Outlook

Messages & Communications Doc. No. 38GL-26-3171 through 3178.

From 38th Committee On Rules <committeeonrules@guamlegislature.gov>
Date Mon 11/9/2026 10:44 AM
To Guam Legislature Clerks <clerks@guamlegislature.gov>
Cc Frank Blas Jr. <speakerblas@guamlegislature.gov>

7 attachments (21 MB)

11926COMM Doc. No. 38GL-26-3171.pdf; 11926COMM Doc. No. 38GL-26-3172.pdf; 11926COMM Doc. No. 38GL-26-3174.pdf; 11926COMM Doc. No. 38GL-26-3173.pdf; 11926COMM Doc. No. 38GL-26-3175.pdf; 11926COMM Doc. No. 38GL-26-3176.pdf; 11926COMM Doc. No. 38GL-26-3178.pdf;

Håfa Adai Clerks Office,

Please see attached, **Messages & Communications Doc. No. 38GL-26-3171 through 3178** for processing:

√	**38GL-26-3171**	Department of Land Management	FY2026 4th Quarter Travel Report*
√	**38GL-26-3172**	Guam Public Library System	Board Meeting Packet for October 14, 2026*
√	**38GL-26-3173**	Guam Visitors Bureau	FY2026 Reports: 4th Quarter Travel Report; 4th Quarter Staffing Pattern; July 2026, August 2026 and September 2026 Small Purchases Report; Revenue and Expenditures Report for January 2026 to August 2026*
√	**38GL-26-3174**	Department of Administration	Income Tax Refund Efficient Payment Trust Fund Report and accompanying bank statement for October 2026*
√	**38GL-26-3175**	Guam Economic Development Authority	Unaudited Statement of Revenue and Expense Reports for the period ending September 30, 2026*
√	**38GL-26-3176**	Department of Agriculture	Acting Director Designation of Glen Takai, for the Department of Agriculture from November 3, 2026 to November 6, 2026*
√	**38GL-26-3177**	Guam Waterworks Authority	Revenues and Expenditures Report (Unaudited) for the period ending September 30, 2026*
√	**38GL-26-3178**	Civil Service Commission	Board Meeting Packet for November 5, 2026*

Please retrieve Doc. No. 38GL-26-3177 from link below:

Messages & Communications Physical Scanned Copy - Google Drive

Kindly reply to this email.

Si Yu'os ma'åse',

Marie Crisostomo

Committee on Rules Assistant

COMMITTEE ON RULES

Vice Speaker V. Anthony Ada, Chairperson

I Mina'trentai Ocho Na Liheslaturan Guåhan

38th Guam Legislature

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Messages and Communications 38GL-26-3177*

2 messages

Speaker Frank Blas Jr. <speakerblas@guamlegislature.gov> Mon, Nov 9, 2026 at 10:05 AM
To: 38th Committee On Rules <committeeonrules@guamlegislature.gov>, Sabrina Salas Matanane <office.senatorbri@guamlegislature.gov>

Håfa adai,

Please see attached M&C Doc. No. 38GL-26-3177

38GL-26-3177	Guam Waterworks Authority	Revenues and Expenditures Report (Unaudited) for the period ending September 30, 2026*

Si Yu'os Ma'åse'

Bernice Rivera

Administrative Assistant

Office of Speaker Frank F. Blas, Jr.

I Mina'trentai Ocho na Liheslaturan Guåhan 38th Guam Legislature

Guam Congress Building, 163 Chalan Santo Papa, Hagatña

(671)969-6456
speakerblas@guamlegislature.gov

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---------- Forwarded message ---------
From: <sfcalumaya@guamwaterworks.org>
Date: Thu, Nov 5, 2026 at 2:06 PM
Subject: Guam Waterworks Authority - SEP 2026 Financial Reports (Unaudited)
To: <speakerblas@guamlegislature.gov>
Cc: <tmtaitano@guamwaterworks.org>, Gilda M Mafnas <gildam@guamwaterworks.org>, <ssantos@guamwaterworks.org>, Mercedes Ched Poliarco <mpoliarco@guamwaterworks.org>

Hafa Adai and Good Afternoon,

Please see attached GWA's financials for the month of September 2026 for submission.

