of the following types issued by the following agencies: U.S. Export-Import Bank (direct obligations or fully guaranteed certificates of beneficial ownership), Farmers Home Administration (certificates of beneficial ownership), Federal Financing Bank, General Services Administration (participation certificates), U.S. Maritime Administration (guaranteed Title XI financing), U.S. Department of Housing and Urban Development (project notes, local authority bonds, new communities debentures--U.S. government guaranteed debentures, or U.S. public housing notes and bonds--U.S. government guaranteed public housing notes and bonds); (3) obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (collectively, “Municipal Obligations”) (a) which are fully secured as to principal and interest and redemption premium, if any, by an escrow or trust fund consisting only of cash or obligations of the character described in clauses (1) or (2) of this definition (“Government Obligations”), which fund may be applied only to the payment of interest on such municipal obligations when due and principal of and redemption premium, if any, on such municipal obligations on the maturity date or dates thereof or the redemption date or dates specified in an irrevocable notice, as appropriate, (b) as to which the cash and the principal of and interest on the Government Obligations in such escrow or trust fund will be sufficient to pay such interest, principal and redemption premium on such date or dates, and (c) which at the time of purchase are rated in the highest rating category by each Rating Agency; (4) certificates which evidence ownership of the right to the payment of any specified portion of the principal of and interest on obligations described in clause (1) of this definition, provided that such obligations have been stripped by the Treasury of the United States of America; and (5) the interest component of Resolution

Funding Corp. stripped securities, which have been stripped by request to the Federal Reserve Bank of New York, in book entry form.

“Fiduciaries” means the Trustee, the Co-Trustee, each Depositary, each Registrar and each Paying Agent.

“Financial Newspaper or Journal” means, collectively, The Wall Street Journal, The Bond Buyer or any one or more other newspapers or journals publishing financial news and selected by the Trustee, whose decision shall be final and conclusive, printed in the English language, customarily published on each business day and circulated in New York, New York, San Francisco, California, and Hagatña, Guam.

“Fiscal Year” means the period beginning on October 1 of each year and ending on the next succeeding September 30, or such other fiscal year as may be adopted by the Authority.

“Fund” means each fund established and given a designation pursuant to the Indenture or any Supplemental Indenture.

“General Manager” means the person appointed by the Board under the Act to supervise the administration of the Authority as its chief executive officer.

“Government” means the Government of Guam or any successor to the rights, powers and obligations thereof under the Act with respect to the Bonds.

“Indenture” means the Indenture, as originally executed or as it may from time to time be supplemented, modified or amended by any Supplemental Indenture.

“Independent” means, when used with respect to any given person, that such person (who may be selected and paid by the Authority or the Government) (1) is in fact independent and not under domination of the Authority or the Government; (2) does not have any substantial interest, direct or indirect, with the Authority or the Government; and (3) is not connected with the Authority or the Government as an officer or employee of the Authority or the Government, but who may be regularly retained to provide services to the Authority or the Government.

“Interest Accrual Period” means, for any particular Bond, each period between successive Interest Payment Dates for such Bond, including in each case in such period the concluding Interest Payment Date but not the beginning Interest Payment Date, and treating the day prior to the date of original issuance of such Bond as if it were an Interest Payment Date for such Bond for this purpose.

“Interest Payment Date” means, for any particular Bond, each date specified as an Interest Payment Date for such Bond by the Supplemental Indenture authorizing the issuance of such Bond and, for all Bonds, all such dates.

“Investment Securities” means any of the following which at the time are legal investments under the laws of Guam for moneys held under the Indenture and then proposed to be invested therein (the Trustee and the Co-Trustee shall be entitled to rely upon a Request of the Authority directing investments under the Indenture as a determination that such investment constitutes a legal investment): (1) Federal Securities; (2) obligations, debentures, notes or other evidence of indebtedness issued or guaranteed by any of the following: Federal Home Loan Banks, Federal National Mortgage Association, Government National Mortgage Association, Federal Housing Administration or Federal Home Loan Mortgage Corporation; (3) interest-bearing demand or time deposits (including certificates of deposit) which are continuously and fully insured by the Bank Insurance Fund or the Savings Association Insurance Fund; (4) obligations, including deposits, federal funds borrowings and banker’s acceptances, of any bank, or of the subsidiary lead bank of any bank holding company, which has an unsecured, uninsured and unguaranteed obligation of equivalent maturity rated at least the second highest major rating category by each Rating Agency; (5) commercial paper rated at least the second highest rating category by each Rating Agency; (6) money market funds which are (a) restricted to Federal Securities or (b) registered under the Investment Company Act of 1940 and the shares of which are registered under the Securities Act of 1933, and have a rating by

S&P of AAAM-G; AAA-m; or AA-m and Moody's of Aaa, Aa1 or Aa2; (7) repurchase agreements, the underlying securities of which are specifically designated and are obligations described in clause (1) or (2) of this definition, provided that, (a) the agreement is between the municipal entity and a dealer bank or securities firm; (b) such dealer bank or securities firm is either a primary dealers on the Federal Reserve reporting dealer list rated "A" or better by Standard & Poor's and Moody's, or a bank rated "A" or better by Standard & Poor's and Moody's; (c) the agreement provides that the securities be delivered to the Authority, the Trustee, the Co-Trustee or third party acting as agent for either (if the Trustee or Co-Trustee is supplying the collateral) before payment or on a delivery versus payment basis; (d) the securities must be valued weekly, marked-to-market at current market price plus accrued interest; (e) the value of collateral must be equal to 104% (or 105% if the collateral is comprised of obligations of Federal National Mortgage Association or Federal Home Loan Mortgage Corporation) of the amount of cash transferred to the dealer bank or security firm plus accrued interest; and (f) the Authority receives a legal opinion that the agreement is a legal investment under the laws of Guam; (8) subject to the provisions of any Supplemental Indenture, investment agreements (a) with corporations, associations or financial institutions which have general obligations, or whose holding companies have general obligations, rated at least the second highest rating category by each Rating Agency, or (b) which agreements are continuously secured by obligations described in clause (1) or (2) of this definition which have a market value (valued at least weekly) not less than 103% of the amount so invested; and (9) any other investment approved in writing by each Credit Provider then providing a Credit Facility for Bonds not then in default of its obligations thereunder. None of the Trustee, the Co-Trustee nor any Depositary shall be deemed, by entering into the Indenture, to have agreed to make the valuation required by clauses (7) and (8) of this definition, but such agreement by or on behalf of the Trustee, the Co-Trustee or a Depositary shall be a condition precedent to investment in obligations of the type described in such clauses.

"Legislature" means the Legislature of Guam or any successor to the rights, powers and obligations thereof under the Act with respect to the Bonds.

"Mandatory Sinking Account Payment" means, as of any date of calculation with respect to any Series of Bonds, the amount required by the Indenture and any Supplemental Indenture to be paid by the Authority on a given date for the retirement of Term Bonds of such Series.

"Maximum Annual Debt Service" means, for any particular Bonds as of any particular date of calculation, Annual Debt Service on such Bonds for the Bond Year including or commencing on or after such date for which such sum shall be largest.

"Net Revenues" means, for any particular period, (a) the sum of (i) all of the Revenues (other than Payment Agreement Receipts) received during such period plus (ii) the aggregate amount of all transfers from the Rate Stabilization Fund to the Revenue Fund during such period, less (b) the sum of (x) all Operation and Maintenance Expenses incurred during such period plus (y) the amount of all transfers from the Revenue Fund to the Rate Stabilization Fund during such period.

"Operation and Maintenance Expenses" means such reasonable and necessary current expenses of the Authority, paid or accrued, for operation, maintenance and repair of the System as may be determined by the Board, and the term may include at the Board's option, except as limited by contract or otherwise limited by law, without limiting the generality of the foregoing: (a) legal and overhead expenses of the Authority directly related and reasonably allocable to the administration of the System; (b) fidelity bond and insurance premiums appertaining to the System or a reasonably allocable share of a premium of any blanket bond or policy pertaining to the System; (c) contractual services, professional services, salaries, administrative expenses, and costs of labor appertaining to System, including fees and expenses of the Trustee; (d) the costs incurred in the collection of all or any part of the Revenues; and (e) any costs of utility services furnished to the System by the Authority or otherwise. However, the term "Operation and Maintenance Expenses" as used in the Indenture does not include: (i) any allowance for depreciation; (ii) any costs of System capital renewals, replacements, major repairs, reconstruction, improvements, extensions or betterments; (iii) any accumulation of reserves for System capital renewals, replacements, major repairs or reconstruction; (iv) any reserves for operation, maintenance or repair of the System; (v) any liabilities incurred in the acquisition or improvement of any properties comprising the System or any combination thereof; (vi) any other legal liability not based on contract; and (vii) payments made by the Authority to Guam Power Authority for power delivered prior to the Fiscal Year commencing October 1, 2003.

“Operation and Maintenance Fund” means the fund by that name established pursuant to the Indenture.

“Operation, Maintenance, Renewal and Replacement Reserve Fund” means the fund by that name established pursuant to the Indenture.

“Opinion of Counsel” means a written opinion of counsel (who may be counsel for the Authority) retained by the Authority. If and to the extent required by relevant provisions of the Indenture, each Opinion of Counsel shall include the statements provided for in such provisions.

“Order of the Authority, Request of the Authority, Requisition of the Authority, or Statement of the Authority” mean, respectively, a written order, request, requisition or statement signed by or on behalf of the Authority by the Chairperson or the General Manager or by any person (whether or not an officer of the Authority) who is specifically authorized by resolution of the Board to sign or execute such a document on behalf of the Authority.

“Other Credit Agreement Payments” means any payment obligation of the Authority pursuant to a Credit Agreement designated as such in a Supplemental Indenture.

“Outstanding”, when used as of any particular time with reference to: (A) Bonds, means (subject to the provisions of the Indenture relating to discharge of liability on Bonds) all Bonds theretofore executed, issued and delivered by the Authority under the Indenture except --(1) Bonds theretofore cancelled by the Trustee or surrendered to the Trustee for cancellation, (2) Bonds for the payment or redemption of which funds or securities in the necessary amount (as set forth in the Indenture) shall have theretofore been deposited with the Trustee (whether upon or prior to the maturity or redemption date of such Bonds), provided that, if such Bonds are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given as in the Indenture provided or provision satisfactory to the Trustee shall have been made for the giving of such notice, and (3) Bonds in lieu of or in substitution for which other Bonds shall have been executed, issued and delivered by the Authority pursuant to the Indenture; (B) Payment Agreements, means all Payment Agreements which have not been paid or otherwise satisfied as provided in the proceedings and instruments pursuant to which such Payment Agreements have been incurred; provided that Payment Agreements shall not be Outstanding if the Authority or the Qualified Counterparty with respect thereto is in default thereunder; and (C) Credit Agreements, means all Credit Agreements which have not been paid or otherwise satisfied as provided in the proceedings and instruments pursuant to which such Credit Agreements have been incurred; provided that a Credit Agreement shall not be Outstanding during any period in which the Credit Provider with respect thereto is in default on its payment obligations thereunder.

“Parity Payment Agreement” means a Payment Agreement which is designated as such in a Supplemental Indenture, the payment of which constitutes a charge and lien on Revenues equal to and on a parity with the charge and lien upon the Revenues for the payment of the Bonds.

“Parity Payment Agreement Payments” means Payment Agreement Payments under a Parity Payment Agreement.

“Paying Agent” means any paying agent appointed pursuant to a Supplemental Indenture, and its successors and assigns as provided in the provisions of the Indenture regarding the Paying Agent.

“Payment Agreement” means any contract entered into by the Authority with a Qualified Counterparty in connection with, or incidental to, the issuance of Bonds, or the carrying of any investment or program of investment or entering into or maintaining any agreement which secures Bonds, which the Authority determines to be necessary or appropriate to place the obligation or investment of the Authority, as represented by such Bonds, investment, program of investment or agreement and the contract or contracts, in whole or in part, on the interest rate, currency, cash-flow, or other basis desired by the Authority, including, without limitation, contracts commonly known as interest rate swap agreements or contracts providing for payments based on levels of, or changes in, interest rates, or contracts to exchange cash flows or a series of payments, or contracts, including, without limitation, interest rate floors or caps, options, put or call to hedge payment, rate, spread, or similar exposure and which is designated as such and as Related to particular Bonds in a Supplemental Indenture.

“Payment Agreement Payment Accrual Period” means, for any Payment Agreement, each period between successive Payment Agreement Payment Dates for such Payment Agreement, including in each case in such period the concluding Payment Agreement Payment Date but not the beginning Payment Agreement Payment Date, and treating the day prior to the effective date of such Payment Agreement as if it were a Payment Agreement Payment Date for such Payment Agreement for this purpose.

“Payment Agreement Payment Date” means, for any particular Payment Agreement, each date specified as a payment date in such Payment Agreement.

“Payment Agreement Payments” means amounts required to be paid periodically by the Authority to any Qualified Counterparty pursuant to a Payment Agreement, but not including (i) Termination Payments or (ii) such other payments as may be specified in a Supplemental Indenture.

“Payment Agreement Receipts” means amounts required to be paid periodically by a Qualified Counterparty to the Authority pursuant to a Payment Agreement, but not including Termination Payments.

“Principal Office” means, with respect to the Trustee, the Co-Trustee and any other Fiduciary, the office at the respective address set forth in the Indenture or at such other address as the respective party may have designated for such purpose. The Principal Office of any Credit Provider shall be as specified by such Credit Provider pursuant to its Credit Facility or Credit Agreement.

“Principal Payment Period” means, for any particular Bond, each period so designated by the Supplemental Indenture authorizing the issuance of such Bond.

“Project” means any particular additions, enlargements, betterments, extensions and other improvements to or related to, and the equipping of, the System, including, without limitation, the acquisition of land and furnishings therefor or the payment of any claims or judgments relating thereto, as specified and described by the Supplemental Indenture authorizing issuance of the first Series of Bonds for such Project, and as such specification and description may be modified in accordance with the Indenture.

“Project Costs” means, with respect to any given Project, all costs which are chargeable to the capital account of such Project, including, but not limited to, the following: (1) costs of the Authority and all contractors for land (including franchises, licenses or other interests in land), labor, materials, machinery, equipment and furnishings in connection with the acquisition, construction, reconstruction, installation and equipping of the Project or otherwise attributable to the Project; (2) the cost of relocation and installation of utilities, environmental cleanup and noise abatement; (3) the cost of contract bonds and insurance of all kinds that may be required or necessary during the construction of the Project; (4) all costs of architectural and engineering services, including the costs of test borings, surveys, estimates, plans and specifications and preliminary investigation therefor, and for inspecting and supervising construction, as well as for the performance of all other duties required by or consequent upon the proper construction of the Project; (5) relocation costs and any claims, awards or judgments relating to the Project; (6) Capitalized Interest; and (7) all amounts required to reimburse the Authority for advances made by it for any of the above items or for any other costs incurred and for work done, whether before or after the date of the Indenture, which are properly chargeable to the Project.

“Qualified Counterparty” means the party, other than the Authority, to a Payment Agreement; provided that any such party must satisfy the following requirements: (1) either (a) the obligations of such party under the Payment Agreement (or obligations of such type) must be rated in one of the three highest rating categories of each of the Rating Agencies then rating the Bonds (without regard to any gradations within a rating category), or (b) the obligations of such party under the Payment Agreement are guaranteed by a bond insurer or other institution, in each case the obligations of such type of which must be rated in one of the three highest rating categories of each of the Rating Agencies then rating the Bonds (without regard to any gradations within a rating category); and (2) such party must be otherwise qualified to act as the other party to a Payment Agreement with the Authority under any applicable laws.

“Rate Stabilization Fund” means the fund by that name established pursuant to the Indenture.

“Rating Agency” means, as of any given date, each nationally recognized securities rating agency designated by the Indenture or any Supplemental Indenture as a Rating Agency under the Indenture and then rating any Series of Bonds.

“Rebate Fund” means the fund by that name established pursuant to the Indenture.

“Record Date” means, for any particular payment of principal of or interest or premium on particular Bonds, each date specified as a Record Date for such Bonds by the Supplemental Indenture authorizing the issuance of such Bonds.

