



## About the Guam Waterworks Authority (GWA)

Guam Waterworks Authority (GWA) is a public authority governed by the Consolidated Commission on Utilities (CCU). The Authority is subject to regulation by the Guam Public Utilities Commission (PUC). GWA provides water to all of the civilian population of Guam. They also provide sewer service to a large percentage of the civilian population, Andersen Air Force Base and several United States Navy facilities. During FY2020, GWA served an average of 42,769 water customers and 29,482 wastewater customers.

GWA's water system consists of 120 wells, one active production spring, one "Maui" well, 27 booster pump stations, 23 reservoirs/tanks in service, 586 miles of water distribution lines, and approximately 3,814 fire hydrants, all in the agency's effort to provide more efficient and reliable service to its customers while meeting regulatory requirements.

GWA's wastewater system consists of 296 miles of gravity sewer network, 79 sewer pump stations, approximately 32.46 miles of force main and five wastewater treatment plants and associated outfalls.

GWA has undergone significant transformation over the last several years by working to improve the management and operations, including decreasing expenditures, decreasing leak repair times, implementing a meter replacement program and launching a computerized maintenance management system, which have all contributed to significantly improved operating results since FY 2011.

## LEADERSHIP

**Miguel C. Bordallo, P.E.**  
General Manager

**Kelly O. Clark**  
General Counsel

**Taling M. Taitano, CPA, CGFM, CGMA**  
Chief Financial Officer

**Christopher M. Budasi**  
AGM for Administration & Support

**Paul J. Kemp, M.S.**  
AGM for Compliance & Safety

**Thomas A. Cruz, P.E.**  
Interim AGM for Operations

## Consolidated Commission on Utilities



**Joseph (Joey) T. Dueñas**  
Chairman

**Francis E. Santos**  
Chairman of Finance Committee  
Vice Chairman

**Michael T. Lintiaco**  
Chairman of IT and Cyber Security Committee  
Secretary

**Judith 'Judi' T. Guthertz**  
Chairman of Internal Audit Committee  
Treasurer

**Simon A. Sanchez II**  
Commissioner

## Full-Time Employees

	FY2018	FY2019	FY2020	% Change
Administration	187	183	177	-3%
Water Division	109	121	121	0%
Wastewater Division	72	73	81	11%
<b>TOTAL</b>	<b>368</b>	<b>377</b>	<b>379</b>	<b>1%</b>

## TABLE OF CONTENTS

- 1 - About GWA
- 2 - Performance
- 3 - Finances
- 4 - Challenges and Outlook

## VISION

To be a world class provider of water and wastewater services.

## MISSION

We will provide outstanding customer service in delivering excellent water and wastewater services in a safe, reliable, responsible, and cost-effective manner.

## LOCATIONS & HOURS OF OPERATION

**Gloria B. Nelson Public Service Bldg.**  
688 Route 15 Fadian  
Mangilao, Guam 96913  
Hours: Mon - Fri | 7:00am to 5:00pm

**Upper Tumon Satellite Office**  
561 N. Marine Corps Drive  
Upper Tumon, Guam 96911  
Hours: Mon - Fri | 7:30am to 6:00pm

**Julale Satellite Office Hagåtña**  
424 W. O'Brien Drive  
Hagåtña, Guam 96931  
Hours: Mon - Fri | 8:00am to 5:00pm

## CONTACT INFORMATION

**Customer Service**  
647-7800/3

**Payment Information**  
Pay by Phone: 647-4729  
Online: PayGWA.com

**Water Outages/Leaks**  
646-4211  
Hours: 24/7

**GWA Alerts - Email or Text**  
For Outage Information or Road Closures  
Sign up at [guamwaterworks.org/textalerts](http://guamwaterworks.org/textalerts)

GWA Textalerts  
QR Code:



*\*Hours subject to change due to Public Health Emergency, Holiday, etc. See website for information.*

**ISSUED MAY 2021**

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## Capital Assets

The Authority had about \$698.2 million invested in a broad range of utility capital assets as of September 30, 2020. In FY 2020, GWA's capital assets increased by \$81.1 million. The increase is attributable to on-going major capital improvement projects associated with a 2011 Federal Court Order, the Authority's five-year Capital Improvement Program (CIP) and the Water Resources Master Plan to reflect long-term planning needs.