Please let me know if you have any questions.

Thank You & Kindest Regards,

Shaine Calumaya
Finance-Accounting Division

GUAM WATERWORKS AUTHORITY

Gloria B. Nelson Public Service Building

688 Route 15, Mangilao, Guam 96913

Tel: (671) 300-6882 | Fax: (671) 646-2594

Email: sfcalumaya@guamwaterworks.org

3 attachments

Revenue and Expenditures Report to Speaker - SEP 2026 (signed).pdf
13861K

Revenue and Expenditures Report to Speaker - SEP 2026.xlsx
69K

38GL-26-3177.pdf
1050K

38th Committee On Rules <committeeonrules@guamlegislature.gov> Mon, Nov 9, 2026 at 10:10 AM
To: "Speaker Frank Blas Jr." <speakerblas@guamlegislature.gov>

Håfa Adai,

Received, and thank you.

Si Yu'os ma'åse',

Marie Crisostomo

Committee on Rules Assistant

COMMITTEE ON RULES

Vice Speaker V. Anthony Ada, Chairperson

I Mina'trentai Ocho Na Liheslaturan Guåhan

38th Guam Legislature

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[Quoted text hidden]

THE GUAM LEGISLATURE

Speaker Frank Blas Jr. <speakerblas@guamlegislature.gov>

Guam Waterworks Authority - SEP 2026 Financial Reports (Unaudited)

2 messages

sfcalumaya@guamwaterworks.org <sfcalumaya@guamwaterworks.org> Thu, Nov 5, 2026 at 2:05 PM
To: speakerblas@guamlegislature.gov
Cc: tmtaitano@guamwaterworks.org, Gilda M Mafnas <gildam@guamwaterworks.org>, ssantos@guamwaterworks.org, Mercedes Ched Poliarco <mpoliarco@guamwaterworks.org>

Hafa Adai and Good Afternoon,

Please see attached GWA's financials for the month of September 2026 for submission.

Please let me know if you have any questions.

Doc Type: 38GL-26-3177
OFFICE OF THE SPEAKER
FRANK F. BLAS, JR.
November 5, 2026
Time: 2:05 PM
Received:

Thank You & Kindest Regards,

Shaine Calumaya
Finance-Accounting Division

GUAM WATERWORKS AUTHORITY

Gloria B. Nelson Public Service Building

688 Route 15, Mangilao, Guam 96913

Tel: (671) 300-6882 | Fax: (671) 646-2594

Email: sfcalumaya@guamwaterworks.org

2 attachments

Revenue and Expenditures Report to Speaker - SEP 2026 (signed).pdf
13861K

Revenue and Expenditures Report to Speaker - SEP 2026.xlsx
69K

Speaker Frank Blas Jr. <speakerblas@guamlegislature.gov> Thu, Nov 5, 2026 at 2:12 PM
To: sfcalumaya@guamwaterworks.org
Cc: tmtaitano@guamwaterworks.org, Gilda M Mafnas <gildam@guamwaterworks.org>, ssantos@guamwaterworks.org, Mercedes Ched Poliarco <mpoliarco@guamwaterworks.org>

Håfa Adai,

Confirming receipt of your email.

Si Yu'os Ma'åse'

Bernice Rivera

Administrative Assistant

Office of Speaker Frank F. Blas, Jr.

I Mina'trentai Ocho na Liheslaturan Guåhan 38th Guam Legislature

Guam Congress Building, 163 Chalan Santo Papa, Hagatña

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speakerblas@guamlegislature.gov

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[Quoted text hidden]

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building | 688 Route 15, Mangilao, Guam 96913
P.O. Box 3010, Hagåtña, Guam 96932
Tel. No. (671) 300-6846/47 Fax No. (671) 648-3290

November 5, 2026

The Honorable Speaker Frank F. Blas Jr.
38th Guam Legislature
I Mina'trentai Ocho Na Liheslaturan Guåhan
163 Chalan Santo Papa
Hagtåña, Guam 96910

Dear Honorable Speaker Blas,

Pursuant to Public Law 38-60, Chapter XIII, Part II, Section 4, transmitted herewith is Guam Waterworks Authority's Revenues and Expenditures Report for the period ending September 30, 2026. In addition, we are transmitting the Travel Expense Report for the Fourth Quarter of FY2026.