“Redemption Price” means, with respect to any Bond (or portion thereof if less than all of a Bond is to be redeemed) the principal amount of such Bond (or portion) plus the applicable premium, if any, payable upon redemption thereof pursuant to the provisions of such Bond and the Indenture.

“Registrar” means any registrar appointed pursuant to a Supplemental Indenture, and its successors and assigns as provided in the Indenture.

“Related” means, with respect to any particular Payment Agreement, having been designated as such with respect to any particular Bonds pursuant to a Supplemental Indenture.

“Renewal and Replacement Costs” means the costs of System capital renewals, replacements, major repairs or reconstruction.

“Revenue Fund” means the Guam Waterworks Authority Revenue Fund established pursuant to the Act.

“Revenues” means all gross income and other amounts received or receivable by the Authority as revenues of any kind from the ownership or operation of any part of the System, including all rates, fees and charges (including ground water, surface water and treated water charges and all sewer and wastewater service charges), received by the Authority for providing water and sewer services (but excluding development charges and assessments and hook-up fees and other special charges such as penalties and fines), all Payment Agreement Receipts, and all proceeds of insurance or grants covering business interruption loss (and related losses and expenses) relating to the System, and all other income and revenue howsoever derived by the Authority from the ownership or operation of, or arising from, the System, together with all interest, profits or other income derived from the investment of amounts in the Revenue Fund, but not including: (1) amounts received as insurance proceeds (except as provided above) or from the sale, transfer or other disposition of, or upon the taking by or under the threat of eminent domain of, all or any part of the System (which moneys shall be received and disposed of pursuant to the relevant provision of the Indenture), (2) proceeds from any securities issued by the Authority or proceeds from loans obtained by the Authority, (3) the proceeds of any court or arbitration award or settlement in lieu thereof received by the Authority, (4) amounts received by the Authority as gifts or as grants (except as provided above), whether restricted or unrestricted; and (5) other amounts (except as provided above), the use of which is restricted by the donor or grantor.

“Serial Bonds” means Bonds designated as Serial Bonds in the Supplemental Indenture providing for the issuance of such Series and for which no Mandatory Sinking Account Payments are provided.

“Series or Series of Bonds” means and refers to all Bonds of like designation and described as such in a Supplemental Indenture authenticated and delivered on original issuance at the same time pursuant to the Indenture, and any Bonds thereafter delivered in lieu of or substitution for any of such Bonds pursuant to the Indenture.

“Series 2017 Bonds” means the Guam Waterworks Authority Water and Wastewater System Revenue Refunding Bonds, Series 2017.

“Sinking Accounts” means any special account or accounts established by any Supplemental Indenture or Indentures in the Debt Service Fund for the payment of Term Bonds.

“Sixth Supplemental Indenture” means the Supplemental Indenture, to be dated as of December 1, 2017, providing for the issuance of the Series 2017 Bonds.

“Subordinate Securities” means any obligations of the Authority payable from the Subordinate Securities Fund and having a lien, if any, on Revenues subordinate to the pledge and lien of the Indenture securing the payment of the Bonds.

“Subordinate Securities Fund” means the fund by that name established pursuant to the Indenture for the purposes provided in the Indenture.

“Supplemental Indenture” means any indenture duly authorized under and in compliance with the Act, entered into by and between the Authority, the Trustee and the Co-Trustee and accepted by each Depositary, Paying Agent and Registrar the duties of which are affected thereby, supplementing, modifying or amending the Indenture; but only if and to the extent that such Supplemental Indenture is specifically authorized under the Indenture.

“System” means the water and sewer systems, now or hereafter existing, owned and/or operated by the Authority or its contractors, agents or subcontractors.

“Tax Certificate” means a Certificate of the Authority concerning the calculation of any amount to be paid to the United States of America pursuant to Section 148(f) of the Code and any other matters relating to the exclusion of interest on Bonds from gross income for federal income tax purposes.

“Term Bonds” means Bonds designated as Term Bonds in the Supplemental Indenture providing for the issuance of such Series and which are payable at or before their specified maturity date or dates from Mandatory Sinking Account Payments established for that purpose and calculated to retire such Bonds on or before their specified maturity date or dates.

“Termination Payments” means amounts required to be paid by the Authority or a Qualified Counterparty pursuant to a Payment Agreement in connection with a termination of all or any portion thereof.

“Trustee” means Bank of Guam, appointed by the Authority as Trustee in the Indenture and acting as an independent trustee with the duties and powers provided in the Indenture, its successors and assigns, and any other corporation or association which may at any time be substituted in its place as provided in the Indenture.

“Variable Rate Bonds” means Bonds which bear interest at a variable rate of interest.

THE BONDS

Authorization of Bonds

Bonds may be issued under the Indenture from time to time in order to obtain funds for the purposes authorized in the Indenture. The Bonds shall be issued under the Act for the purpose of financing or refinancing the acquisition, construction, reconstruction, improvement, betterment, extension, financing and refinancing of the System. The aggregate principal amount of Bonds which may be issued under the Indenture is not limited (subject, however, to the right of the Authority, which is reserved under the Indenture, to limit or restrict the aggregate principal amount of Bonds which may at any time be issued and Outstanding under the Indenture) and consists or may consist of one or more Series of varying denominations, dates, maturities, interest rates and other provisions, all issued and to be issued pursuant to the Indenture and the Act, subject to the limitations on the issuance of Bonds contained in the Indenture. The Bonds are designated as the “Guam Waterworks Authority Water and Wastewater System Revenue Bonds.” The Bonds may be issued in such Series as from time to time shall be established and authorized by the Authority by Supplemental Indenture, subject to the provisions and conditions contained in the Indenture.

Payment of Bonds

The principal of and premium, if any, on each Series 2017 Bond shall be payable in lawful money of the United States of America to the Owner of such Bond, upon the surrender of such Bond at the Principal Office of any Paying Agent for such Bond. The interest on each Series 2017 Bond shall be payable in like lawful money to the person whose name appears on the bond registration books of the Registrar for such Bond as the Owner of such Bond as of the close of business on the Record Date for such Bond preceding the Interest Payment Date, whether or not such Record Date is a Business Day, such interest to be paid by check or mailed by first class mail to such Owner at such address as appears on such registration books or at such address as such Owner may have filed with the Registrar for that purpose. Upon the written request of a registered owner of \$1,000,000 or more in aggregate principal amount of Series 2017 Bonds, payment of interest on and principal (including Redemption Price) of such Bonds shall be made by wire transfer from the Paying Agent to the registered owner of such Bonds. Any such principal payment by wire transfer shall nevertheless be subject to prior surrender of the Series 2017 Bonds with respect to which such payment is made. Each payment of interest or principal on Series 2017 Bonds, whether by check, draft or wire transfer, shall be accompanied by information specifying for each maturity of such Bonds with respect to which such payment is being made, the amount and the CUSIP number (if available).

Execution of Bonds

The Bonds shall be executed on behalf of the Authority by the manual or facsimile signature of the Chairperson, and countersigned by the manual or facsimile signature of the Chief Financial Officer. The Bonds shall then be delivered to the applicable Registrar for authentication by it. In case any of the officers who shall have signed or countersigned any of the Bonds shall cease to be such officer or officers before the Bonds so signed or countersigned shall have been authenticated or delivered by the Registrar or issued by the Authority, such Bonds may nevertheless be authenticated, delivered and issued and, upon such authentication, delivery and issue, shall be as binding upon the Authority as though those who signed and countersigned the same had continued to be such officers of the Authority, and also any Bond may be signed and countersigned on behalf of the Authority by such persons as on the actual date of the execution of such Bond shall be the proper officers of the Authority although at the nominal date of such Bond any such person shall not have been such officer of the Authority.

Except as may be provided in any Supplemental Indenture, only such of the Bonds as shall bear thereon a certificate of authentication in the form recited in the Indenture, manually executed by the applicable Registrar, shall be valid or obligatory for any purpose or entitled to the benefits of the Indenture, and such certificate of the Registrar shall be conclusive evidence that the Bonds so authenticated have been duly authenticated and delivered under the Indenture and are entitled to the benefits of the Indenture.

Transfer of Bonds

Any Bond may, in accordance with its terms, be transferred, upon the books required to be kept pursuant to the Indenture, by the person in whose name it is registered, in person or by its duly authorized attorney, upon surrender of such Bond for cancellation, accompanied by delivery of a duly executed written instrument of transfer in a form approved by the applicable Registrar.

Whenever any Bond or Bonds shall be surrendered for transfer, the Authority shall execute and the applicable Registrar shall authenticate and deliver a new Bond or Bonds of the same Series and maturity, for a like aggregate principal amount of authorized denominations. The Registrar shall require the payment by any Bondowner requesting any such transfer of any tax or other governmental charge required to be paid with respect to such transfer.

No transfer or exchange of any Bond of any Series shall be required during the period established by the applicable Registrar for the selection of Bonds of such Series for redemption or at any time after selection of such Bond for redemption.

ISSUANCE OF BONDS; ISSUANCE OF A SERIES OF BONDS; PARITY PAYMENT AGREEMENTS

Issuance of Bonds

At any time after the execution of the Indenture and one or more appropriate Supplemental Indentures, the Authority may sell and execute one or more Series of Bonds and the Registrar for each such Series of Bonds is required to authenticate and, upon the Order of the Authority, deliver such Series of Bonds. The proceeds received by the Authority from the sale of each Series of Bonds are required to be deposited with the Trustee or the Co-Trustee, who shall forthwith set aside such proceeds in such respective funds and accounts as are directed by a Request of the Authority, subject to the requirements of the Indenture.

Establishment and Application of Construction Accounts; Modification of Projects

With respect to each Project or Series, as determined by the Authority, the Depositary for the Construction Account for such Project or Series shall establish within the Construction Fund and maintain and hold in trust under the Indenture a separate account designated as the “_____ Construction Account” (inserting therein the Project or Series designation). Amounts in each Construction Account shall be used and withdrawn, as provided in the Indenture, solely for the payment of Project Costs of such Project (or of the Project or Projects for which such Series is being issued), including by (1) direct payment, (2) payment of any debt obligations issued by the Authority, or repayment of any advances made from any source, to finance temporarily such Project Costs, (3) payment of Capitalized Interest accruing on Bonds issued for such Project as specified in the Supplemental Indenture relating thereto, and (4) payment of Costs of Issuance of such Bonds. A Depositary shall disburse moneys in a Construction Account only upon Requisition of the Authority stating the person to whom payment is to be made, the amount to be paid, the purpose for which the obligation was incurred and that such payment is a proper and lawful charge against such account.

The Authority may modify the specifications or description of any Project or Projects by filing with the Trustee and each Depositary for each Construction Account for such Project or Projects a Certificate of the Authority describing such modification, together with a written report of a Consulting Engineer to the effect that such modification will have no material adverse effect on the Authority’s ability to comply with the rate covenant contained in the Indenture and an opinion of Bond Counsel to the effect that such modification and the use of amounts in such Construction Accounts for such modified Project or Projects will not adversely effect the exclusion, if any, of interest on any Bonds from gross income for federal income tax purposes.

Upon receipt of a Certificate of the Authority that amounts in any Construction Account are no longer required for the purpose of such account, said amounts shall be transferred to the Capital Improvement Fund or any other fund or account designated by the Authority in such Certificate; provided, however, that any such transfer shall be subject to receipt by the Trustee of an opinion of Bond Counsel to the effect that such transfer and the use of such amounts for the purposes intended by the Authority after such transfer will not adversely affect the exclusion, if any, of interest on any Bonds from gross income for federal income tax purposes.

All interest and other profits derived from the investment of moneys in each Construction Account shall be retained therein.

Establishment and Application of 2017 Costs of Issuance Account

Pursuant to the 2017 Supplemental Indenture, the Trustee is required to establish within the Construction Fund a separate account (the “2017 Costs of Issuance Account”) to be used and withdrawn, as provided in the Indenture, solely for the payment of Costs of Issuance of the 2017 Bonds. Any moneys remaining on deposit in the 2017 Costs of Issuance Account after the date specified in the 2017 Supplemental Indenture are to be transferred and deposited in the Revenue Fund.

Issuance of Additional Series of Bonds

In addition to the initial Series of Bonds, the Authority may by Supplemental Indenture establish one or more other Series of Bonds payable from Revenues on a parity with the initial Series of Bonds and Parity Payment Agreements and secured by a lien upon and pledge of Revenues equal to the lien and pledge securing the initial Series of Bonds and Parity Payment Agreements, and the Authority may issue Bonds of any Series so established, in such principal amount and for such lawful purpose or purposes (including refunding of any Bonds issued under the Indenture and then Outstanding) as shall be specified by the Authority in said Supplemental Indenture, but only upon compliance by the Authority with the relevant provisions of the Indenture and subject to the following specific conditions, which are conditions precedent to the issuance of any such additional Series of Bonds: (1) no Event of Default shall have occurred and then be continuing; (2) the Supplemental Indenture providing for the issuance of such additional Series of Bonds shall specify the purposes for which such Series is being issued, which shall be one or more of the following (a) to provide moneys for deposit into a Construction Account and withdrawal therefrom in accordance with law for purposes other than the refunding of Bonds, or (b) to refund all or part of the Bonds of any one or more Series then Outstanding, by depositing with the Trustee, in trust, moneys or noncallable Federal Securities in the necessary amount to discharge all liability of the Authority with respect to the Bonds to be refunded as provided in the Indenture and to make any payment necessary or desirable in connection with the termination of any Related Payment Agreement in connection with such refunding; (3) the Supplemental Indenture providing for the issuance of such additional Series of Bonds shall require that the amount in the Bond Reserve Fund be increased, if and to the extent necessary, to an amount at least equal to the Bond Reserve Fund Requirement for such Series. Said deposit may be made from such proceeds or any other source, as provided in the Indenture; (4) the aggregate principal amount of Bonds issued under the Indenture shall not exceed any limitation imposed by law or by the Indenture; and (5) the representations and estimates set forth in the certificates and written reports required by the Indenture for such Series shall have been made by the parties required to give such certificates and written reports.

Additional Parity Payment Agreements

The Authority may enter into Parity Payment Agreements payable from Revenues on a parity with the Bonds and other Parity Payment Agreements and secured by a lien upon and pledge of Revenues equal to the lien and pledge securing the Bonds and other Parity Payment Agreements, but only upon compliance by the Authority with the relevant provisions of the Indenture, and subject to the following specific conditions, which are conditions precedent to the entering into by the Authority of any Parity Payment Agreement: (1) no Event of Default shall have occurred and then be continuing; (2) the representations and estimates set forth in the certificates and written reports required by the Indenture shall have been made by the parties required to give such certificates and written reports; and (3) the Authority, the Trustee and the Co-Trustee shall have executed and delivered a Supplemental Indenture designating such agreement as a Parity Payment Agreement and the Bonds to which such Parity Payment Agreement is Related.

Other Payment Agreements

In addition to Parity Payment Agreements, the Authority may enter into Payment Agreements payable from Revenues after and subordinate to the payment from Revenues of payments with respect to the Bonds and Parity Payment Agreements, but only upon compliance by the Authority with any applicable provisions of the Indenture and any such agreement shall constitute a Payment Agreement upon execution and delivery by the Authority, the Trustee and the Co-Trustee of a Supplemental Indenture designating such agreement as a Payment Agreement and the Bonds to which such Payment Agreement is Related.

Proceedings for the Issuance of a Series of Bonds; Parity Payment Agreements.