The investment in capital assets includes building improvements, water treatment plants, water transmission and distribution mains, sewer lines, water reservoirs, pump stations, wastewater treatment facilities, deep wells, meter replacements, fire hydrant replacements, machinery and equipment as shown in the Table below identified by text color ([Water Projects are in Blue](#), [Wastewater in Green](#) and [all others in Purple](#)). MG = million gallons).



### Umatac-Merizo Wastewater Treatment Plant Improvement Project Aerial Shots

One of the projects completed in FY 2020 was the Umatac-Merizo Wastewater Treatment Plant Improvement. This project will improve the collection and treatment of wastewater in order to protect public health and the environment. See pictures above.

	In Design/Design Procurement	In Construction/Construction Procurement	Completed
<b>ISLANDWIDE</b>	<ul style="list-style-type: none"> <li>Pressure Zone Realignment</li> <li>Systemwide District Meter Project</li> </ul>	<ul style="list-style-type: none"> <li>Fire Hydrant Replacement</li> <li>Pressure Zone Realignment Phase 1</li> <li>Steel Water Inspection &amp; Repair</li> <li>Groundwater Production Well Meter Replacement</li> <li>Islandwide GWA Facility Survey</li> <li>GPWA System Control &amp; Data Acquisition (SCADA) System</li> </ul>	<ul style="list-style-type: none"> <li>SCADA Phase A1</li> </ul>
<b>SOUTHERN VILLAGES</b>	<ul style="list-style-type: none"> <li>Inarajan Booster Pump Station</li> <li>Mannenggon Water Tank (2MG)</li> <li>Ugum Water Tanks (2MG)</li> </ul>	<ul style="list-style-type: none"> <li>Brigade II Booster Pump Station Improvement</li> <li>Santa Rita Water Tank (1MG)</li> <li>Sinifa Water Tank (1MG)</li> <li>Pale Ferdinand Waterline Replacement</li> <li>Route 2 Agat Sewer Rehabilitation and Replacement</li> <li>Southern Sewer System Evaluation Survey Rehabilitation Phase II</li> <li>Talofofo Sewer Pump Stations (5 stations)</li> <li>Baza Gardens and Cross-Island Road Sewer Pump Station Autodialers and Communication Routers</li> </ul>	<ul style="list-style-type: none"> <li>Umatac-Merizo Wastewater Treatment Plant Improvements</li> </ul>
<b>NORTHERN VILLAGES</b>	<ul style="list-style-type: none"> <li>New Production Wells (AG-10, AG-12 and Y-8)</li> <li>Tumon No. 1 (Airport) Water Tank (3MG)</li> <li>Fujita Sewage Pump Station Redundant Force Main</li> <li>GWA/GPA Customer Services Center and Information Technology Renovation, Upper Tumon</li> <li>GWA/GPA Transportation Building</li> </ul>	<ul style="list-style-type: none"> <li>Deep Water Well Drilling &amp; Well Rehabilitation</li> <li>Santa Rosa Water Tank (1MG)</li> <li>Water Wells Rehabilitation (A-Series)</li> <li>NGLA Monitoring Wells</li> <li>Astumbo No. 2 Water Tank (2MG)</li> <li>Yigo No. 3 Water Tank (2.5MG)</li> <li>Northern District Wastewater Treatment Plant Secondary Upgrades and Expansion</li> <li>Northern District Wastewater Treatment Plant Outfall Diffuser</li> <li>Yigo Sewer Pump Station Flood Mitigation and Rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Northern Water Line Replacement Phase IV</li> <li>Northern District Interceptor Sewer Refurbishment</li> </ul>
<b>CENTRAL VILLAGES</b>	<ul style="list-style-type: none"> <li>Asan Springs Rehabilitation</li> <li>Piti Water Tank (1MG)</li> <li>Tai Road Water Line Replacement</li> <li>Toto-Canada Road/Bias Street Water Line Replacement</li> <li>Dungca Beach Sewerline Relocation</li> <li>Hagatna Main Sewage Pump Station Redundant Force Main</li> <li>Hagatna Wastewater Treatment Plant and Causeway Structural Assessment</li> </ul>	<ul style="list-style-type: none"> <li>Central Water Line Replacement Phase IV</li> <li>Bayside Sewer Pump Station Improvements</li> <li>Asan-Adelup-Hagatna, Route 1 Sewerline Rehabilitation and Replacement Phases 1 and 2</li> <li>Route 4 Relief Sewerline Rehabilitation and Repair</li> <li>Tamuning Sewer Hot Spots Repair/Rehabilitation</li> <li>Hagatna Wastewater Treatment Plant Interim Disinfection</li> </ul>	<ul style="list-style-type: none"> <li>Chaot No. 2 Water Tank (0.5MG)</li> <li>Hyundai Water Tank (1MG)</li> <li>Tumon No. 2 (Nissan) Water Tank (1MG)</li> </ul>