Senseramente,

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

cc: Miguel C. Bordallo, P.E.
General Manager

38GL-26-3177
Messages and Communications
RECEIVED
COMMITTEE ON RULES
November 9, 2026
10:05 a.m.
Marie Crisostomo

GUAM WATERWORKS AUTHORITY
Statement of Revenues, Expenses and Changes in Net Position
For the period ending September 30, 2026 (unaudited)

	Month to Date	Year to Date
OPERATING REVENUES		
Water Revenues	7,120,923	92,938,240
Wastewater Revenues	4,567,598	58,574,734
Legislative Surcharge	358,921	4,685,245
Other Revenues	72,296	1,075,325
System Development Charge	72,843	1,386,574
Total Operating Revenues	12,192,580	158,660,118
OPERATING AND MAINTENANCE EXPENSES		
Water Purchases	266,107	6,443,338
Power Purchases	1,631,319	16,428,072
Total Utility Costs	1,897,426	22,871,410
Salaries and Wages	2,323,253	26,116,981
Pension and Benefits	1,063,057	11,638,630
Total Salaries and Benefits	3,386,310	37,755,611
Capitalized Labor and Benefits	(755,334)	(4,183,165)
Net Salaries and Benefits	2,630,976	33,572,446
Administrative and General Expenses		
Sludge removal	111,049	1,445,574
Chemicals	314,692	2,404,334
Materials & Supplies	438,640	2,576,511
Transportation	134,012	931,596
Communications	3,868	82,207
Claims	-	91,622
Insurance	160,193	1,895,324
Training & Travel	6,728	400,949
Advertising	2,680	50,780
Miscellaneous	157,072	2,124,945
Regulatory Expense	140,570	389,654
Bad Debts Provision	84,475	1,013,704
Total Administrative and General Expense	1,553,979	13,407,201
Depreciation Expense	2,295,648	28,173,113
Contractual Expense		
Audit & Computer Maintenance	124,837	2,232,661
Building rental	74,783	849,434
Equipment rental	77,634	577,902
Legal	-	19,887
Laboratory	63,349	590,836
Other	187,159	1,834,497
Total Contractual Expense	527,762	6,105,217
Retiree Supp. Annuities and health care costs	285,601	3,738,929
Contribution to Government of Guam	58,842	706,100
Total Retiree Benefits	344,442	4,445,029
Total Operating Expenses	9,250,233	108,574,417
Earnings (Loss) from Operations	2,942,347	50,085,701
Interest Income - Bond Funds	973,986	12,213,036
Interest Income - Other Funds	543,455	6,362,296
Interest Income - SDC	23,769	310,210
Contributions from Local Government	2,816,547	7,518,747
Interest Expense - Bonds	(3,374,830)	(40,791,150)
Federal Expenditures	-	(30,000)
Loss on Asset Disposal	(6,839)	(6,839)
Amortization of Discount, Premium and Issuance Costs	227,271	2,727,250
Defeasance due to bond refunding	(51,445)	(570,579)
Prior Year Adjustment	(116,732)	(297,029)
Legal settlements	-	15,246,047
Total non-operating revenues (expenses)	1,035,183	2,681,990
Net Income (Loss) before capital contributions	3,977,529	52,767,691
Capital Contributions		
Grants from US Government	4,515,199	13,812,738
Grants from GovGuam & Others	20,851	478,000
Total Capital Contributions	4,536,050	14,290,738
Change in Net Position	8,513,579	67,058,429