Whenever the Authority shall determine to issue a Series of Bonds, the Authority shall execute and deliver a Supplemental Indenture providing for the issuance of such Series of Bonds and specifying the terms and conditions of such Series of Bonds, including the following: (1) the authorized principal amount of such Series; (2) the purpose or purposes for which such Series is being issued and, if such purpose is the deposit of moneys in a Construction Account, the Project or Projects for which such Series is being issued (including any appropriate modifications to any previously specified or described Project or Projects); (3) the amount of the Bond Reserve Fund Requirement upon the issuance of such Series; (4) the amount to be deposited (or otherwise available) in the

Bond Reserve Fund upon the issuance of such Series, the source or sources of such amount (which may be proceeds of such Series, a Credit Facility or other amounts available for such purpose); (5) the amount, if any, to be deposited in the applicable Construction Account, if any, upon the issuance of such Series, and the source or sources of such deposit (which may be the proceeds of such Series or other amounts available for such purpose); (6) the amounts, if any, to be reserved within the applicable Construction Account to pay Costs of Issuance and Capitalized Interest of such Series and the source or sources of such amounts (which may be the proceeds of such Series or other amounts available for such purpose); (7) the amount, if any, to be deposited in the Debt Service Fund as accrued interest upon the issuance of such Series; (8) the Credit Facility and Credit Provider, if any, for such Series and any special provisions not inconsistent with the terms of the Indenture relating to such Credit Facility and designating any Credit Agreement Payments with respect thereto; (9) the Related Payment Agreement, if any, and Qualified Counterparty with respect thereto and any provisions not inconsistent with the terms of the Indenture relating to such Payment Agreement; (10) the appointment of the Registrar and any Paying Agents for such Series and, if necessary, any Depositary for any Funds or Accounts relating to such Series; (11) the form, title and designation of, and the manner of numbering and lettering, Bonds of such Series; (12) the denomination or denominations of Bonds of such Series; (13) the date or dates of maturity and Principal Payment Periods of Bonds of such Series and the manner of payment of principal of such Bonds; (14) the rate or rates of interest or the manner of determining such rate or rates borne by the Bonds of such Series and the Record Dates and Interest Payment Dates for such Bonds; (15) the Bonds of such Series which are Serial Bonds (if any) and the Bonds of such Series which are Term Bonds (if any); (16) the terms of redemption, if any, of Bonds of such Series; (17) the date and amount of each Mandatory Sinking Account Payment (if any) required to be paid by the Authority for the retirement of Term Bonds of such Series; (18) the designation of any accounts to be established pursuant to the Indenture and any other accounts deemed advisable by the Authority; (19) any tax or other covenants which, in the judgment of the Authority, are designed to insure that interest on such Series of Bonds will be excludable from gross income for federal income tax purposes and which are not inconsistent with the provisions of the Indenture; provided, however, that the Authority may, in its sole and absolute discretion, determine in connection with the authorization of a Series of Bonds that it will not make any such covenants because interest on such Series is not intended to be excludable from gross income for federal income tax purposes; and (20) any other provisions deemed advisable by the Authority, not in conflict with or in substitution for the provisions of the Indenture (except as expressly permitted in the Indenture).

Before any Series of Bonds shall be issued and delivered and before any Parity Payment Agreements are entered into, the Authority shall file the following documents with the Trustee:

(a) If and to the extent that an additional Series of Bonds is being issued, an Opinion of Counsel setting forth (i) that such counsel has examined the Supplemental Indenture; (ii) that the execution and delivery of the additional Series of Bonds have been duly authorized by the Authority; and (iii) that said additional Series of Bonds, when duly executed by the Authority and, if required, authenticated and delivered by the Registrar for such Bonds, will be valid and binding special obligations of the Authority, payable from Revenues as provided in the Indenture;

(b) A Certificate of the Authority that no Event of Default has occurred and is then continuing; and

(c) (i) If and to the extent that an additional Series of Bonds is being issued for the purpose of providing moneys for deposit in a Construction Account, the following certificates:

(A) A certificate of a Consulting Engineer setting forth (I) the projected Date of Completion for the Project or Projects for which such Series of Bonds is being issued and for any other uncompleted Projects, and (II) an estimate of the cost of construction of such Projects;

(B) A written report of a Consulting Engineer setting forth for each Fiscal Year from the then current Fiscal Year through the later of (I) the first Fiscal Year commencing at least five years after the date of original issuance of such additional Series, or (II) the first Fiscal Year commencing at least three years after the Date of Completion projected by the Consulting Engineer pursuant to subparagraph (A) above, estimates of Revenues, Operation and Maintenance Expenses and Net Revenues; and

(C) A Certificate of the Authority (I) setting forth (a) the estimates of Revenues, Operation and Maintenance Expenses and Net Revenues, as set forth in the written report of a Consulting Engineer pursuant to subparagraph (B) above, for each of the Fiscal Years covered by such report, and (b) the

Aggregate Annual Debt Service and Capitalized Interest for each of such Fiscal Years, including Annual Debt Service and Capitalized Interest on all future Series of Bonds, if any, which such Certificate of the Authority shall estimate (based on the estimate of the Consulting Engineer of the cost of construction of such Projects) are required to complete payment of the cost of construction of such Projects, and (II) demonstrating that for each of such Fiscal Years (a) Revenues are projected to be at least equal to the aggregate amount of all transfers required to be made to the Operations and Maintenance Fund, the Debt Service Fund, the Bond Reserve Fund, the Subordinate Securities Fund, and the Operation, Maintenance, Renewal and Replacement Reserve Fund for such Fiscal Year and, to the extent applicable, otherwise required to provide for the payment of all obligations of the Authority to be paid from Revenues, and (b) Net Revenues are projected to be at least equal to 1.25 times Aggregate Annual Debt Service.

(ii) In lieu of the certificates and reports described above in subparagraphs (i)(A), (B) and (C) above, the Authority may deliver to the Trustee a Certificate of the Authority to the effect that for the last complete Fiscal Year or any period of 12 consecutive calendar months out of the 18 calendar months next preceding the original issuance of such Series of Bonds, Net Revenues for such Fiscal Year or 12-month period equaled at least 1.25 times the Maximum Annual Debt Service on all Bonds then Outstanding plus the Series of Bonds being issued.

(iii) In addition, a Series of Bonds may be issued for the sole purpose of depositing in a Construction Account the amounts necessary to complete any one or more Projects without filing with the Trustee of the certificates and reports described in subparagraphs (i)(B) and (C), if such certificates and reports demonstrating compliance with such subparagraphs were filed in connection with the issuance of the prior Series of Bonds for each of such Projects and if the principal amount of such Bonds to be issued for completion purposes does not exceed ten percent (10%) of the principal amount of Bonds previously issued for and allocable to such Projects.

If and to the extent that an additional Series of Bonds is being issued for the purpose of refunding Bonds, either (i) a certificate of an Independent Certified Public Accountant that Aggregate Annual Debt Service for each Fiscal Year thereafter will be less than or equal to Aggregate Annual Debt Service for each such Fiscal Year in the absence of such refunding, or (ii) the certificates and reports described in paragraphs (A) (if any one or more of the Projects for which the Bonds being refunded is not then completed), (B) and (C) above; provided that in lieu of the certificates and reports described in paragraphs (A), (B) and (C) above, the Authority may deliver to the Trustee the certificate described in paragraph (ii) above.

If and to the extent that a Parity Payment Agreement, other than a Parity Payment Agreement all payments pursuant to which have been taken into account for purposes of determining that the requirements have been satisfied with respect to the issuance of the Related Bonds, is being entered into, either (i) a certificate of an Independent Certified Public Accountant that Aggregate Annual Debt Service for each Fiscal Year thereafter will be less than or equal to Aggregate Annual Debt Service for each such Fiscal Year in the absence of such Parity Payment Agreement, or (ii) the certificates and reports described in paragraphs (B) and (C) above, in each case treating such Payment Agreement as in effect for purposes of any calculations; provided that in lieu of the certificates and reports described in said paragraphs (B) and (C), the Authority may deliver to the Trustee the certificate described in paragraph (ii) above, treating such Payment Agreement as in effect for purposes of any calculations.

In connection with the issuance of an additional Series of Bonds, upon the delivery to the Trustee of the foregoing instruments, the applicable Registrar is required to authenticate and deliver said additional Series of Bonds, in the aggregate principal amount specified in such Supplemental Indenture, to, or upon the Order of, the Authority, when such additional Series of Bonds shall have been presented to it for that purpose.

Validity of Bonds

The validity of the authorization and issuance of the Bonds shall not be dependent on or affected in any way by any proceedings taken by the Authority for the improvement of the System, or by any contracts made by the Authority in connection therewith, or the failure to construct the System or any part thereof. The recital contained in the Bonds that the same are regularly issued pursuant to the Act shall be conclusive evidence of their validity and of compliance with the provisions of law in their issuance.

REDEMPTION OF BONDS

Terms of Redemption

Any Series of Bonds may be made subject to redemption prior to maturity, as a whole or in part, at such time or times, and upon payment of the principal amount thereof plus such premium or premiums, if any, as may be determined by the Authority at the time such Series is authorized and as shall be set forth in the Supplemental Indenture authorizing such Series; provided, however, that such Supplemental Indenture shall provide that the Authority shall have the right, on any date, to redeem the Bonds of any such Series, as a whole, or in part so that the reduction in Annual Debt Service for the Bonds of such Series for each Bond Year after such redemption shall be as nearly proportional as practicable, from and to the extent of proceeds received by the Authority due to a governmental taking of the System or portions thereof by eminent domain proceedings, if such amounts are not used for additions, improvements or extensions to the System, under the circumstances and upon the conditions and terms set forth in the provisions of the Indenture relating to eminent domain proceeds, at the principal amount thereof plus interest accrued thereon, without premium.

Selection of Bonds for Redemption. For purposes of selecting Bonds for redemption, Bonds shall be deemed to be composed of portions equal to their respective minimum authorized denomination, and any such portion may be separately redeemed. The applicable Registrar shall promptly notify the Authority, the Trustee and the Co-Trustee in writing of the Bonds or portions thereof selected for redemption.

Notice of Redemption. A copy of any notice of redemption shall be sent by first class mail to each Owner of \$1,000,000 or more in aggregate principal amount of Bonds to be redeemed and to each of the Fiduciaries, each of the Credit Providers, the Securities Depositories (as defined in the Indenture) and two or more Information Services (as defined in the Indenture); provided, however, that failure to give notice pursuant to this sentence by certified mail to any Bondowners, to any Fiduciaries, to any Credit Providers or to any Securities Depositories or Information Services, or the insufficiency of any such notices, shall not affect the sufficiency of the proceedings for redemption of any Bonds. A second notice shall be sent by first class mail to the registered owner of any Bond which has been called for redemption in whole or in part, and is not surrendered for payment within 60 days after the date fixed for redemption; provided, however, that failure to send any such second notice, or any deficiency of any such notice, shall not affect the sufficiency of the proceedings for redemption of any Bonds.

Partial Redemption. Upon surrender of any Bond redeemed in part only, the Authority shall execute and the applicable Registrar shall authenticate and deliver to the registered owner thereof, at the expense of the Authority, a new Bond or Bonds of authorized denominations, and of the same Series, maturity and tenor, equal in aggregate principal amount to the unredeemed portion of the Bond surrendered.

Effect of Redemption

Notice of redemption having been duly given as aforesaid, and moneys being held by the Trustee, the Co-Trustee or Paying Agents for payment of the Redemption Price of, and interest accrued to the redemption date on, the Bonds (or portions thereof) so called for redemption on the redemption date designated in such notice, such Bonds (or such portions) shall become due and payable at the Redemption Price specified in such notice plus interest accrued thereon to the date fixed for redemption, interest on the Bonds so called for redemption shall cease to accrue, said Bonds (or portions thereof) shall cease to be entitled to any benefit or security under the Indenture, and the Owners of said Bonds shall have no rights in respect thereof except to receive payment of said Redemption Price and accrued interest.

All Bonds purchased or redeemed pursuant to the provisions of the Indenture shall be cancelled upon surrender thereof and delivered to or upon the Order of the Authority.

REVENUES AND FUNDS

Revenue Fund

The Authority shall deposit all Revenues upon the receipt thereof in the Revenue Fund. Subject only to the provisions of the Indenture permitting the application thereof for or to the purposes and on the terms and conditions set forth in the Indenture, the Trustee and the Depositary shall be entitled to and shall collect and receive all of the Revenues, and any Revenues collected or received by the Authority shall be deemed to be held, and to have been collected or received, by the Authority as the agent of the Trustee, the Co-Trustee and the Depositary for the Revenue Fund and shall forthwith be paid by the Authority to such Depositary.

All moneys at any time deposited with the Trustee, the Co-Trustee or any Depositary, as the case may be, are required to be held by the Trustee, the Co-Trustee or such Depositary, as the case may be, in trust for the benefit of the Owners at any time of the Bonds (and, to the extent any Credit Agreement Payment is due and payable, for the benefit of the applicable Credit Provider), and the Authority is to have no beneficial right or interest in any of such moneys, except as in the Indenture provided. All Revenues and other moneys so deposited shall be held, disbursed, allocated and applied only as provided in the Indenture.

Rebate Fund, 2017 Rebate Account

The Trustee, as Depositary for the Revenue Fund, shall establish and maintain within the Rebate Fund a separate subaccount designated as the "2017 Rebate Account." There shall be deposited in the 2017 Rebate Account from amounts in the Operation and Maintenance Fund or other lawfully available moneys such amounts as are required to be deposited therein pursuant to the Tax Certificate delivered by the Authority in connection with the issuance of the Series 2017 Bonds. All money at any time deposited in the 2017 Rebate Account is required to be held by the Trustee in trust, to the extent required to satisfy the Rebate Requirement for the Series 2017 Bonds (as defined in such Tax Certificate), for payment to the United States of America, and the United States of America is granted a first lien on such money until such payment. All amounts required to be deposited into or on deposit in the 2017 Rebate Account will be governed exclusively by the Indenture and by such Tax Certificate.

In the event that the amount in the 2017 Rebate Account exceeds the Rebate Requirement for the Series 2017 Bonds, upon the Request of the Authority, the Trustee is required to transfer the excess from the 2017 Rebate Account to the Revenue Fund.

Notwithstanding any provisions of the Indenture relating to the Rebate Fund or Rebate Accounts, if the Authority shall provide to the Trustee an opinion of Bond Counsel that any specified action required under such provisions is no longer required or that some further or different action is required to maintain the exclusion from federal income tax of interest on any Series of Bonds, the Trustee and the Authority may conclusively rely on such opinion in complying with the requirements of the Indenture relating to the Rebate Fund, and, notwithstanding the requirements of the Indenture for modifications to the Indenture, the covenants under the Indenture shall be deemed to be modified to that extent.

Application of Debt Service Fund

Subject to the provisions of the next paragraph, on each Mandatory Sinking Account Payment date, the Co-Trustee shall apply the Mandatory Sinking Account Payment or Payments required on that date to the redemption (or payment at maturity, as the case may be) of the applicable Term Bonds upon the notice and in the manner provided in the Indenture. At any time prior to giving such notice of such redemption, the Co-Trustee, upon the Request of the Authority, shall apply moneys in the Debt Service Fund, in an amount not in excess of such Mandatory Sinking Account Payment, to the purchase of the applicable Term Bonds at public or private sale, as and when and at such prices (including brokerage and other charges) as are specified in such Request, except that the purchase price (excluding accrued interest) shall not exceed the price that would be payable for such Bonds upon redemption by application of such Mandatory Sinking Account Payment.

If (1) during the twelve-month period immediately preceding a Mandatory Sinking Account Payment date the Co-Trustee purchases the applicable Term Bonds with moneys in the Debt Service Fund, or (2) during said period and prior to giving notice of redemption the Authority otherwise deposits the applicable Term Bonds with the Co-Trustee (together with a Request of the Authority to apply such Bonds so deposited to the Mandatory Sinking Account Payment due on said date), the amount of Bonds so purchased or deposited shall be credited at the time of such purchase or deposit, to the extent of the full principal amount thereof, to reduce such Mandatory Sinking Account Payment. All Bonds purchased or deposited pursuant to this paragraph are required be cancelled and destroyed by the Co-Trustee.

With respect to each series of Bonds for which proceeds of the sale thereof are required to be set aside to pay interest on the Bonds, the Co-Trustee (if so instructed by the Supplemental Indenture providing for the issuance of such series) shall transfer from the Construction Fund and deposit in the Debt Service Fund the amounts at the times specified in the Supplemental Indenture providing for the issuance of such Series.

Application of Bond Reserve Fund

All amounts in the Bond Reserve Fund shall be used and withdrawn by the Co-Trustee solely for the purpose of paying debt service on Bonds (including Payment Agreement Payments to the extent provided in any Supplemental Indenture) in the event of a deficiency in the Debt Service Fund, in the manner and to the extent set forth in the Indenture. So long as the Authority is not in default under the Indenture, any amount in the Bond Reserve Fund in excess of the Bond Reserve Fund Requirement shall be transferred to the Revenue Fund. A Supplemental Indenture providing for the issuance of a Series of Bonds may provide that income derived from the investment of the proceeds of such Series in the Bond Reserve Fund prior to the completion of each Project for which such Bonds were issued shall be deposited in the Construction Account for such Project. Otherwise, such income shall be deposited in the Revenue Fund.