An independent audit was conducted by Deloitte & Touche LLP, resulting in an unmodified or clean audit opinion. GWA had been classified as low risk auditee since FY2016. The Office of Public Accountability released GWA's audited financial statements on March 23, 2021. More information can be found at our website at [guamwaterworks.org](http://guamwaterworks.org).

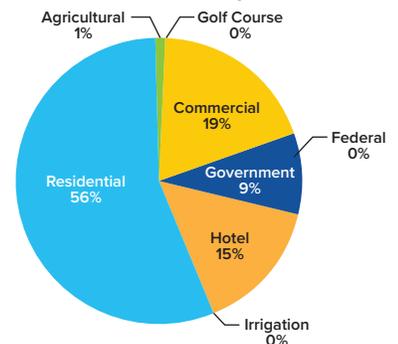
Total water revenues decreased by \$2 million or about -3% while total wastewater revenues decreased by \$5.2 million or about -13% over the prior fiscal year. Hotel customers accounted for most of the decrease in FY2020. Although a 5% rate increase was implemented in March 2020, in the same month, the Governor declared a pandemic emergency and implemented restrictions on business and government activities for the remainder of FY2020. Total operating expenses increased by \$3.7 million or about 4% over the prior fiscal year. Compared to last fiscal year, Retiree benefits has increased the most significantly by 93% while Contractual expenses decreased the most by -25%.

A comparative analysis of Revenues, Expenses and Changes in Percentages, FY2019 – FY2020, as well as prior years amounts, are illustrated in the Table below:

## Operating Revenues

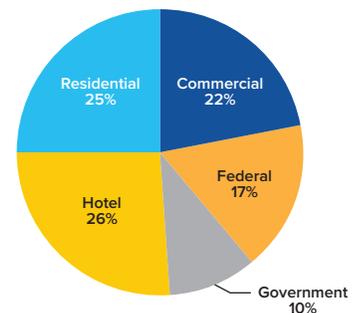
Water Revenues	FY2018	FY2019	FY2020	FY2019-2020 % Change
Agricultural	\$ 460,076	\$ 496,399	\$ 485,425	-2%
Golf Course	48,567	49,903	85,504	71%
Commercial	13,667,485	13,868,755	12,896,717	-7%
Federal	31,502	23,137	25,625	11%
Government	6,572,048	6,233,660	6,123,799	-2%
Hotel	13,802,981	14,955,990	10,237,252	-32%
Irrigation	49,457	51,409	57,432	12%
Residential	34,100,450	34,689,848	38,439,018	11%
<b>Total Water Revenues</b>	<b>\$68,732,566</b>	<b>\$70,369,101</b>	<b>\$68,350,772</b>	<b>-2.87%</b>

FY2020 Water Revenues by Rate Class



Wastewater Revenues	FY2018	FY2019	FY2020	FY2019-2020 % Change
Commercial	\$ 8,735,533	\$ 8,753,399	\$ 7,933,048	-9%
Federal	6,322,371	6,388,022	6,108,423	-4%
Government	3,800,155	3,569,358	3,423,005	-4%
Hotel	11,937,462	13,178,157	9,156,976	-31%
Residential	8,619,390	8,934,371	8,977,791	0%
<b>Total Wastewater Revenues</b>	<b>\$39,414,911</b>	<b>\$40,823,307</b>	<b>\$35,599,243</b>	<b>-12.80%</b>