Guam Waterworks Authority
FY2026 4th Quarter Travel

Name of Traveler	Fund Source	Purpose of Travel	Conference/Meeting Dates	Cost	
Taitano, Taling	Revenue	GFOA 120th Annual Conference; Stipulation Meeting	06/26/2026 - 07/01/2026; 07/06/2026 - 07/09/2026	$ 9,055.42	
Baza, Jason	Revenue	GFOA 120th Annual Conference	06/26/2026 - 07/01/2026	$ 6,949.70	
Baza, Jason	Revenue	Stipulation Meeting	07/06/2026 - 07/09/2026	$ 4,396.57	
Bordallo, Miguel	Revenue	Stipulation Meeting	07/06/2026 - 07/09/2026	$ 4,423.12	
Taitague, Ann-Marie	Revenue	2026 ESRI User Conference	07/13/2026 - 07/17/2026	$ 4,725.15	
Cruz, Jennifer	DPHSS grant	California West Coast Wastewater Surveillance for Public Health Annual Conference	07/21/2026 - 07/22/2026	$ 3,285.13	
Perez, N'tasha	DPHSS grant	California West Coast Wastewater Surveillance for Public Health Annual Conference	07/21/2026 - 07/22/2026	$ 3,356.61	
Crisostomo, Arden	DPHSS grant	California West Coast Wastewater Surveillance for Public Health Annual Conference	07/21/2026 - 07/22/2026	$ 3,024.77	
Nauta, Richard	Revenue	UTA OSHA #503 Update for General Industry Outreach Trainers	07/29/2026 - 07/31/2026	$ 4,208.37	
Cruz, Jennifer	DPHSS grant	Peer-to-Peer Visit with Hawaii NWSS Team	08/03/2026 - 08/07/2026	$ 3,935.57	
Perez, N'tasha	DPHSS grant	Peer-to-Peer Visit with Hawaii NWSS Team	08/03/2026 - 08/07/2026	$ 4,115.80	
Crisostomo, Arden	DPHSS grant	Peer-to-Peer Visit with Hawaii NWSS Team	08/03/2026 - 08/07/2026	$ 4,689.61	
Budasi, Christopher	Revenue	Rating Meetings	08/17/2026 - 08/20/2026	$ 3,495.23	
Taitano, Taling	Revenue	Rating Meetings	08/17/2026 - 08/20/2026	$ 3,842.67	
Santos, Francis	Revenue	Rating Meetings	08/17/2026 - 08/20/2026	$ 3,893.43	
Bordallo, Miguel	Revenue	Rating Meetings	08/17/2026 - 08/20/2026	$ 3,906.22	
Limtiaco, Michael	Revenue	AWWA Water Infrastructure Conference	08/31/2026 - 09/02/2026	$ 5,946.83	*
Lujan, Evangeline	Revenue	2026 Pacific Water & Wastewater Association (PWWA) Conference and Expo	08/31/2026 - 09/04/2026	$ 7,768.66	
Santos, Francis	Revenue	2026 Pacific Water & Wastewater Association (PWWA) Conference and Expo	08/31/2026 - 09/04/2026	$ 4,837.35	
Camacho, Teresa	Revenue	2026 Pacific Water & Wastewater Association (PWWA) Conference and Expo	08/31/2026 - 09/04/2026	$ 7,347.95	
Budasi, Christopher	Revenue	2026 Pacific Water & Wastewater Association (PWWA) Conference and Expo	09/02/2026 - 09/04/2026	$ 6,253.48	
Cura II, Michael	Revenue	NSC Safety Congress and Expo	09/11/2026 - 09/17/2026	$ 6,305.93	
Bordallo, Miguel	Revenue	Economic Adjustment Committee Meeting	09/21/2026 - 09/25/2026	$ 6,438.53	*
Railey, Brett	Revenue	Economic Adjustment Committee Meeting	09/21/2026 - 09/25/2026	$ 5,563.98	
Crisostomo, Arden	DPHSS grant	WEFTEC 2026	09/26/2026 - 09/30/2026	$ 5,621.22	
Cruz, Jennifer	DPHSS grant	WEFTEC 2026	09/26/2026 - 09/30/2026	$ 5,573.34	
Perez, N'tasha	DPHSS grant	WEFTEC 2026	09/26/2026 - 09/30/2026	$ 5,540.89	
Watson, George	Revenue/DCA (contractor)	WEFTEC 2026	09/26/2026 - 09/30/2026	$ 597.92	*
Lee, Nicholas	Revenue	WEFTEC 2026	09/26/2026 - 09/30/2026	$ 4,338.70	
Castino, Tristan	Revenue	WEFTEC 2026	09/26/2026 - 09/30/2026	$ 4,646.35	
Duenas, Ryan-Cole	Revenue	WEFTEC 2026	09/28/2026 - 09/30/2026	$ 4,419.51	
Viches, Rafael	Revenue	WEFTEC 2026	09/28/2026 - 09/30/2026	$ 4,153.63	
Tudela, Jason	Revenue	WEFTEC 2026	09/28/2026 - 09/30/2026	$ 4,487.53	*
Quinata, Jake	Revenue	WEFTEC 2026	09/28/2026 - 09/30/2026	$ 4,405.67	
				$ 165,550.84	