If and to the extent provided by a Supplemental Indenture, and subject to certain provisions of the Indenture, the Bond Reserve Fund Requirement may be wholly or partially satisfied by a Credit Facility.

Application of Operation, Maintenance, Renewal and Replacement Reserve Fund

All amounts in the Operation, Maintenance, Renewal and Replacement Reserve Fund shall be used and withdrawn upon Requisition of the Authority solely for the purposes of (A) paying Operation and Maintenance Expenses if and to the extent that amounts on deposit in the Operation and Maintenance Fund are insufficient for such purpose, (B) paying Renewal and Replacement Costs budgeted by the Authority, pursuant to the budget, as revised, filed in accordance with the Indenture, for the then current Fiscal Year, and (C) paying the costs of repair or replacement of loss or damage caused by or resulting from fire or from action of the elements (including loss from typhoons, earthquakes, floods and tidal waves), whether or not such costs are Operation and Maintenance Expenses or Renewal and Replacement Costs. For purposes of this Section, any check, draft, warrant or purchase order of the Authority executed by an officer or employee of the Authority duly authorized by resolution of the Board of Directors of the Authority to execute such instruments shall be treated as a Requisition.

Application of Rate Stabilization Fund

All amounts in the Rate Stabilization Fund shall be transferred by the Authority from time to time to the Revenue Fund in the amounts specified by a Certificate of the Authority which also certifies that such amount is consistent with the annual budget established by the Authority pursuant to the Indenture.

Application of Capital Improvement Fund

Except as may be otherwise set forth in a Supplemental Indenture, all amounts in the Capital Improvement Fund may be used and withdrawn by the Authority for any lawful purpose of the Authority or may be transferred to the Revenue Fund, in each case upon Request of the Authority. The Authority may direct the appropriate Depositary to establish accounts within the Capital Improvement Fund for appropriate purposes, and may restrict the

purposes for which amounts in any such account may be used and withdrawn so long as such purposes are lawful purposes.

Application of Subordinate Securities Fund

All amounts in the Subordinate Securities Fund may be used and withdrawn, as directed by a Request of the Authority, for the purpose of paying debt service due on Subordinate Securities, amounts due pursuant to Payment Agreements (including Termination Payments), funding or replenishing reasonable reserves and meeting other requirements of the instrument pursuant to which such Subordinate Securities are issued.

Investment of Moneys in Funds

All Investment Securities and any other investments acquired with moneys held under the Indenture shall be acquired subject to the limitations of any covenant relating to the exclusion of interest on Bonds from gross income for federal income tax purposes, to the limitations as to maturities set forth in the Indenture and to such additional limitations or requirements consistent with the foregoing as may be established by Request of the Authority. No Investment Security which is subject to redemption at the option of the issuer may be purchased at a premium above the amount of the premium payable upon any such redemption.

Moneys in the Construction Accounts, the Rebate Fund, the Debt Service Fund and the Bond Reserve Fund shall be invested solely in Investment Securities to maximize investment income, with proper regard for the preservation of principal, pursuant to a Request of the Authority as to such investment. In the absence of any different instruction, such moneys shall be invested in Investment Securities described in clause (6) of the definition thereof.

Moneys in the Revenue Fund, the Operation and Maintenance Fund, the Subordinate Securities Fund, the Operation, Maintenance, Renewal and Replacement Reserve Fund and the Capital Improvement Fund may be invested in any investment designated by Request of the Authority.

Notwithstanding any other provision of the Indenture, moneys in the Revenue Fund and the Bond Reserve Fund shall be invested only in Investment Securities having at least an investment grade rating from the Rating Agency.

Subject to the provisions of any Supplemental Indenture, moneys in all Funds and Accounts established under the Indenture shall be invested in investments paying interest and maturing not later than the dates on which it is estimated that such moneys will be required by the Trustee, the Co-Trustee, the applicable Depositary or the Authority.

All interest and other profit derived from such investments shall be deposited in the Revenue Fund when received, except that interest and other profit derived from the investment of moneys in the Construction Accounts, the Capital Improvement Fund and the Rebate Fund shall be retained in such respective Fund or Account, and except that interest and other profit derived from the investment of moneys in the Bond Reserve Fund shall be deposited as provided in the Indenture. Investments acquired as an investment of moneys in any Fund or Account established under the Indenture shall be credited to such Fund or Account.

Subject to the provisions of any Supplemental Indenture, for the purpose of determining the amount in any Fund or Account, except the Rebate Fund, the amount of any obligation allocable to such Fund or Account shall be equal to the purchase price of such obligation (not including accrued interest, if any, paid on the purchase of such obligation) plus the amount of any discount below par accounting for any such discount ratably each year over the term of such obligation (i.e., by dividing the amount of such discount by the number of interest payments remaining to maturity and by multiplying the amount so calculated by the number of interest payment dates having passed since the date of purchase) ("amortized value"); provided, however, that the amount of any accrued interest on any obligation may be credited to the Revenue Fund or to any Fund or Account to which such amount or any portion thereof may have been transferred from the Revenue Fund.

The Trustee, the Co-Trustee or the applicable Depositary may sell at the best price obtainable, or present for redemption, any security purchased under the Indenture whenever it shall be necessary in order to provide moneys to meet any required payment, transfer, withdrawal or disbursement from the Fund or Account to which such security is credited, and the Trustee, the Co-Trustee and such Depositary shall not be liable or responsible for any loss resulting from such investment.

CERTAIN COVENANTS

Payment of Principal and Interest

The Authority will punctually pay or cause to be paid the principal and interest (and premium, if any) to become due in respect of every Bond issued under the Indenture at the times and places and in the manner provided in the Indenture and in the Bonds, in strict conformity with the terms of the Bonds and of the Indenture, but solely from Revenues and other moneys held in trust under the Indenture, as provided in the Indenture.

Against Encumbrances

Subject to any rights of the United States of America or as otherwise set forth in the Indenture, the Authority will not mortgage or otherwise encumber, pledge or place any charge upon the System or any part thereof, or upon any of the Revenues, prior to or on a parity with the Bonds, the Parity Payment Agreements and Credit Agreement Payments. So long as any Bonds are Outstanding, the Authority will not issue any bonds or obligations payable from Revenues or secured by a pledge, lien or charge upon Revenues prior to or on a parity with the Bonds, the Parity Payment Agreements and the Credit Agreement Payments, other than the Bonds, the Parity Payment Agreements and the Credit Agreement Payments. Except as may be otherwise set forth in a Supplemental Indenture, nothing in the Indenture, and particularly nothing in the preceding two paragraphs, shall prevent the Authority from authorizing and issuing bonds, notes, warrants, certificates or other obligations or evidences of indebtedness which as to principal or interest, or both, (1) are payable from Revenues after and subordinate to the payment from Revenues of the principal of and interest on the Bonds, the Parity Payment Agreement Payments and Credit Agreement Payments, or (2) are payable from moneys which are not Revenues as such term is defined in the Indenture.

Sale or Other Disposition of Property

The Authority will not sell or otherwise dispose of the System or any part thereof, or permit others to sell or otherwise dispose of the System or any part thereof, essential to the proper operation of the System or to the collection of Revenues sufficient to pay debt service on the Bonds, Parity Payment Agreement Payments and Credit Agreement Payments and otherwise comply with the rate covenant contained in the Indenture. The Authority will not enter into any agreement which impairs the operation of the System or impedes the collection of Revenues sufficient to pay debt service on the Bonds, Parity Payment Agreement Payments and Credit Agreement Payments and otherwise comply with the rate covenant contained in the Indenture.

Any real or personal property which has become nonoperative or which is not needed for the efficient and proper operation of the System, or any material or equipment which has worn out, may be sold at a price not less than the fair market value thereof if such sale will not reduce Net Revenues and if the net proceeds of such sale are deposited in the Revenue Fund.

Operation and Maintenance of the System

The Authority will maintain and preserve the System in good repair and working order at all times from the Revenues available for such purposes, in conformity with prudent management and standards customarily followed in the industry for systems of like size and character. The Authority will from time to time make all necessary and proper repairs, renewals, replacements and substitutions to the properties of the System, so that at all times business carried on in connection with the System shall and can be properly and advantageously conducted in an efficient manner and at reasonable cost. The Authority will operate the System in an efficient and economical manner, consistent with the protection of the Owners of the Bonds and so as to assure that the System shall be financially

self-sufficient and self-sustaining. The Authority shall not commit or allow any waste with respect to the System. Nothing in the Indenture shall prohibit the Authority from subcontracting any part of the maintenance and operation of the System.

Liens and Claims

Subject to any rights of the United States of America, the Authority shall keep the System and all parts thereof free from judgments, from mechanics' and materialmen's liens and from all liens and claims of whatsoever nature or character, to the end that the security provided pursuant to the Indenture may at all times be maintained and preserved, and the Authority shall keep the System and the Revenues free from any liability which might hamper the Authority in conducting its business or operating the System. The Trustee or and Co-Trustee at its option (after first giving the Authority ten days' written notice to comply therewith and failure of the Authority to so comply within said ten-day period) may defend against any and all actions or proceedings in which the validity of the Indenture is or might be questioned, or may pay or compromise any claim or demand asserted in any such actions or proceedings; provided, however, that, in defending against such actions or proceedings or in paying or compromising such claims or demands, the Trustee or the Co-Trustee shall not in any event be deemed to have waived or released the Authority from liability for or on account of any of its covenants and warranties contained in the Indenture, or from its liability under the Indenture to defend the validity of the Indenture and the pledge made in the Indenture and to perform such covenants and warranties.

Insurance

The Authority will maintain or cause to be maintained insurance on the System with responsible insurers in such amounts and against such risks (including accident to or destruction of the System) as are usually maintained by prudent operators of systems similar and similarly situated to the System and which it shall deem advisable or necessary to protect its interests and the interests of the Bondowners so long as such insurance is available to the Authority on the open market from responsible insurers at reasonable cost. In the event of any damage to or destruction of the System caused by the perils covered by such insurance, the proceeds of such insurance shall be applied to the repair, reconstruction or replacement of the damaged or destroyed portion of the System; and the Authority shall cause such repair, reconstruction or replacement to begin promptly after such damage or destruction shall occur and to continue and to be properly completed as expeditiously as possible. If the proceeds received by reason of any such loss shall exceed the costs of such repair, reconstruction or replacement, the Authority shall deposit such excess in the Capital Improvement Fund. Notwithstanding the foregoing, if the proceeds of such insurance, together with other moneys available for such purpose, are sufficient to enable the Authority to retire all Outstanding Bonds, whether at maturity or on redemption prior to maturity or any combination thereof, and to pay the Parity Payment Agreement Payments and any Termination Amount payable by the Authority pursuant to Parity Payment Agreements in connection with a termination thereof, and to pay any Credit Agreement Payments then due and payable the Authority may elect not to repair, reconstruct or replace the damaged or destroyed portion of the System, and thereupon, the proceeds of such insurance shall be applied by the Authority and the Trustee to the payment when due of the interest to become due on all Outstanding Bonds on and prior to the maturity date or redemption date thereof, as the case may be, to the payment of the principal of and redemption premiums, if any, on all Outstanding Bonds at maturity or on redemption prior to maturity, as the case may be, and to the payment of such Parity Payment Agreement Payments and any such Termination Amounts, as the case may be, when due and to pay any Credit Agreement Payments then due and payable.

The Authority will maintain such other insurance which it shall deem advisable or necessary to protect its interests and the interests of the Bondowners, which insurance shall afford protection in such amounts and against such risks as are usually maintained by prudent operators of systems similar to the System.

Any insurance required under the Indenture may be maintained under a self-insurance program so long as such self-insurance is maintained in the amounts and manner customarily maintained by prudent operators of systems similar to the System. The Authority shall, every third year, engage an insurance consultant to review the Authority's self-insurance program and to make recommendations for any necessary modifications, including, but not limited to, any modifications necessary to comply with these provisions. Each such report shall be filed with the Trustee.

Books and Accounts; Financial Statements

The Authority will keep proper books of record and accounts, separate from all other records and accounts, in which complete and correct entries shall be made of all transactions relating to the System. Such books of record and accounts shall at all times during business hours be subject to the inspection of the Trustee, the Co-Trustee or any Owner of Bonds then Outstanding or their representatives authorized in writing, at reasonable hours and under reasonable conditions.

The Authority will prepare and file with the Trustee and the Co-Trustee annually within nine months after the close of each Fiscal Year so long as any of the Bonds are Outstanding: (1) financial statements for the preceding Fiscal Year, prepared in accordance with (i) the accounting requirements of the Indenture and (ii) generally accepted accounting principles applied on a consistent basis from year to year, including a balance sheet, statement of income, statement of retained earnings, and statement of changes in financial position (including a statement of revenue, expenditures and fund balances for each of the Funds and Accounts established pursuant to the Indenture), and including a reconciliation between the bases of accounting required under clauses (i) and (ii) above, which financial statements shall be examined by and include the certificate or opinion of an Independent Certified Public Accountant, such certificate or opinion to include a statement as to the manner and extent to which the Authority has complied with the provisions of the Indenture as it relates to said financial statements; and (2) a statement as to all insurance carried by the Authority as of the end of such Fiscal Year, including a brief description of the amount and coverage of each insurance policy and the name of the insuring company.

The Authority will furnish a copy of the aforesaid statements to any Credit Provider and to any Bondowner upon request, and will furnish to the Trustee such reasonable number of copies thereof (not exceeding 100 copies) as may be required by the Trustee for distribution to investment bankers, securities dealers and others interested in the Bonds and to the Owners of Bonds requesting copies thereof. The Trustee shall not be required to incur any nonreimbursable expenses in making such distribution.

Authority Budgets

Prior to the commencement of each Fiscal Year, the Authority shall prepare and adopt an annual budget for such Fiscal Year. Such budget shall set forth in reasonable detail the Revenues anticipated to be derived in such Fiscal Year and the expenditures anticipated to be paid or provided for therefrom in such Fiscal Year including, without limitation, the amounts required to provide for the payment of the principal of, interest and redemption premium, if any, on the Bonds during such Fiscal Year, to pay or provide for Operation and Maintenance Expenses for such Fiscal Year, to pay or provide for Renewal and Replacement Costs for such Fiscal Year, to make up any deficiencies in any Fund or Account anticipated for the then current Fiscal Year, to transfer to or from the Rate Stabilization Fund each month, and to pay or provide for the payment of all other claims or obligations required to be paid from Revenues in such Fiscal Year, and shall show that Net Revenues shall be at least adequate to satisfy the rate covenant contained in the Indenture. The Authority shall supply to the Trustee, the Co-Trustee, the Revenue Fund Depositary, any Credit Provider and any Bondowners who shall so request in writing a copy of the annual budget for the then current Fiscal Year. Such budget shall also be open for inspection by any Owner during normal business hours. The Authority may at any time adopt a revised annual budget and shall supply copies as aforesaid.

Payment of Taxes, Etc.

The Authority will pay and discharge, or cause to be paid and discharged, all taxes, assessments and other governmental charges which may hereafter be lawfully imposed upon the Authority on account of the System or any portion thereof or upon any Revenues and which, if unpaid, might impair the security of the Bonds, when the same shall become due, but nothing contained in the Indenture shall require the Authority to pay any such tax, assessment or charge so long as it shall in good faith contest the validity thereof. The Authority will duly observe and conform with all valid requirements of any governmental authority having jurisdiction over the Authority or the System or any part thereof.

Acquisition and Construction of Improvements

The Authority will commence and will continue to completion the acquisition and construction of the improvements to the System proposed to be financed from any Series of Bonds, and said improvements will be acquired, constructed and completed in a sound and economical manner and in conformity with law.