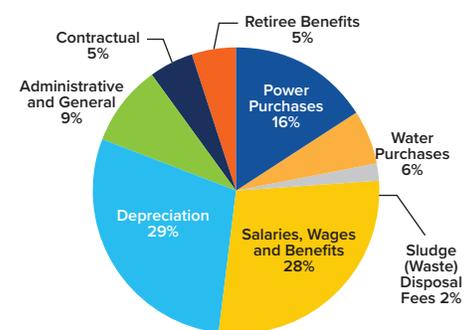
FY2020 Wastewater Revenues by Rate Class



## Operating Expenses

	FY2018	FY2019	FY2020	FY2019-2020 % Change
Power Purchases	\$ 14,686,486	\$ 16,150,781	\$ 14,118,145	-13%
Water Purchases	8,684,974	6,277,864	5,551,065	-12%
Sludge (Waste) Disposal Fees	1,507,654	1,333,887	1,277,885	-4%
Salaries, Wages and Benefits	18,534,508	21,030,363	24,192,355	15%
Depreciation	19,280,249	21,174,220	25,048,700	18%
Administrative and General	8,072,979	8,510,862	7,359,398	-14%
Contractual	5,036,651	5,945,478	4,431,863	-25%
Retiree Benefits	8,548,967	2,267,681	4,381,255	93%
<b>Total Operating Expenses</b>	<b>\$84,352,468</b>	<b>\$82,691,136</b>	<b>\$86,360,666</b>	<b>4%</b>

FY2020 Breakdown of Operating Expenses



## Series 2020A GWA Water and Wastewater System Revenue Bonds & Series 2020B Refunding

The Series 2020A GWA Water and Wastewater System Revenue Bonds were sold on May 28, 2020 securing a 4% yield to the 10-year call date and an all-in TIC (true interest cost) of 4.59% and resulting in net proceeds of \$143,911,039. The bond proceeds will be used to complete projects related to the 2011 Court Order and begin projects to address the consent decree currently in negotiations, projects that will reduce non-revenue water, as well as projects to address safety and compliance, system capacity, and operational efficiency. Additionally, the advanced refunding of a portion of the 2013 Series Bonds occurred on August 18, 2020. The resulting \$166 million Series 2020B bonds are taxable and secured \$13 million in debt service savings and an all-in TIC of 3.70%.

For both bond offerings, GWA maintained its existing bond ratings of Baa2 by Moody's and A-. by Standard and Poor's. Although the 2020B Bonds were not rated by Fitch, GWA received a Fitch rating upgrade from BBB- to BBB the week prior to pricing.

## Challenges & Outlook

The major challenge for the entire Island in FY2021 is recovering from the devastating global pandemic that has affected nearly every aspect of life for every citizen on Guam – for the Guam Waterworks Authority, our mission and our focus has not changed, but the operating conditions caused by the pandemic and necessitated for pandemic recovery, have made meeting that mission much more difficult. As soon as the Governor declared the Public Health Emergency, GWA immediately implemented a Continuity of Operations Plan (COOP) and Cost Containment measures to ensure that we could maintain continuous reliable provision of services, and adjust our operational expenses appropriate to the anticipated reduced revenues that would result from the turndown in economic activity.

For FY2021, GWA Management continues to implement its Five-Year Financial Plan (FY20-FY24) and Capital Improvement Program, which GWA's Governance, the Consolidated Commission on Utilities (CCU), recognized as critical to maintaining infusion of revenue into Guam's economy during this difficult time. The five-year \$342M plan is the third such plan GWA has issued, and lays out its on-going significant investments to complete the 2011 Federal Court Order, address upcoming regulatory mandates and implement CCU policy as reflected in the adoption of the 2018 Water Resource Master Plan.