** Travel report pending*

GUAM WATERWORKS AUTHORITY

Travel Report

Taling M Taitano:	Chief Financial Officer
June 23, 2026	July 11, 2026
TA No.: 26-472	Travel Location: Chicago and San Francisco

Trip Objective:
To attend the Government Finance Officers Association (GFOA) Annual Conference in Chicago, Illinois, including preconference sessions on debt management and procurement, held June 26 through July 1, 2026; and to meet with the Public Utilities Commission (PUC) consultants in San Francisco, California, July 7-9, 2026, to negotiate a stipulated agreement on the FY2027 annual rate true-up proceeding required under the PUC-approved FY2025-FY2029 Financial Plan.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

Chicago, Illinois – GFOA Annual Conference (June 26 – July 1, 2026)

Preconference Sessions:
Friday, June 26 – Establishing, Enhancing, and Effectuating Your Debt Policy
Saturday, June 27 – Managing a Procurement Upgrade; Enterprise Funds Untangled

Conference Sessions:
Sunday, June 28 – The World as I See It; Best Practices for Municipal Issuers; Rules of the Game: Working with Regulated Entities for Debt Management
Monday, June 29 – Bond Sale: Preparing for the Sale; Accounting & Auditing Year in Review; Strengthening Investor Relations: Effective Engagement with Municipal Investors; Accounting Clues: Unraveling the Mysteries of Debt Issuances with the Sources and Uses Schedule
Tuesday, June 30 – Cyber Crime and Public Finance; Unpacking GASB 103; Washington DC Update
Wednesday, July 1 – Talking Single Audits in the Second City; Bond Sale: Post-Issuance Compliance

These sessions provided updated guidance on debt issuance and post-issuance compliance, new GASB pronouncements, cybersecurity risk in public finance, investor relations best practices, and current federal developments affecting municipal issuers – directly supporting GWA's 2026 bond financing, debt management policy administration, and Single Audit compliance responsibilities.

San Francisco, California – PUC Annual Rate True-Up Proceeding (July 7–9, 2026)
The PUC-approved FY2025-FY2029 Financial Plan established a five-year rate path but requires an annual true-up proceeding to determine whether approved rates should be adjusted based on updated projected revenues, expenses, debt issuances, and other plan assumptions. I was part of the GWA team that met with PUC consultants to negotiate the FY2027 true-up. The parties reached agreement to stipulate; a draft stipulation was prepared and presented to the PUC consultants for review and comment on the last day of the meetings.

Benefit to GWA: The conference sessions, which earned 33 hours of CPE credit, strengthen GWA's debt management, procurement, accounting, and audit compliance practices, while the PUC stipulation supports timely resolution of the FY2027 annual rate true-up proceeding – both directly tied to the Finance Division's statutory and regulatory responsibilities.

7/25/2026
Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Jason Baza	Title/Unit Position: Chief Budget Officer
Travel Date Begin: June 25, 2026	Travel Date End: July 3, 2026
TA No.: 26-473	Travel Location: Chicago, IL

Trip Objective:

To gain insights from CPE-accredited sessions covering a wide range of budgeting, financial reporting, and capital financing prioritization that are offered during the 120th GFOA Annual Conference.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

A. Sessions Attended & What Was Learned:

1. Back to Basics: An Overview of Personnel Budgeting

What was Learned: GWA's budgeting standard mirrors the Best Practice Assessment. Further, it was refreshing to learn that other counties, cities, and municipalities have their own versions of compensation adjustments via COLA increases and market study research. It appears GWA's current practice of utilizing a consultant to evaluate position descriptions against the market is in line, but more structured, than what is being done elsewhere.