Eminent Domain Proceeds

If all or any part of the System shall be taken by or under threat of eminent domain proceedings, the net proceeds realized by the Authority therefrom (excluding any portion thereof payable to the United States of America or required by the United States of America to be deposited in a restricted fund) shall be deposited by the Chief Financial Officer in a special fund in trust and applied and disbursed by the Chief Financial Officer subject to the following conditions:

(A) If such proceeds are sufficient to provide for the payment of the entire amount of principal due or to become due upon all of the Bonds, together with all of the interest due or to become due thereon and any redemption premiums, and all amounts payable under Parity Payment Agreements (including Termination Amounts) and all Credit Agreement Payments then due and payable so as to enable the Authority to retire all of the Bonds, either by redemption at the then current redemption prices or by payment at maturity or partly by redemption prior to maturity and partly by payment at maturity, and terminate such Parity Payment Agreements and discharge such obligations with respect to such Credit Agreement Payments, the Chief Financial Officer shall transfer such moneys to the Trustee who shall apply such moneys to such retirement and to the payment of such amounts. The balance of such moneys, if any, shall be transferred back to the Authority and shall be deposited in the Capital Improvement Fund.

(B) If such proceeds are insufficient to provide the moneys required for the purposes described in the foregoing paragraph (A), the Authority shall by resolution determine to apply such proceeds for one of the following purposes, subject to the conditions described in this paragraph (B):

(1) The Authority may determine to apply such proceeds to the purchase or redemption of Bonds then Outstanding and to the payment of Credit Agreement Payments then due and payable. In that event, the Chief Financial Officer shall transfer such proceeds to the Trustee, who shall apply such proceeds pro rata to the redemption or purchase of Bonds of each Series then Outstanding in the proportion which the principal amount of outstanding Bonds of each Series bears to the aggregate principal amount of all Bonds then Outstanding.

(2) The Authority may determine to apply such proceeds to the cost of additions or improvements to or extensions of the System if the Authority first secures and files with the Trustee a report of an Independent Consulting Engineer (a) showing (i) the loss in annual Revenues, if any, suffered or to be suffered, by the Authority by reason of such eminent domain proceedings, (ii) a general description of the additions, improvements or extensions then proposed to be acquired by the Authority from such proceeds, and (iii) an estimate of the additional Revenues to be derived from such additions, improvements or extensions; and (b) determining that such eminent domain proceedings will not substantially impair the ability of the Authority to meet the rate covenant contained in the Indenture. The Authority shall then promptly proceed with the construction of the additions, improvements or extensions substantially in accordance with such report. Payments for such construction shall be made by the Authority from such proceeds. Any balance of such proceeds not required by the Authority for the purposes aforesaid shall be deposited in the Capital Improvement Fund.

Rate Covenant

The Authority shall at all times fix, prescribe and collect rates, fees and charges in connection with the services furnished by the System which will be sufficient to yield the sum of Net Revenues during each Fiscal Year equal to at least 1.25 times the Aggregate Annual Debt Service for such Fiscal Year and to yield Revenues during each Fiscal Year equal to at least the aggregate amount of all transfers required to be made to the Operations and

Maintenance Fund, the Debt Service Fund, the Bond Reserve Fund, the Subordinate Securities Fund, and the Operation, Maintenance, Renewal and Replacement Reserve Fund for such Fiscal Year.

The debt service coverage ratio specified in this covenant shall be the debt service coverage ratio used by the PUC, together with other appropriate factors, in setting rates.

If the financial statements prepared pursuant to the Indenture reflect that (or if the Authority's other books and records at the time such statements are due under the Indenture reflect that) at the end of a Fiscal Year the sum of Net Revenues shall have been less than 1.25 times Aggregate Annual Debt Service for such Fiscal Year, or if Revenues shall have been less than the aggregate amount of all transfers required to be made to the Operations and Maintenance Fund, the Debt Service Fund, the Bond Reserve Fund, the Subordinate Securities Fund, and the Operation, Maintenance, Renewal and Replacement Reserve Fund for such Fiscal Year, the Authority shall promptly employ a Consulting Engineer to make recommendations as to a revision of such rates, fees and charges or the methods of operation of the System. The Authority shall, promptly upon its receipt of such recommendations, subject to applicable requirements or restrictions imposed by law and subject to a good faith determination of the Board that such recommendations, in whole or in part, are in the best interests of the Authority, the Owners and each Credit Provider, revise such rates, fees and charges or methods of operation and will take such other actions as shall be in conformity with such recommendations.

If the Authority complies in all material respects with the reasonable recommendations of the Consulting Engineer with respect to said rates, fees, charges and methods of operation or collection, or makes a good faith determination that such recommendations are not in the best interests of the Authority, the Authority will be deemed to have complied with the rate covenant contained in the Indenture for such Fiscal Year; provided, that Net Revenues shall in no event have been less than Aggregate Annual Debt Service for such Fiscal Year.

The Authority may make adjustments from time to time in its rates, fees and charges and may make such classification thereof as it deems necessary, but shall not reduce such rates, fees and charges below those then in effect unless the Revenues from such reduced rates, fees and charges will at all times be sufficient to meet the requirements of the Indenture.

Compliance with Indenture

The Authority (and the Government as to its covenant summarized below) will faithfully observe and perform all the covenants, conditions and requirements of the Indenture, and will not suffer or permit any default to occur under the Indenture, or do or permit to be done, in, upon or about the System, or any part thereof, anything that might in any way weaken, diminish or impair the security intended to be given pursuant to the Indenture.

Observance of Laws and Regulations

The Authority shall comply promptly, fully and faithfully with and abide by any contract relating to or affecting the availability of any grant or other similar assistance and any statute, law, ordinance, order, rule, regulation, judgment, decree, direction or requirement now in force or hereafter enacted, adopted or entered by any competent governmental authority or agency applicable or with respect to or affecting the acquisition, construction or reconstruction of the System or any part thereof or applicable or with respect to or affecting the operation, manner, use or condition of the System or any part or parcel thereof or adjoining public ways or relating to the imposition of charges or collection of Revenues; provided that the Authority need not comply with any such contract, statute, law, ordinance, rule, regulation, judgment, decree, direction or requirement if and so long as the Authority in good faith shall be contesting or permitting or causing to be contested the applicability or validity thereof by appropriate proceedings diligently prosecuted, even though such contest may result in the imposition of a lien or charge against the System or the Revenues, if (1) the Authority shall effectively prevent foreclosure or enforcement of any such lien or charge and (2) the foreclosure or enforcement of any such lien or charge shall be stayed, and if said stay thereafter expires, the Authority shall forthwith discharge such lien or charge or cause the same to be discharged, so that pending such proceedings the System and the Revenues thereof shall not be affected thereby, and the security of the Bonds shall not be impaired.

Prosecution and Defense of Suits

The Authority shall promptly from time to time take such action as may be necessary or proper to remedy or cure any defect in or cloud upon the title to the System hereafter developing, and shall prosecute all such suits, actions and other proceedings as may be appropriate for such purposes and, to the extent permitted by law, shall indemnify and save the Trustee and every Bondowner harmless from all loss, cost, damage and expense, including attorneys' fees, which they or any of them may incur by reason of any such defect, cloud, suit, action or proceeding. The Authority shall defend against every suit, action or proceeding at any time brought against the Trustee or any Bondowner upon any claim arising out of the receipt, application or disbursement of any of the Revenues or involving the rights of the Trustee or any Bondowner under the Indenture; provided, that the Trustee or any Bondowner at its or his election may appear in and defend any such suit, action or proceeding. The Authority shall, to the extent permitted by law, indemnify and hold harmless the Trustee and the Bondowners against any and all liability claimed or asserted by any person arising out of such receipt, application or disbursement, and shall indemnify and hold harmless the Bondowners against any attorneys' fees or other expenses which any of them may incur in connection with any litigation to which any of them may become a defendant by reason of its ownership of Bonds. The Authority, to the extent permitted by law, shall promptly reimburse any Bondowner in the full amount of any attorneys' fees or other expenses which such Bondowner may incur in litigation or otherwise in order to enforce its rights under the Indenture or the Bonds, if such litigation is concluded favorably to such Bondowner's contentions therein. Notwithstanding any contrary provision of the Indenture, this paragraph will remain in full force and effect, even though all indebtedness and obligations issued under the Indenture may have been fully paid and satisfied, until the Authority shall have been dissolved.

Pledge of the Government

The Government pledges to the holders of all Bonds the following: while any Bonds remain outstanding and not fully performed or discharged (A) to maintain the rights, powers and duties of the Board and the Guam Public Utilities Commission, or their respective successors in accordance with law, to fulfill the terms of Bonds and the Indenture, (B) to maintain the rights and remedies of Bondholders provided in the Act and the Indenture, (C) to protect the exclusive right of the Authority to operate or maintain within Guam any water or wastewater system operated by the government or its designees by preventing the acquisition, operation, maintenance or permitting of any instrumentality of the Government or any other public or private agency, entity or person to operate a separate and competitive water and/or wastewater system, and (D) not to transfer any additional non-system operating responsibilities or other unfunded mandates to the Authority without providing for the payment of the costs of such additional responsibilities, with the exception of annual supplemental annuity and COLA contributions paid by the Authority on behalf of retired employees of the Authority (or its lawful predecessors) as may be required by other laws of Guam. The Authority includes a pledge and agreement of the Government in the Indenture as authorized by Section 14229 of the Act.

Tax Covenants for Series 2017 Bonds

The Authority intends that interest on the Series 2017 Bonds be excluded from gross income for federal income tax purposes, that the Series 2017 Bonds and the interest thereon be exempt from taxation by any state or political subdivision or the District of Columbia and that interest on the Series 2017 Bonds not be treated as a specific preference item for purposes of the federal individual and corporate alternative minimum taxes. The Authority reserves the right to determine the desired tax status of any additional Series of Bonds.

The Authority has covenanted that it shall not use or permit the use of any proceeds of the Series 2017 Bonds or any other funds of the Authority, directly or indirectly, to acquire any securities or obligations, and shall not use or permit the use of any amounts received by the Authority in any manner, and shall not take or permit to be taken any other action or actions, which would cause any such Bond to be an "arbitrage bond" within the meaning of Section 148 of the Code or to be "federally guaranteed" within the meaning of Section 149(b) of the Code.

The Authority has covenanted that it shall at all times do and perform all acts and things permitted by law and the Indenture which are necessary or desirable in order to assure that interest paid on the Series 2017 Bonds (or on any of them) shall be excluded from gross income for federal income tax purposes and that interest paid on the

Series 2017 Bonds shall not be treated as a specific preference item for purposes of the federal individual and corporate alternative minimum taxes.

EVENTS OF DEFAULT AND REMEDIES OF BONDOWNERS

Events of Default

Any one or more of the following events shall be an “Event of Default” under the Indenture:

(1) if default shall be made in the due and punctual payment of the principal of, or the premium (if any) on, any Bond when and as the same shall become due and payable, whether at maturity as therein expressed, by proceedings for redemption, or otherwise, or if default shall be made in the redemption or payment at maturity from any Sinking Account of any Term Bonds in the amounts and at the times provided therefor;

(2) if default shall be made in the due and punctual payment of any installment of interest on any Bond or any Parity Payment Agreement Payment when and as such interest installment or Parity Payment Agreement Payment shall become due and payable;

(3) if default shall be made by the Authority in the observance of any of the other covenants, agreements or conditions on its part in the Indenture or in the Bonds contained or by the Government in the observance of its covenant in summarized above, and such default shall have continued for a period of 30 days after notice thereof, specifying such default and requiring the same to be remedied, shall have been given to the Authority by the Trustee, the Co-Trustee or a Credit Provider, or to the Authority, the Trustee and the Co-Trustee by the Owners of not less than twenty-five percent in aggregate principal amount of the Bonds at the time Outstanding; or

(4) if the Authority shall file a petition or answer seeking reorganization or arrangement under the federal bankruptcy laws or any other applicable law of the United States of America, or if a court of competent jurisdiction shall approve a petition, filed with or without the consent of the Authority, seeking reorganization under the federal bankruptcy laws or any other applicable law of the United States of America, or if, under the provisions of any other law for the relief or aid of debtors, any court of competent jurisdiction shall assume custody or control of the Authority or of the whole or any substantial part of its property.

Remedies

In each and every case during the continuance of an Event of Default, the Trustee in its own name and as Trustee of an express trust, on behalf and for the benefit and protection of the Bondowners, after notice to the Authority, and upon the request of the Owners of a majority in Accreted Value of the Bonds then Outstanding, shall proceed to protect and enforce any rights of the Trustee and, to the full extent that the Bondowners themselves might do, the rights of such Bondowners under the Indenture and under the laws of the Government by such of the following remedies as such majority shall deem most effectual to protect and enforce such rights:

(a) by mandamus or other suit, action or proceeding at law or in equity, to enforce all rights of the Bondowners, including the right to require the Authority to charge, prescribe and collect Revenues adequate to comply with the covenants and agreements made in the Indenture, and to require the Authority to carry out any other covenant or agreement with the Bondowners and to perform its duties under the Act;

(b) by bringing suit upon the Bonds;

(c) by action or suit in equity, to require the Authority to account as if it were the trustee of an expressed trust for the Bondowners;

(d) by realizing or causing to be realized through sale or otherwise upon the moneys, securities and other assets pledged under the Indenture;

(e) by action or suit in equity, to enjoin any acts or things which may be unlawful or in violation of the rights of the Bondowners;

(f) by requiring the Authority to endorse all checks and other negotiable instruments representing Revenues to the order of the Trustee immediately upon the receipt thereof and to deliver such endorsed instruments daily to the Trustee;

(g) by notifying any or all account debtors of the Authority to pay any amounts representing Revenues, when due, directly to the Trustee as Trustee; and

(h) by commencing proceedings for the appointment of a receiver or receivers of the System and of the Revenues, with such powers as the court making such appointment confers.

Application of Funds Upon Default

All of the Revenues, all amounts in certain of the Funds and Accounts established under the Indenture (except any escrow fund established for the payment of any refunded obligations), upon the date of the declaration of an Event of Default as provided in the Indenture and all Revenues thereafter received by the Authority, the Trustee, the Co-Trustee or any Depositary under the Indenture, shall be transmitted to the Trustee and be applied by the Trustee as and in the order of priority provided in the Indenture; provided, however, that (A) if amounts in the Debt Service Fund are insufficient to pay, when due, all interest on, principal of, and Mandatory Sinking Account Payments on all Bonds then Outstanding, all Parity Payment Agreement Payments pursuant to Parity Payment Agreements then Outstanding and all Credit Agreement Reimbursement Payments due and payable pursuant to Credit Agreements then Outstanding, then such amounts in the Debt Service Fund shall be used first to pay all installments of interest then due and owing without preference or priority of any such installment of interest over any other installment of interest, then to pay installments of principal and Mandatory Sinking Account Payments then due and owing, without preference or priority of any installment of principal or Mandatory Sinking Account Payments over any other such installment, then to pay all Credit Agreement Reimbursement Payments then due and payable, and then to pay Parity Payment Agreement Payments then due and owing, without preference or priority of any Parity Payment Agreement Payment over any other such Parity Payment Agreement Payment; and (B) amounts in Construction Accounts may be used for the purposes for which such Construction Accounts were created and funded if the Trustee determines, in accordance with relevant provisions of the Indenture, that such use is in the best interests of the Bondholders and the Credit Providers.

If any installment of interest, principal or Redemption Price is only partially paid, such payment shall occur only upon presentation of the several Bonds and the recording thereon of a record of such partial payment.

Representation of Bondowners by Trustee

In case one or more of the Events of Default shall happen, then and in every such case the Owner of any Bond at the time Outstanding shall be entitled to proceed to protect and enforce the rights vested in such Owner by the Indenture by such appropriate judicial proceeding as such Owner shall deem most effectual to protect and enforce any such right, either by suit in equity or by action at law, whether for the specific performance of any covenant or agreement contained in the Indenture, or in aid of the exercise of any power granted in the Indenture, or to enforce any other legal or equitable right vested in the Owners of Bonds by the Indenture or by law; provided, however, that no such Bondowner shall have the right to institute any such judicial proceeding pursuant to this paragraph unless (A) such Owner shall have previously given to the Trustee notice of the occurrence of an Event of Default under the Indenture; (B) the Owners of at least a majority in Accreted Value of the Bonds then Outstanding shall have made request to the Trustee to exercise the powers granted in the Indenture or to institute such action, suit or proceeding in its own name; (C) such Owner or said Owners shall have tendered to the Trustee reasonable indemnity against the costs, expenses and liabilities to be incurred in compliance with such request; and (D) the Trustee shall have refused or omitted to comply with such request for a period of sixty days after such request shall have been received by, and said tender of indemnity shall have been made to, the Trustee. The provisions of the Indenture shall constitute a contract with the Owners of the Bonds, and such contract and duties of the Authority and of the Authority members, officers and employees thereof shall be enforceable by any Bondowner by mandamus or other appropriate suit, action or proceeding in any court of competent jurisdiction.