### Court Order Compliance

With the extraordinarily successful issuance of GWA's Series 2020A Revenue Bonds during the early stages of the pandemic, GWA was able to secure the needed funds to complete the last remaining requirement of the 2011 Federal Court Order. These funds will enable GWA to complete the execution of mandatory rehabilitation, repair and replacement of water storage reservoirs. Multiple contracts will be issued in FY 2021 to bring the 2011 Court Order to completion after 10-years of significant engineering and construction efforts.

### Metering Challenges

In July 2020, the Authority completed meter replacement efforts to address defective meters deployed in our distribution system. In FY 2021, we continue our efforts to recover costs on behalf of our ratepayers through litigation against the manufacturer of these defective meters. GWA will also be initiating the implementation of Advance Metering Infrastructure to provide customers with accessible, real-time metering data for enhanced water usage management, and improved water loss control system-wide.

### Wastewater Treatment - Secondary Upgrades

GWA has already successfully completed major upgrades to secondary wastewater treatment plants (WWTP) in Agat-Santa Rita in FY2019, Umatac-Merizo in FY2020, and the elimination of the Baza Gardens WWTP also in FY 2020, reaching major compliance milestones in addressing regulatory requirements. For FY2021, GWA will have nearly completed secondary treatment upgrades at its largest facility, the Northern District WWTP, in support of and in preparation for commissioning of the new Marine

Corps Cantonment at Camp Blaz. This latest upgrade has been funded by Department of Defense (DOD), through the Office of Economic Adjustment (OEA), using grants awarded to the Authority totaling \$173 million for this project and other improvements related to the military build-up.

### Protection of Guam's Sole Source Northern Guam Lens Aquifer (NGLA)

In FY2021, GWA will complete a study outlining steps needed to expand our wastewater collection system in critical portions of our service area in order to prevent negative impacts to the NGLA. A new program for the expansion of the collection system and the elimination of cesspools and septic tanks prioritized in areas to protect drinking water sources will be implemented as part of our five-year Capital Improvement Program and our 20-year Water Resources Master Plan. Cooperative efforts with the Guam Environmental Protection Agency and the Water and Environmental Research Institute (WERI) of the University of Guam have already begun and will continue into the coming years to develop enhanced regulations and building permit processes to improve aquifer protection while maintaining flexibility for Guam homeowners and developers. This collaboration will also include upcoming efforts to work with the Department of Defense in partnership to protect our shared drinking water resources.

### Water Loss Control Program

The Authority continues to address the longstanding issue of Non-Revenue Water (NRW). According to the latest water audit figures, GWA was able to reduce real losses (from leaks and breaks) from 42% to 38%, and also reduce overall NRW to 51%. GWA continues its progress on initiatives intended to address water loss control on several levels, including satellite-based leak detection, pressure-zone realignment within the distribution system and improved system metering. In FY 2021, GWA follows on its successful pilot-test of District Metered Areas (DMA) which showed potential for 45% reductions in water loss, with an implementation plan anticipated to outline DMA construction island-wide. GWA completed its comprehensive Water Loss Control Plan, which provides for and documents a long-term, sustainable and holistic approach to monitoring and managing water losses. Implementation of this Water Loss Control Plan will begin in FY2021.

### Wastewater Collection

In FY 2020, GWA made substantial progress in addressing long-standing issues in its aged collection system by completing a significant portion of its Route 1 (Asan-Adelup-Hagatña) Sewer Line Improvements project and all of the Route 4 Sewer Line Improvements project. GWA also completed the rehabilitation of 9-miles of sewer interceptor piping along Route 3/Route 9 originally installed in the late 1970s. For FY 2021, GWA will begin the second phase of construction for the Route 1 project, Rehabilitation of the Hagatna Main Pump Station Force Main, and several other projects addressing upgrades to sewer pump stations and force mains at critical locations within our wastewater collection system.



## WE WANT TO HEAR FROM YOU!

Do you like this report? Do you believe it should include different or additional information? Please let us know by contacting our General Manager at [mcbordallo@guamwaterworks.org](mailto:mcbordallo@guamwaterworks.org). More information is available on GWA's website, [guamwaterworks.org](http://guamwaterworks.org) or [guamccu.org](http://guamccu.org).