2. Bye-Bye Boring Budget Books: Hello Compelling, Concise, Clear Communications

What was Learned: Most cities, counties, and municipalities prepare and make available a budget book, which summarizes their annual budgets for constituents to review. These budget books provide both narratives and graphics of what is contained in their budget. The class was catered towards making these budget document communications more user friendly and palatable for the average resident to review.

3. Building Upon a Strong Foundation: A Framework for Budget Process and Culture Change

What was Learned: The class had representatives from the Charlestown, South Carolina education system, where they overhauled their budget process. They discussed that they changed their framework to a Five-Year Budget forecast, offered several public budget workshops to get constituent input, collaborated with all the district education managers, and implemented a "Risk Pool" fund for unforeseen expenses. This provided more transparency to their constituents to better serve their needs.

4. Deep Dish Discussions on Capitalization Thresholds

What was Learned: That GWA's capitalization threshold is in line with the GFOA Best Practice Assessment ($5K). Additionally, the presenters described a capitalization strategy to capitalize via "Asset Grouping", which resulted in improved capital inventory completeness and is compliant with GASB.

5. One Step at a Time: Getting Results with Incremental Process Improvement

What was Learned: Very interesting discussion from the panelists that described situations where small fixes, done in phases, ultimately results in better operational enhancements. They also provided examples where they mentioned trying to change too much, too soon, ultimately does not succeed in getting the envisioned results.

6. Strengthen Your Budget Bedrock with Long-Term Planning

What was Learned: Panelists discussed the importance of having a strategic, long term plan to our approach to budgeting as opposed to a reactionary, annual adjustment budget approach. GWA currently uses the Five-Year plan methodology for its budgeting.

7. Why I'm a Finance Officer

What was Learned: Panelists discussed their unique paths to becoming government finance officers. Common theme was being transparent with your constituents is always the best practice.

8. Don't Worry Your Life Away: Developing and Maintaining Appropriate Reserve Levels

What was Learned: Having a healthy reserve level is important for risk assessments when going to the bond market, but there's also a balance in ensuring reserves are not too healthy that it appears the entity is overtaxing its constituents. Proper planning, and clear policy decisions, are required to achieve that balance.

9. Pick Me, Pick Me: Developing Selection Criteria for Your Capital Plan

What was Learned: The presenters provided a variety of aspects that go into developing the capital plan, of which the common theme was addressing Level of Service. Quantifying what assets need improving, or need to be constructed, or purchased in conjunction with determining its impact on our ability to serve the community is key to this development.

10. Trending Topics in Rate-Setting with the Utility Finance Forum

What was Learned: The presentation was very relevant to GWA, as the entirety of the presentation focused on the process of developing appropriate rates for utility agencies, and used best practice standards from the American Waterworks Association.

11. Be Honest. Do You Really Have Position Control?

What was Learned: This session discussed controlling personnel expenses via budget approval prior to the recruitment effort, managing a master position listing, and use of ERP systems to track all activity. These actions are currently being practiced at GWA.

12. Beyond 9 to 5: Alternative Solutions to Traditional Staffing Models

What was Learned: This session discussed offering different staffing schedules to promote flexibility with the workforce. For example, some counties used a 9 day x 80 hour workweek (9 hours a day with one additional day off per pay period), a 8 day x 80 hour workweek (10 hours a day with two additional days off per pay period), and teleworking privileges with scheduled days to be in/out of the office.

GUAM WATERWORKS AUTHORITY

Travel Report

13. Timeless or Trendy: Debating the Staying Power of Common Budget Fads

What was Learned: There are multiple ways to budget: Zero Based, Outcome (Performance) Based, and Target based. Some methods work better than others depending on your municipality and the services you provide. The session was a panel discussion of what worked, or didn't work for them and provided examples of such.

B. How GWA Benefits from the Trip:

GWA benefits from getting the most up to date information related to best practice approaches, and can either utilize new information to improve operations, or feel comfort in knowing that our practices already follow the standards.

C. How Trip Relates to Agency's responsibility:

All the sessions attended were relevant to the CBO's role.