Nonwaiver

Nothing in the Indenture, or in the Bonds, shall affect or impair the obligation of the Authority, which is absolute and unconditional, to pay the principal of and the interest (and premium, if any) on the Bonds to the respective Owners of the Bonds at the respective dates of maturity, or upon call for redemption, as provided in the Indenture, but only out of the Revenues pledged in the Indenture for such payments, or affect or impair the right of action, which is also absolute and unconditional, of such Owners to institute suit to enforce such payment by virtue of the contract embodied in the Bonds.

A waiver of any default or breach of duty or contract by any Bondowner shall not affect any subsequent default or breach of duty or contract, or impair any rights or remedies on the subsequent default or breach. No delay or omission of the Trustee or of any Owner of any of the Bonds to exercise any right or power arising upon the happening of any Event of Default shall impair any such right or power or shall be construed to be a waiver of any such Event of Default or an acquiescence therein, and every power and remedy given by the Act or relevant provisions of the Indenture to the Trustee or to the Owners of Bonds or any Credit Provider may be exercised from time to time and as often as shall be deemed expedient by the Trustee or the Owners of Bonds or any such Credit Provider.

If a suit, action or proceeding to enforce any right or exercise any remedy is abandoned or determined adversely to the Bondowners, the Authority, the Trustee and the Bondowners and each Credit Provider shall be restored to their former positions, rights and remedies as if such suit, action or proceeding had not been brought or taken.

Actions by Trustee as Attorney-in-Fact

Any suit, action or proceeding which any Owner of Bonds shall have the right to bring to enforce any right or remedy under the Indenture may be brought by the Trustee for the equal benefit and protection of all Owners of Bonds similarly situated (notwithstanding any conditions upon the bringing of any such action, suit or proceeding set forth in the Indenture) and the Trustee is appointed (and the successive respective Owners of the Bonds issued under the Indenture, by taking and holding the same, shall be conclusively deemed so to have appointed it) the true and lawful attorney-in-fact of the respective Owners of the Bonds for the purpose of bringing any such suit, action, or proceeding and to do and perform any and all acts and things for and on behalf of the respective Owners of the Bonds as a class or classes, as may be necessary or advisable in the opinion of the Trustee as such attorney-in-fact.

Except as may be set forth in a Supplemental Indenture, anything in the Indenture to the contrary notwithstanding, the Owners of a majority in Accreted Value of the Bonds at any time Outstanding shall have the right, by an instrument or concurrent instruments in writing executed and delivered to the Trustee, to direct the method and place of conducting all remedial proceedings to be taken by the Trustee under the Indenture, provided that such direction shall be in accordance with law and the provisions of the Indenture.

Remedies Not Exclusive

No remedy conferred upon or reserved to the Trustee or to the Owners of Bonds or to any Credit Provider is intended to be exclusive of any other remedy. Every such remedy shall be cumulative and shall be in addition to every other remedy given under the Indenture or now or hereafter existing, at law or in equity or by statute or otherwise and may be exercised without exhausting and without regard to any other remedy conferred by the Act or any other law.

MODIFICATION OR AMENDMENT OF THE INDENTURE

Amendments Permitted

The Indenture and the rights and obligations of the Authority and of the Owners of the Bonds and of the Trustee and Co-Trustee may be modified or amended at any time by a Supplemental Indenture which shall become binding when the consents of the Owners of at least 60% in Accreted Value of the Bonds then Outstanding,

exclusive of Bonds disqualified as provided in the Indenture; provided that if such modification or amendment will, by its terms, not take effect so long as any bonds of any particular maturity or Series remain Outstanding, the consent of the Owners of Bonds of such maturity or Series shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds relative to such modification or amendment; and provided further that the consent of a Credit Provider for any Bond shall be deemed to be the consent of the Owner of such Bond if specified in the Supplemental Indenture pursuant to which such Credit Provider is designated as providing a Credit Facility for such Bond.

No such modification or amendment shall (a) extend the fixed maturities of the Bonds, or extend the time for making any Mandatory Sinking Account Payments, or reduce the rate of interest thereon, or extend the time of payment of interest, or reduce the amount of principal thereof, or reduce any premium payable on the redemption thereof, without the consent of the Owner of each Bond so affected, (b) reduce the aforesaid percentage of Owners of Bonds whose consent is required for the execution of any amendment or modification of the Indenture or permit the creation of any lien on the Revenues prior to or on a parity with the lien created by the Indenture or deprive the Owners of the Bonds of the lien created by the Indenture upon such Revenues, without in each case the consent of the Owners of all of the Bonds then Outstanding.

No such modification or amendment shall modify any of the rights or obligations of any Fiduciary without its consent thereto.

The Indenture and the rights and obligations of the Authority and of the Owners of the Bonds may also be modified or amended at any time by a Supplemental Indenture which shall become binding upon adoption, without the consent of any Bondowners, but only to the extent permitted by law and only for any one or more of the following purposes: (1) to add to the covenants and agreements of the Authority in the Indenture contained other covenants and agreements thereafter to be observed or to surrender any right or power reserved to or conferred upon the Authority in the Indenture; (2) to cure, correct or supplement any ambiguous or defective provision contained in the Indenture or in regard to questions arising under the Indenture, as the Authority may deem necessary or desirable and not inconsistent with the Indenture, and which shall not materially adversely affect the interests of the Owners of the Bonds or any Credit Provider; (3) to provide for the issuance of Additional Bonds, and to provide the terms and conditions under which such Additional Bonds may be issued, subject to and in accordance with the provisions of the Indenture; (4) to provide for any other matters for which a Supplemental Indenture is expressly permitted or required under the Indenture; and (5) to make any other amendment or modification which shall not materially adversely affect the interests of the Owners of the Bonds or any Credit Provider.

Any Supplemental Indenture providing for the issuance of a Series of Bonds may require, in addition to or in lieu of any consents described in the foregoing provisions, the consent of any Credit Provider for such Bonds in order for any amendment to the Indenture affecting such Bonds to be effective, and may set forth appropriate procedures for obtaining and evidencing such consent.

Procedure for Amendment with Consent of Bondowners

The Authority may at any time adopt a Supplemental Indenture amending the provisions of the Bonds or of the Indenture, to the extent that such amendment is permitted by the Indenture, to take effect when and as provided. A copy of the Supplemental Indenture, together with a request to Bondowners for their consent thereto, shall be mailed by the Authority to each Owner of Bonds, but failure to receive any such copies of such Supplemental Indenture and request shall not affect the validity of the Supplemental Indenture when assented to as provided.

Such Supplemental Indenture shall not become effective unless there shall be filed with the Trustee the consents of the Owners of 60% in Accreted Value of the Bonds then Outstanding (exclusive of Bonds disqualified as provided in the Indenture) and a notice shall have been published as hereafter provided. Each such consent shall be effective only if accompanied by proof of ownership of the Bonds for which such consent is given, which proof shall be such as is permitted by the Indenture. Any such consent shall be binding upon the Owner of the Bonds giving such consent and on any subsequent Owner (whether or not such subsequent Owner has notice thereof) unless such consent is revoked in writing by the Owner giving such consent or a subsequent Owner by filing such revocation with the Trustee prior to the date when the notice provided for has been published.

After the Owners of the required percentage of Bonds shall have filed their consents to the Supplemental Indenture, the Authority shall mail a notice to the Bondowners in the manner provided for the mailing of the Supplemental Indenture and publication of the notice of adoption thereof, stating in substance that the Supplemental Indenture has been consented to by the Owners of the required percentage of Bonds and will be effective as provided in the Indenture (but failure to receive copies of said notice shall not affect the validity of the Supplemental Indenture or consents thereto). A record, consisting of the papers required to be filed with the Trustee, shall be proof of the matters therein stated until the contrary is proved.

In lieu of obtaining any demand, request, direction, consent or waiver in writing, the Trustee may call and hold a meeting of the Bondowners upon such notice and in accordance with such rules and regulations as the Trustee considers fair and reasonable for the purpose of obtaining any such action.

DEFEASANCE

Discharge of Indenture

If the Authority shall pay and discharge the entire indebtedness on all Bonds Outstanding in any one or more of the following ways—

(A) by well and truly paying or causing to be paid the principal of (including redemption premiums, if any) and interest on all Bonds Outstanding, as and when the same become due and payable (but this clause shall not include Bonds the principal of or interest on which has been paid by a Credit Provider until said principal and interest shall have been paid by the Authority); or

(B) by depositing with the Co-Trustee, in trust, at or before maturity, money which, together with the amounts then on deposit in the Debt Service Fund and the Bond Reserve Fund, is fully sufficient to pay or redeem all Bonds Outstanding, including all principal, interest and redemption premiums, if any; or

(C) by delivering to the Co-Trustee, for cancellation by it, all Bonds Outstanding; or

(D) by depositing with the Co-Trustee, in trust, non-callable Federal Securities in such amount which, in the determination of an Independent Certified Public Accountant, who shall certify such determination to the Co-Trustee and, if so provided in a Supplemental Indenture, any Credit Provider, shall, together with the income or increment to accrue thereon and any other moneys of the Authority made available for such purpose, be fully sufficient to pay and discharge the indebtedness on all Bonds (including all principal, interest and redemption premiums, if any) at or before their respective maturity dates;

and if the Authority shall also pay or cause to be paid all other sums payable under the Indenture by the Authority (including all Parity Payment Agreement Payments and any Termination Payments payable in connection with a termination of a Parity Payment Agreement and any Credit Agreement Payments then due and payable) and deliver or have delivered to the Trustee, the Co-Trustee and each Credit Provider an Opinion of Counsel to the effect that upon satisfaction of the other requirements of the Indenture all obligations of the Authority under the Indenture have ceased, terminated and been completely discharged, then and in that case, at the election of the Authority (evidenced by a Certificate of the Authority signifying its intention to pay and discharge all such indebtedness and that the Indenture and all other obligations of the Authority under the Indenture shall cease and terminate, which shall be filed with the Trustee and the Co-Trustee), and notwithstanding that any Bonds shall not have been surrendered for payment, the pledge of the Revenues and other funds provided for in the Indenture and all other obligations of the Authority under the Indenture are required to cease, terminate and be completely discharged, and the Owners of the Bonds not so surrendered and paid would thereafter be entitled to payment only out of the money or Federal Securities deposited with the Co-Trustee as aforesaid for their payment; subject, however, to the provisions of the Indenture.

The Authority may at any time surrender to the Co-Trustee for cancellation by it any Bonds previously issued and delivered, which the Authority may have acquired in any manner whatsoever, and such Bonds, upon such surrender and cancellation, are required to be deemed to be paid and retired.

Discharge of Liability on Bonds

Upon the deposit with the Co-Trustee, in trust, at or before maturity, of money or Federal Securities in the necessary amount to pay or redeem Outstanding Bonds (whether upon or prior to their maturity or the redemption date of such Bonds), provided that if such Bonds are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given as in the Indenture provided or provision satisfactory to the Co-Trustee shall have been made for the giving of such notice, then all liability of the Authority in respect of such Bonds is required to cease, determine and be completely discharged and the Owners thereof would thereafter be entitled only to payment out of the money or Federal Securities deposited with the Trustee as aforesaid for their payment, subject, however, to the provisions of the Indenture.

Payment of Bonds after Discharge of Indenture

Notwithstanding any provisions of the Indenture, any moneys deposited with the Co-Trustee in trust for the payment of the principal of, or interest or premium on, any Bonds and remaining unclaimed for two years after the principal of all the Outstanding Bonds has become due and payable (whether at maturity or upon call for redemption or by declaration as provided in the Indenture) are required to then be repaid to the Authority upon its Request, and the Owners of such Bonds would thereafter be entitled to look only to the Authority for payment thereof, and all liability of the Co-Trustee with respect to such moneys would thereupon cease; provided, however, that before the repayment of such moneys to the Authority as aforesaid, the Co-Trustee may (at the cost of the Authority) first publish at least once in a Financial Newspaper or Journal and in a newspaper of general circulation in Guam a notice, in such form as may be deemed appropriate by the Co-Trustee, with respect to the Bonds so payable and not presented and with respect to the provisions relating to the repayment to the Authority of the moneys held for the payment thereof. In the event of the repayment of any such moneys to the Authority as aforesaid, the Owners of the Bonds in respect of which such moneys were deposited would thereafter be deemed to be general creditors of the Authority for amounts equivalent to the respective amounts deposited for the payment of such Bonds and so repaid to the Authority (without interest thereon).

[THIS PAGE INTENTIONALLY LEFT BLANK]

APPENDIX D

PROPOSED FORM OF OPINION OF BOND COUNSEL

[Closing Date]

Guam Waterworks Authority
Tamuning, Guam

Guam Waterworks Authority
Water and Wastewater System Revenue Refunding Bonds,
Series 2017

(Final Opinion)

Ladies and Gentlemen:

We have acted as bond counsel to the Guam Waterworks Authority (the “Authority”) in connection with the issuance of \$107,660,000 aggregate principal amount of Guam Waterworks Authority Water and Wastewater System Revenue Refunding Bonds, Series 2017 (the “Series 2017 Bonds”) issued pursuant to an indenture dated as of December 1, 2005, as heretofore supplemented and amended, and as supplemented by the Sixth Supplemental Indenture, dated as of December 1, 2017 (as so supplemented, the “Indenture”), among the Authority, Bank of Guam, as trustee (the “Trustee”) and U.S. Bank National Association, as co-trustee (the “Co-Trustee”). Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Indenture.

In such connection, we have reviewed the Indenture, the Tax Certificate of the Authority, dated the date hereof (the “Tax Certificate”), certificates of the Authority, the Trustee, the Co-Trustee, and others, opinions of counsel to the Authority and others, and such other documents, opinions and matters to the extent we deemed necessary to render the opinions set forth herein.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after the date hereof. Accordingly, this letter speaks only as of its date and is not intended to, and may not, be relied upon or otherwise used in connection with any such actions, events or matters. Our engagement with respect to the Series 2017 Bonds has concluded with their issuance, and we disclaim any obligation to update this letter. We have assumed the genuineness of all documents and signatures presented to us (whether as originals or as copies) and the due and legal execution and delivery thereof by, and validity against, any parties other than the Authority. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the second paragraph hereof. Furthermore, we have assumed compliance with all covenants and agreements contained in the Indenture and the Tax Certificate, including (without limitation) covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause interest on the Series 2017 Bonds to be included in gross income for federal income tax purposes. We call attention to the fact that the rights and obligations under the Series 2017 Bonds, the Indenture and the Tax Certificate and their enforceability may be subject to bankruptcy, insolvency, receivership, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors’ rights, to the application of equitable principles and to the exercise of judicial discretion in appropriate cases. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute a penalty), right of set-off, arbitration, judicial reference, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents. Our services did not include financial or other non-legal advice. Finally, we undertake no responsibility for the accuracy, completeness or fairness of the Official Statement or other offering material relating to the Series 2017 Bonds and express no opinion with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The Series 2017 Bonds constitute the valid and binding limited obligations of the Authority payable solely from the Revenues of the System.

2. The Indenture has been duly executed and delivered by, and constitutes the valid and binding obligation of, the Authority.

3. The Indenture creates a valid pledge, to secure the payment of the principal of, premium, if any, and interest on the Bonds, Credit Agreement Payments and Parity Payment Agreement Payments, of the Revenues, subject to the provisions of the Indenture permitting the application thereof for the purposes and on the terms and conditions set forth in the Indenture.

4. Interest on the Series 2017 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the "Code"). Interest on the Series 2017 Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, nor is it included in adjusted current earnings when calculating corporate alternative minimum taxable income. Under 48 U.S.C. Section 1423a, interest on the Series 2017 Bonds is exempt from taxation by the Government of Guam, or by any State or Territory or any political subdivision thereof or by the District of Columbia. We express no opinion regarding other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Series 2017 Bonds.