7/15/26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Jason Baza	Title/Unit Position: Chief Budget Officer
Travel Date Begin: July 5, 2026	Travel Date End: July 11, 2026
TA No.: 26-511	Travel Location: San Francisco, CA

Trip Objective:

To meet with the Public Utilities Commission's (PUC) consultant, Georgetown Consulting Group (GCG), and stipulate to an agreement for the Guam Waterworks Authority's (GWA) FY 2027 True-Up Budget and rate adjustment.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

How was objective met:

- Prior to the meetings with GCG, they had sent GWA their position statement for the FY 2027 true-up. Their position was to reduce the revenue requirement by approximately $20M. This would have significantly reduced the approved rate adjustment originally contained in the Five-Year rate plan of 7.75% in FY 2027.
- GWA and GCG were able to stipulate to a ratepayer benefit of $4.2M.
- Further, GWA and GCG were able to stipulate to an agreement on the proposed rate adjustment for FY27.

What was learned:

- Patience, level-headedness, and the ability to support our positions with the facts will go a long way when it comes to the negotiation process.
- Defend our position by all means necessary. However, if concessions need to be made, then reasonable discussions to come to an agreed middle-ground need to be tactfully conducted.

GWA's benefit:

- Establishing the rate adjustment and upcoming fiscal year budget in advance of the upcoming fiscal year start.

Relation to Agency's responsibility:

- As Chief Budget Officer, all discussions on revenue requirements and O&M expenses are relevant to the role of ensuring the Agency can operate effectively.

7/15/26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building | 688 Route 15, Mangilao, Guam 96913
P.O. Box 3010, Hagåtña, Guam 96932
Tel. No. (671) 300-6846/47 Fax No. (671) 648-3290

Employee Name: Miguel C. Bordallo	Title/Unit Position: General Manager
Travel Date Begin: June 30, 2026	Travel Date End: July 11, 2026
TA No.: 26-512	Travel Location: San Francisco, CA

Trip Objective:

1) Meet with US EPA regarding SRF grant funding availability relative to FY2027 True up and upcoming bond documents
2) Consult with Bond Counsel regarding management disclosures required in bond documents for upcoming Series 2026 Bonds
3) Conduct negotiations with PUC Consultant (Georgetown Consulting Group) in GWA Docket 24-05 FY2027 True-up in attempt to streamline processing of the docket and avoid a prolonged disputed adjudication

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

1. **Objectives Met (Bond Counsel): July 7th and 8th**: Meetings with J. Wang and other Orrick Staff, as well as Bond Underwriters and their counsel regarding the Preliminary Official Statement and GWA disclosures that are necessary for the upcoming Series 2026 Bonds (refunding and new money). and discussed
2. **Objectives Met (Stipulation Negotiations):** Attended three days of meetings (July 7th – 9th) with GCG in which the parties:
    a. Narrowed the issues for potential adjudication before the PUC
    b. negotiated acceptable expense adjustments and revenue adjustments to arrive at a mutually accepted rate increase of 6.25% (reduced from PUC-approved 7.75%)
    c. Agreed that the Series 2026 bond issuance would not require delay because of GCG position regarding the structure of bonds to include capitalized interest
    d. Agreed to remove the capitalized interest bond structure issue to a separate docket if PUC required it.
3. **Objectives Met (Meeting with EPA):** Coordinated a meeting with Financial Consultants and EPA Grants officer and discussed availability of future grant funds for projections relating to the upcoming Series 2026 bonds.
4. **How did GWA benefit**:
    a. GWA successfully advanced the preparation of bond disclosure documents and confirmed the timing of bond issuance activities
    b. GWA successfully achieved a Stipulation that greatly reduced the adjudication burden to the PUC and reduced projected rate increases for FY2027 by 1.5% from 7.75% to 6.25%
    c. GWA successfully removed any delays to the Series 2026 bond issuance because of PUC consultant interference in the bond structure; the deferral of the issue to a separate docket effectively affirmed the current schedule of bond related activities.
5. **How this relates to GWA Responsibilities**: The activities, objectives and benefits described above are all directly related (a) GWA's responsibility to comply with PUC regulatory authority and rate setting protocols; and (b) achieve needed funding through the issuance of water/wastewater revenue bonds for successful implementation of the Authority's Capital Improvement Program.