Faithfully yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

per

APPENDIX E

PROPOSED FORM OF CONTINUING DISCLOSURE AGREEMENT

[THIS PAGE INTENTIONALLY LEFT BLANK]

FORM OF MASTER CONTINUING DISCLOSURE AGREEMENT

The Master Continuing Disclosure Agreement, dated as of December 1, 2005, is executed and delivered by the Guam Waterworks Authority (the “Authority”) and Digital Assurance Certification, L.L.C., as dissemination agent (the “Dissemination Agent”), in connection with the issuance of the Guam Waterworks Authority Water and Wastewater System Revenue Bonds (the “Bonds”) pursuant to an indenture (the “Indenture”), dated as of December 1, 2005, as it may be supplemented from time to time, among the Authority, Bank of Guam, as trustee, and U.S. Bank National Association, as co-trustee. The Authority and the Dissemination Agent covenant and agree as follows:

SECTION 1. Purpose of the Disclosure Agreement. The Disclosure Agreement is being executed and delivered by the Authority for the benefit of the Holders and Beneficial Owners of the Bonds and in order to assist the Participating Underwriters in complying with S.E.C. Rule 15c2-12(b)(5).

SECTION 2. Definitions. In addition to the definitions set forth in the Indenture, which apply to any capitalized term used in the Disclosure Agreement unless otherwise defined in this Section, the following capitalized terms shall have the following meanings:

“Annual Report” means any Annual Report provided by the Authority pursuant to, and as described in, Sections 3 and 4 of this Disclosure Agreement.

“Beneficial Owner” means any person which has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any Bonds (including persons holding Bonds through nominees, depositories or other intermediaries).

“Business Day” means any day other than a Saturday, Sunday or other day on which Authority offices generally are not open for business.

“Designated Bonds” means any Bonds subject to the Rule and identified as such by a Supplemental Continuing Disclosure Agreement.

“Disclosure Agreement” means the Master Continuing Disclosure Agreement as it may be supplemented from time to time by one or more Supplemental Disclosure Agreements.

“Dissemination Agent” means the Authority, or any successor Dissemination Agent designated in writing by the Authority and which has filed with the Authority a written acceptance of such designation.

“Holder” or “Bondholder” means any registered owner of Bonds as shown on the books of registration kept by the Registrar.

“Listed Events” means any of the events listed in Section 5(a) of the Disclosure Agreement.

“National Repository” means any Nationally Recognized Municipal Securities Information Repository for purposes of the Rule. A list of the National Repositories approved by the Securities and Exchange Commission is available at <http://www.sec.gov/info/municipal/nrmsir.htm>.

“Participating Underwriter” means any “participating underwriter” of the Bonds within the meaning of the Rule required to comply with the Rule in connection with offering of the Bonds.

“Repository” shall mean each National Repository and the State Repository.

“Rule” shall mean Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

“State Repository” shall mean any public or private repository or entity designated by the Authority as the state repository for the purpose of the Rule and recognized as such by the Securities and Exchange Commission. As of the date of the Agreement, there is no State Repository.

“Supplemental Disclosure Agreement” means any supplemental disclosure agreement entered into between the Authority and the Dissemination Agent, supplementing the Disclosure Agreement.

SECTION 3. [Provision of Annual Reports.](#)

(a) The Authority shall, or shall cause the Dissemination Agent to, not later than 270 days after the end of each fiscal year of the Authority (presently September 30), commencing with the report for the fiscal year ending September 30, 2005, provide to each Repository an Annual Report which is consistent with the requirements of Section 4 of the Disclosure Agreement; provided that the audited financial statements of the Authority may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may cross-reference other information as provided in Section 4 of the Disclosure Agreement. If the Authority’s fiscal year changes, it shall give notice of such change in the same manner as for a Listed Event under Section 5(a).

(b) Not later than fifteen (15) Business Days prior to said date, the Authority shall provide the Annual Report to the Dissemination Agent (if other than the Authority). If the Authority is unable to provide to the Repositories an Annual Report by the date required in subsection (a), the Authority shall send a notice to the Municipal Securities Rulemaking Board and the State Repository, if any, in substantially the form attached as Exhibit A.

(c) The Dissemination Agent shall:

(i) determine each year prior to the date for providing the Annual Report the name and address of each National Repository and the State Repository, if any; and

(ii) if the Dissemination Agent is other than the Authority, file a report with the Authority certifying that the Annual Report has been provided pursuant to the Disclosure Agreement, stating the date it was provided and listing all the Repositories to which it was provided.

SECTION 4. [Content of Annual Reports.](#) The Annual Report shall contain or include by reference the following:

(a) the audited financial statements of the Authority for the prior fiscal year, prepared in accordance with generally accepted accounting principles as promulgated to apply to governmental entities from time to time by the Governmental Accounting Standards Board; provided that if the Authority’s audited financial statements are not available by the time the Annual Report is required to be filed pursuant to Section 3(a), the Annual Report shall contain unaudited financial statements for such entity in a format similar to the financial statements contained in the official statement relating to any Designated Bonds, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available; and

(b) operating results of the water and wastewater systems (the “System”), debt service coverage ratios, sources and uses of water, largest water and wastewater customers, data on collection of payments from customers of the System, and new water and sewer installations, to the extent that such information is historical and not projected and that similar information is included in any official statement with respect to Designated Bonds.

The Authority has not undertaken in the Disclosure Agreement to provide all information an investor may want to have in making decisions to buy, hold or sell the Bonds, but only to provide the information specified above. Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues of the Authority, which have been submitted to each of the Repositories

or the Securities and Exchange Commission. If the document included by reference is a final official statement, it must be available from the Municipal Securities Rulemaking Board. The Authority shall clearly identify each such other document so included by reference.

SECTION 5. [Reporting of Significant Events.](#)

(a) Pursuant to the provisions of this Section 5, the Authority shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the Designated Bonds, if material:

- (1) principal and interest payment delinquencies;
- (2) non-payment related defaults;
- (3) modifications to rights of Bondholders;
- (4) optional, contingent or unscheduled bond calls;
- (5) defeasances;
- (6) rating changes;
- (7) adverse tax opinions or events affecting the tax-exempt status of any Bonds;
- (8) unscheduled draws on the debt service reserves reflecting financial difficulties;
- (9) unscheduled draws on the credit enhancements reflecting financial difficulties;
- (10) substitution of the credit or liquidity providers or their failure to perform; or
- (11) release, substitution or sale of property securing repayment of the Bonds.

(b) Whenever the Authority obtains knowledge of the occurrence of a Listed Event, the Authority shall as soon as possible determine if such event would be material under applicable federal securities laws.

(c) If the Authority determines that knowledge of the occurrence of a Listed Event would be material under applicable federal securities laws, the Authority shall promptly file a notice of such occurrence with the Municipal Securities Rulemaking Board and the State Repository. Notwithstanding the foregoing, notice of Listed Events described in subsections (a)(4) and (5) need not be given under this subsection any earlier than the notice (if any) of the underlying event is given to Holders of affected Bonds pursuant to the Indenture.

SECTION 6. [Termination of Reporting Obligation.](#) The Authority's obligations under the Disclosure Agreement with respect to any Designated Bonds shall terminate upon the legal defeasance, prior redemption or payment in full of such Bonds. If such termination occurs with respect to any Designated Bonds prior to the final maturity thereof, the Authority shall give notice of such termination in the same manner as for a Listed Event under Section 5(c). The Authority's obligations under the Disclosure Agreement may also be temporarily suspended with respect to any Series of Designated Bonds under certain conditions as permitted by the Rule.

SECTION 7. [Dissemination Agent.](#) The Authority may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under the Disclosure Agreement, and may discharge any such Agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent shall not be responsible in any manner for the content of any notice or report prepared by the Authority pursuant to the Disclosure Agreement. The initial Dissemination Agent shall be the Digital Assurance Certification, L.L.C.

SECTION 8. [Amendment; Waiver; Supplemental Disclosure Agreements](#) (a) Notwithstanding any other provision of the Disclosure Agreement, the Authority and the Dissemination Agent may amend the Disclosure Agreement, and any provision of the Disclosure Agreement may be waived, provided that the following conditions are satisfied:

(i) If the amendment or waiver relates to the provisions of Sections 3(a), 4, or 5(a), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to one or more Designated Bonds, or the type of business conducted;

(ii) The undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of any affected Designated Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(iii) The amendment or waiver either (A) is approved by the Holders of a majority in aggregate principal amount of the affected Designated Bonds, or (B) does not, in the opinion of the Authority, materially impair the interests of the Holders or Beneficial Owners of the Designated Bonds.

In the event of any amendment or waiver of a provision of the Disclosure Agreement, the Authority shall describe such amendment in the next Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or in the case of a change of accounting principles, on the presentation) of financial information or operating data being presented by the Authority. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (A) notice of such change shall be given in the same manner as for a Listed Event under Section 5(c), and (B) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

(b) A Supplemental Disclosure Agreement may be entered into by the Authority and the Dissemination Agent at any time from time to time upon the sale or issuance of a Series of Bonds, specifying the Series designation of the Bonds to be included hereunder and confirming other matters related thereto, and shall be fully effective in accordance with the terms hereof upon its execution and delivery by Authorized Officers of the Authority and the Dissemination Agent.

SECTION 9. [Additional Information.](#) Nothing in the Disclosure Agreement shall be deemed to prevent the Authority from disseminating any other information, using the means of dissemination set forth in the Disclosure Agreement or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by the Disclosure Agreement. If the Authority choose to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by the Disclosure Agreement, the Authority shall have no obligation under the Disclosure Agreement to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

SECTION 10. [Default.](#) In the event of a failure of the Authority to comply with any provision of the Disclosure Agreement any Holder or Beneficial Owner of the Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Authority to comply with its obligations under the Disclosure Agreement. A default under the Disclosure Agreement shall not be deemed an event of default under the Indenture, and the sole remedy under the Disclosure Agreement in the event of any failure of the Authority to comply with the Disclosure Agreement shall be an action to compel performance.

SECTION 11. [Duties, Immunities and Liabilities of Dissemination Agent.](#) The Dissemination Agent shall have only such duties as are specifically set forth in the Disclosure Agreement, and the Authority agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's gross negligence or willful misconduct. The obligations of the Authority under this Section shall survive resignation or removal of the Dissemination Agent and payment of the Bonds.

SECTION 12. Beneficiaries. The Disclosure Agreement shall inure solely to the benefit of the Authority, the Dissemination Agent, the Participating Underwriters and Holders and Beneficial Owners from time to time of the Bonds, and shall create no rights in any other person or entity.

GUAM WATERWORKS AUTHORITY

By /s/
Authorized Officer

DIGITAL ASSURANCE CERTIFICATION, L.L.C.

By /s/
Authorized Officer

EXHIBIT A

NOTICE TO REPOSITORIES OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer: Guam Waterworks Authority

Name of Bond Issue: Guam Waterworks Authority
Water and Wastewater System Revenue Refunding Bonds, Series 2017

Date of Issuance: December 20, 2017

NOTICE IS HEREBY GIVEN that the Authority has not provided an Annual Report with respect to the above-named Bonds as required by Section _____ of the Indenture providing for the issuance of such Bonds. [The Authority anticipates that the Annual Report will be filed by _____.]

Dated: _____

GUAM WATERWORKS AUTHORITY

By: _____
Title:

PROPOSED FORM OF 2017 SUPPLEMENTAL CONTINUING DISCLOSURE AGREEMENT

This Supplemental Continuing Disclosure Agreement, dated December 20, 2017, supplementing and amending the Master Continuing Disclosure Agreement, dated as of December 1, 2005 (as supplemented, the “Disclosure Agreement”), between the GUAM WATERWORKS AUTHORITY (the “Authority”) and DIGITAL ASSURANCE CERTIFICATION, L.L.C. (the “Dissemination Agent” or “DAC”), is being executed by the Authority and the Dissemination Agent in connection with the issuance of \$107,660,000 Guam Waterworks Authority Water and Wastewater System Revenue Refunding Bonds, Series 2017 (the “2017 Bonds”). The 2017 Bonds are being issued pursuant to the Indenture, dated as of December 1, 2005, as supplemented (including as supplemented by the Sixth Supplemental Indenture, dated as of December 1, 2017) (the “Indenture”), among the Authority, Bank of Guam, as trustee (the “Trustee”), and U.S. Bank National Association, as co-trustee (the “Co-Trustee”).

The services provided under this Supplemental Continuing Disclosure Agreement relate solely to the execution of instructions received from the Authority through use of the DAC system and do not constitute “advice” within the meaning of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Act”). The Dissemination Agent will not provide any advice or recommendation to the Authority or anyone on the Authority’s behalf regarding the “issuance of municipal securities” or any “municipal financial product” as defined in the Act and nothing in this Supplemental Continuing Disclosure Agreement shall be interpreted to the contrary.

The Authority and the Dissemination Agent covenant and agree as follows:

SECTION 1. Definitions. Unless otherwise defined herein, or the context otherwise requires, capitalized terms used in this Supplemental Continuing Disclosure Agreement shall have the meanings ascribed thereto in the Disclosure Agreement or, if not defined in the Disclosure Agreement, in the Indenture.

SECTION 2. Purpose of the Supplemental Continuing Disclosure Agreement; Designation as Designated Bonds; Application of Disclosure Agreement. This Supplemental Continuing Disclosure Agreement is being executed and delivered by the Authority and the Dissemination Agent for the benefit of the Holders and Beneficial Owners of the 2017 Bonds and in order to assist the Participating Underwriters in complying with the Rule. The 2017 Bonds are hereby designated as “Designated Bonds” under the Disclosure Agreement. Except as provided below, all terms and provisions of the Disclosure Agreement are hereby made applicable to the 2017 Bonds described herein.

SECTION 3. Filings with MSRB; Format. Until otherwise designated by the MSRB or the Securities and Exchange Commission, filings with the MSRB are to be made through the Electronic Municipal Market Access (EMMA) website of the MSRB, currently located at <http://emma.msrb.org>. Any report or filing with the MSRB pursuant to this Supplemental Continuing Disclosure Agreement must be submitted in electronic format, accompanied by such identifying information as is prescribed by the MSRB.

SECTION 4. Provisions Applicable to 2017 Bonds. The following provisions shall apply solely to the 2017 Bonds and shall supersede the provisions of the Disclosure Agreement for purposes of the 2017 Bonds.

(a) Solely with respect to the 2017 Bonds, the following terms shall have the following meanings:

“Annual Filing Date” means the date, set forth in Section 3(a), by which the Annual Report is to be filed with the MSRB.

“Certification” means a written certification of compliance signed by the Disclosure Representative stating that the Annual Report, Listed Event notice, or Failure to File Event notice, as applicable, delivered to the Dissemination Agent is the Annual Report, Listed Event notice or Failure to File Event notice, as applicable, required to be submitted to the MSRB under this Supplemental Continuing Disclosure Agreement. A Certification shall accompany each such document submitted to the Dissemination Agent by the Authority and

include the full name of the 2017 Bonds and the 9-digit CUSIP numbers for all 2017 Bonds to which the document applies.

“Disclosure Representative” means such person as the Authority shall designate in writing to the Dissemination Agent from time to time as the person responsible for providing Information to the Dissemination Agent.

“Failure to File Event” means the Authority’s failure to file an Annual Report on or before the Annual Filing Date.

“Force Majeure Event” means: (i) acts of God, war, or terrorist action; (ii) failure or shut-down of the Electronic Municipal Market Access system maintained by the MSRB; or (iii) to the extent beyond the Dissemination Agent’s reasonable control, interruptions in telecommunications or utilities services, failure, malfunction or error of any telecommunications, computer or other electrical, mechanical or technological application, service or system, computer virus, interruptions in Internet service or telephone service (including due to a virus, electrical delivery problem or similar occurrence) that affect Internet users generally, or in the local area in which the Dissemination Agent or the MSRB is located, or acts of any government, regulatory or any other competent authority the effect of which is to prohibit the Dissemination Agent from performance of its obligations under this Disclosure Agreement.

“Information” means, collectively, the Annual Reports, the Listed Event notices and the Failure to File Event notices.

“Listed Events” shall mean any of the events listed in Section 5(a) or (b) of the Disclosure Agreement.

“Official Statement” shall mean the Official Statement, dated November 15, 2017, relating to the 2017 Bonds.

“MSRB” shall mean the Municipal Securities Rulemaking Board or any other entity designated or authorized by the Securities and Exchange Commission to receive reports pursuant to the Rule.

“Repository” shall mean the MSRB.

(b) With respect to the 2017 Bonds, Section 3 of the Master Continuing Disclosure Agreement as originally executed shall not apply and shall be deemed to be replaced by the following:

“SECTION 3. Provision of Annual Reports.

(a) The Authority shall, or shall cause the Dissemination Agent to, not later than 270 days after the end of each fiscal year of the Authority (presently September 30) (the “Annual Filing Date”), commencing with the report for the fiscal year ending September 30, 2017, provide to each Repository an Annual Report which is consistent with the requirements of Section 4 of the Disclosure Agreement; provided that the audited financial statements of the Authority may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. If the Authority’s fiscal year changes, it shall give notice of such change in the same manner as for a Listed Event under Section 5(a).

(b) The Authority shall provide, annually, an electronic copy of the Annual Report and Certification to the Dissemination Agent, not later than the Annual Filing Date. Promptly upon receipt of an electronic copy of the Annual Report and the Certification, the Dissemination Agent shall provide an Annual Report to the MSRB not later than the Annual Filing Date. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may cross reference other information as provided in Section 4 of the Disclosure Agreement.

(c) If on the fifteenth (15th) day prior to the Annual Filing Date, the Dissemination Agent has not received a copy of the Annual Report and Certification, the Dissemination Agent shall contact the Disclosure Representative by telephone and in writing (which may be by e-mail) to remind the Authority of its undertaking to provide the Annual Report pursuant to Section 3(a). Upon such reminder, the Disclosure Representative shall either (i) provide the Disclosure Dissemination Agent with an electronic copy of the Annual Report and the Certification no later than two (2) business days prior to the Annual Filing Date, or (ii) instruct the Dissemination Agent in writing that the Authority will not be able to file the Annual Report within the time required under this Disclosure Agreement, state the date by which the Annual Report for such year will be provided and instruct the Dissemination Agent that a Failure to File Event has occurred and to immediately send a notice to the MSRB in substantially the form attached as Exhibit A, accompanied by a cover sheet completed by the Dissemination Agent.

(d) If the Dissemination Agent has not received an Annual Report and Certification by 6:00 p.m. Eastern time on the Annual Filing Date (or, if such Annual Filing Date falls on a Saturday, Sunday or holiday, then the first business day thereafter) for the Annual Report, a Failure to File Event shall have occurred and the Authority irrevocably directs the Dissemination Agent to immediately send a notice to the MSRB in substantially the form attached as Exhibit A without reference to the anticipated filing date for the Annual Report, accompanied by a cover sheet completed by the Dissemination Agent.

(e) If the Authority adjusts the Annual Filing Date upon change of its fiscal year, it shall provide written notice of such change and the new Annual Filing Date to the Dissemination Agent, Trustee and the MSRB, provided, however, that the period between the existing Annual Filing Date and new Annual Filing Date shall not exceed one year.

(f) Any Information received by the Dissemination Agent before 6:00 p.m. Eastern time on any business day that it is required to file with the MSRB pursuant to the terms of this Disclosure Agreement and that is accompanied by a Certification and all other information required by the terms of this Disclosure Agreement will be filed by the Dissemination Agent with the MSRB no later than 11:59 p.m. Eastern time on the same business day; provided, however, the Dissemination Agent shall have no liability for any delay in filing with the MSRB if such delay is caused by a Force Majeure Event provided that the Dissemination Agent uses reasonable efforts to make any such filing as soon as possible.”

(c) With respect to the 2017 Bonds, references in the Master Continuing Disclosure Agreement to Section 5(a) shall be deemed to refer to Sections 5(a) and (b) of such Section 5, as set forth in Section 4(d) of this Supplemental Continuing Disclosure Agreement.

(d) With respect to the 2017 Bonds, Section 5 of the Master Continuing Disclosure Agreement as originally executed shall not apply and shall be deemed to be replaced by the following:

“SECTION 5. Reporting of Significant Events.

(a) Pursuant to the provisions of this Section 5, the Authority shall give, or cause to be given, to the MSRB notice of the occurrence of any of the following events with respect to the 2017 Bonds in a timely manner not later than ten business days after the occurrence of the event:

(1) Principal and interest payment delinquencies;

(2) Unscheduled draws on debt service reserves reflecting financial difficulties;

- (3) Unscheduled draws on credit enhancements reflecting financial difficulties;
- (4) Substitution of credit or liquidity providers, or their failure to perform;
- (5) Adverse tax opinions or issuance by the Internal Revenue Service of proposed or final determination of taxability or of a Notice of Proposed Issue (IRS Form 5701 TEB);
- (6) Tender offers;
- (7) Defeasances;
- (8) Rating changes; or
- (9) Bankruptcy, insolvency, receivership or similar event of the Authority;

Note: for the purposes of the event identified in subparagraph (9), the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the Authority in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Authority, or if such jurisdiction has been assumed by leaving the existing governmental body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Authority.

(b) The Authority shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the 2017 Bonds, if material, to the MSRB in a timely manner not later than ten business days after the occurrence of the event:

- (1) Unless described in paragraph 5(a)(5), other material notices or determinations by the Internal Revenue Service with respect to the tax status of the 2017 Bonds or other material events affecting the tax status of the 2017 Bonds;
- (2) Modifications to rights of 2017 Bond holders;
- (3) Optional, unscheduled or contingent 2017 Bond calls;
- (4) Release, substitution, or sale of property securing repayment of the 2017 Bonds;
- (5) Non-payment related defaults;
- (6) The consummation of a merger, consolidation, or acquisition involving the Authority or the sale of all or substantially all of the assets of the Authority, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms; or
- (7) Appointment of a successor or additional trustee or the change of name of a trustee.

(c) Notwithstanding the foregoing, notice of the Listed Events described in subsections (a)(7) and (b)(3) need not be given under this subsection any earlier than the notice (if any) of the underlying event is given to Holders of affected 2017 Bonds pursuant to the Indenture.

(d) The Trustee and the Co-Trustee shall, within one (1) Business Day (or as soon thereafter as practicable) of obtaining actual knowledge of the occurrence of any of the Listed Events, inform the Disclosure Representative of the event, and request that the Authority promptly notify the Dissemination Agent in writing whether or not to report the event pursuant to subsections (e) and (f) hereof.

(e) Whenever the Authority obtains knowledge of the occurrence of a Listed Event under subsection 5(b), whether because of a notice from the Trustee or Co-Trustee pursuant to subsection (d) or otherwise, the Authority shall as soon as practicable determine if such event is material under applicable federal securities laws. If the Authority determines that the occurrence of such Listed Event would be material under applicable federal securities laws, the Authority shall promptly notify the Dissemination Agent in writing of the occurrence of the Listed Event. Such notice shall instruct the Dissemination Agent to report the occurrence pursuant to subsection 5(g) hereof and shall be accompanied by a Certification. If in response to a request under subsection 5(d), the Authority determines that such Listed Event would not be material under applicable federal securities laws, the Authority shall so notify the Dissemination Agent in writing and instruct the Dissemination Agent not to report the occurrence. If in response to a request under subsection 5(d), the Authority determines that such Listed Event is a Listed Event under subsection 5(a), the Authority shall so notify the Dissemination Agent in writing and instruct the Dissemination Agent to report the occurrence. Such notice or Certification shall identify the Listed Event that has occurred (which shall be any of the categories set forth in Section 5 (a) or (b) of this Disclosure Agreement), include the text of the disclosure that the Authority desires to make, contain the written authorization of the Authority for the Dissemination Agent to disseminate such information, and identify the date the Authority desires for the Dissemination Agent to disseminate the information.

(f) The Dissemination Agent is under no obligation to notify the Authority or the Disclosure Representative of an event that may constitute a Listed Event. In the event the Dissemination Agent so notifies the Disclosure Representative, the Disclosure Representative will promptly instruct the Dissemination Agent that either (i) a Listed Event has not occurred and no filing is to be made or (ii) a Listed Event has occurred and the Dissemination Agent is to report the occurrence pursuant to subsection (g) of this Section 5, which instructions relating to this clause (ii) to be accompanied by a Certification. Such Certification shall identify the Listed Event that has occurred (which shall be any of the categories set forth in Section 5 (a) or (b) of this Disclosure Agreement), include the text of the disclosure that the Authority desires to make, contain the written authorization of the Authority for the Dissemination Agent to disseminate such information, and identify the date the Authority desires for the Dissemination Agent to disseminate the information.

(g) If the Dissemination Agent has been instructed by the Authority as prescribed in subsection (e) or (f)(ii) of this Section 5 to report the occurrence of a Listed Event, the Dissemination Agent shall file a notice of such occurrence with the MSRB within the time frame set forth in Section 3(f). This notice will be filed with a cover sheet completed by the Dissemination Agent.”

(e) With respect to the 2017 Bonds, Section 7 of the Master Continuing Disclosure Agreement as originally executed shall not apply and shall be deemed to be replaced by the following:

“SECTION 7. Dissemination Agent. The Authority has appointed Digital Assurance Certification, L.L.C. as exclusive Dissemination Agent under this Disclosure Agreement. The Authority may, upon thirty days’ prior written notice to the Dissemination Agent and the Trustee, replace or appoint a successor Dissemination Agent. Upon termination of DAC’s services as Dissemination Agent, whether by notice of

the Authority or DAC, the Authority agrees to appoint a successor Dissemination Agent or, alternately, agrees to assume all responsibilities of Dissemination Agent under this Disclosure Agreement for the benefit of the holders of the 2017 Bonds. Notwithstanding any replacement or appointment of a successor, the Authority shall remain liable until payment in full for any and all sums owed and payable to the Dissemination Agent. The Dissemination Agent may resign at any time by providing thirty days' prior written notice to the Authority."

(f) With respect to the 2017 Bonds, Section 11 of the Master Continuing Disclosure Agreement as originally executed shall not apply and shall be deemed to be replaced by the following:

"SECTION 11. Duties, Immunities and Liabilities of Disclosure Dissemination Agent

(a) The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement. The Dissemination Agent's obligation to deliver the information at the times and with the contents described herein shall be limited to the extent the Authority has provided such information to the Dissemination Agent as required by this Disclosure Agreement. The Dissemination Agent shall have no duty with respect to the content of any disclosures or notice made pursuant to the terms hereof. The Dissemination Agent shall have no duty or obligation to review or verify any Information or any other information, disclosures or notices provided to it by the Authority and shall not be deemed to be acting in any fiduciary capacity for the Authority, the Holders of the 2017 Bonds or any other party. The Dissemination Agent shall have no responsibility for the Authority's failure to report to the Dissemination Agent a Listed Event or a duty to determine the materiality thereof. The Dissemination Agent shall have no duty to determine, or liability for failing to determine, whether the Authority has complied with this Disclosure Agreement. The Dissemination Agent may conclusively rely upon Certifications of the Authority at all times.

The obligations of the Authority under this Section shall survive resignation or removal of the Dissemination Agent and defeasance, redemption or payment of the 2017 Bonds.

(b) The Dissemination Agent may, from time to time, consult with legal counsel (either in-house or external) of its own choosing in the event of any disagreement or controversy, or question or doubt as to the construction of any of the provisions hereof or its respective duties hereunder, and shall not incur any liability and shall be fully protected in acting in good faith upon the advice of such legal counsel. The reasonable fees and expenses of such counsel shall be payable by the Authority.

(c) All documents, reports, notices, statements, information and other materials provided to the MSRB under this Disclosure Agreement shall be provided in an electronic format and accompanied by identifying information as prescribed by the MSRB necessary to file such information in accordance with this Disclosure Agreement."

SECTION 5. Ratification of Disclosure Agreement. As heretofore supplemented and as amended and supplemented hereby, the Disclosure Agreement is in all respects confirmed, except with respect to such provisions which apply expressly to the 2017 Bonds as set forth herein, and the Disclosure Agreement, all agreements supplemental thereto and this Supplemental Continuing Disclosure Agreement shall be read, taken and considered as one instrument.

SECTION 6. Counterparts. This Supplemental Continuing Disclosure Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, this Supplemental Continuing Disclosure Agreement has been executed on behalf of the Authority and the Dissemination Agent by their duly authorized representatives as of the date first written above.

GUAM WATERWORKS AUTHORITY

By _____
Authorized Officer

DIGITAL ASSURANCE CERTIFICATION, L.L.C.

By _____
Authorized Officer

[THIS PAGE INTENTIONALLY LEFT BLANK]

APPENDIX F

DTC AND ITS BOOK-ENTRY ONLY SYSTEM

The Depository Trust Company (“DTC”), New York, NY, will act as securities depository for the 2017 Bonds. The 2017 Bonds will be issued as fully registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered 2017 Bond certificate will be issued for each maturity of each series of the 2017 Bonds in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world’s largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary The Depository Trust & Clearing Corporation (“DTCC”). DTCC is a holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned and operated by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). The DTC Rules applicable to its Direct and Indirect Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of 2017 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2017 Bonds on DTC’s records. The ownership interest of each actual purchaser of each 2017 Bond (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the 2017 Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in 2017 Bonds, except in the event that use of the book-entry system for the 2017 Bonds is discontinued.

To facilitate subsequent transfers, all 2017 Bonds deposited by Direct Participants with DTC are registered in the name of DTC’s partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of 2017 Bonds with DTC and their registration in the name of Cede & Co. or such other nominee does not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the 2017 Bonds; DTC’s records reflect only the identity of the Direct Participants to whose accounts such 2017 Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of 2017 Bonds may wish to take certain steps to augment transmission to them of notices of significant events with respect to the 2017 Bonds, such as redemptions, tenders, defaults, and proposed amendments to the 2017 Bond documents. Beneficial Owners of 2017 Bonds may wish to ascertain that the nominee holding the 2017 Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative,

Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of the notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the 2017 Bonds within a series and maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such series and maturity to be redeemed.

Neither DTC nor Cede & Co. (nor such other DTC nominee) will consent or vote with respect to the 2017 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the 2017 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Payment of principal of, Redemption Price and interest on the 2017 Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Authority or the Trustee on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Authority or the Trustee, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal of, Redemption Price or interest on the 2017 Bonds to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Authority or the Trustee, disbursement of such payments to Direct Participants shall be the responsibility of DTC, and disbursement of such, payments to the Beneficial Owners shall be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as securities depository with respect to the 2017 Bonds at any time by giving reasonable notice to the Authority. Under such circumstances, in the event that a successor securities depository is not obtained, 2017 Bond certificates are required to be printed and delivered. The Authority may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, 2017 Bond certificates will be printed and delivered.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Authority believes to be reliable, but the Authority takes no responsibility for the accuracy thereof.

The preceding information in this APPENDIX F is supplied by DTC for inclusion herein, and has not been independently verified by the Authority or the Underwriters. No representation is made by the Authority as to the completeness or the accuracy of such information or as to the absence of material adverse changes in such information subsequent to the date hereof.

The Authority cannot and does not give any assurances that DTC will distribute to the Participants, or that the Participants or others will distribute to the Beneficial Owners, payments of debt service on the 2017 Bonds paid or any redemption or other notices or that they will do so on a timely basis or will serve and act in the manner described in this Official Statement. The Authority is not responsible or liable for the failure of DTC or any Direct Participant or Indirect Participant to make any payments or give any notice to a Beneficial Owner with respect to the 2017 Bonds or any error or delay relating thereto.

None of the Authority, the Trustee and the Co-Trustee shall have any responsibility or obligation to any DTC Participant, any beneficial owner or other persons claiming a beneficial ownership interest in the 2017 Bonds under or through DTC or any DTC Participant, with respect to (i) the accuracy of any records maintained by DTC or any DTC Participant with respect to the beneficial ownership interest in the 2017 Bonds; (ii) the payment by DTC or any DTC Participant of any amount in respect of the principal of and premium, if any, or interest on the 2017 Bonds to any beneficial owner or other person for the 2017 Bonds; or (iii) the delivery to any beneficial owner of the 2017 Bonds, or any other person of any notice which is permitted or required to be given to owners under the Indenture. None of the Authority, the Trustee and the Co-Trustee shall have any responsibility with respect to obtaining consents from anyone other than the registered owners.



GUAM WATERWORKS AUTHORITY



Printed by: ImageMaster, LLC
www.imagemaster.com