2026.8.3

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Ann-Marie Taitague	Title/Unit Position: Program Coordinator IV
Travel Date Begin: July 12, 2026	Travel Date End: July 19, 2026
TA No.: 26-513	Travel Location: San Diego, California

Trip Objective: The objective of this trip was to acquire insight into industry best practices, emerging GIS technologies, and successful implementation strategies used by peer organizations. The conference provided opportunities to learn directly from water utilities and other organizations that have advanced GIS programs, helping identify practical approaches to improve our implementation roadmap, governance, system integration, and workforce adoption. Attendance at this conference directly supports GWA's GIS Strategic Plan Implementation.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

MONDAY, JULY 13, 2026

User Conference Plenary (8:30AM – 4:00PM)

The opening plenary showcased how organizations around the world are using GIS to address complex challenges such as environmental monitoring, conservation, infrastructure management, and disaster preparedness while highlighting the latest innovations in ArcGIS technology. Presentations demonstrated how artificial intelligence is expanding GIS capabilities through automated data creation, advanced analytics, workflow automation, and code generation, while GIS provides the geographic context needed to make AI-driven insights more meaningful and actionable. The session also introduced new ArcGIS enhancements, including tools that improve visualization and operational awareness, such as displaying stormwater flow direction on maps. One presentation showed how GIS can help project potential primary and secondary impacts of major natural disasters for better preparedness and response. These presentations provided valuable insight into emerging technologies and industry best practices that can support GWA's GIS Strategic Plan by improving data management, operational efficiency, and decision-making. Understanding the evolving capabilities of GIS and AI will help GWA evaluate future technology opportunities that strengthen infrastructure management, enhance resilience, and support the reliable delivery of water and wastewater services.

TUESDAY, JULY 14, 2026

Water Utilities Industry Kick-Off Meeting (7:30AM)

This session provided an overview of the latest GIS developments, ArcGIS Solution updates, and industry priorities specific to water utilities, helping identify conference sessions and resources most relevant to GWA's GIS Strategic Plan implementation. It highlighted emerging technologies, best practices, and opportunities to learn from peer utilities facing similar operational challenges. The knowledge gained will help GWA leverage proven solutions and industry resources to support modernization efforts, improve operational efficiency, and enhance the management of water and wastewater infrastructure, which directly supports the agency's responsibility to provide reliable utility services.

Defining and Implementing Your Geospatial Strategy (8:30AM)

This session presented best practices for developing and implementing an organization-wide geospatial strategy aligned with business goals rather than technology alone. Key topics included executive sponsorship, governance, stakeholder engagement, organizational change management, and measuring program success. These concepts reinforce the implementation approach outlined in GWA's GIS Strategic Plan and provide practical guidance for prioritizing initiatives, improving cross-department collaboration, and increasing organizational adoption of GIS. Strengthening GWA's geospatial program will improve decision-making, infrastructure planning, and the efficient delivery of water and wastewater services.

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ArcGIS Solutions: Implementing a Utility Network Foundation (10:00AM)

This session demonstrated practical approaches for implementing an ArcGIS Utility Network using standardized ArcGIS Solutions and industry best practices. The presentation showed how predefined data models and implementation tools can accelerate deployment while improving asset connectivity, network management, and data quality. Applying these proven approaches can help GWA reduce implementation time, establish a scalable GIS foundation, and improve the management of utility infrastructure. A well-implemented utility network supports more effective planning, maintenance, outage response, and operational decision-making, all of which are essential to GWA's mission.

Transforming Vertical Asset Management Practices (11:30AM)

This session demonstrated how GIS can enhance asset management through improved data collection, system integration, visualization, and maintenance planning. The presentation emphasized the value of integrating GIS with enterprise asset management systems to support condition assessments, inspections, and lifecycle management of utility assets. These concepts align closely with GWA's efforts to strengthen asset management and improve coordination between GIS and asset management systems. Implementing these practices will help optimize maintenance activities, extend asset life, reduce operational costs, and improve the reliability of water and wastewater services.

Approaches to Data Governance (1:00PM)

This session directly addressed one of the primary objectives of the trip by providing best practices for establishing effective geospatial data governance. Topics included defining data ownership, governance structures, policies, standards, metadata management, and processes to improve data quality and accountability. The information gained provides practical guidance for implementing a governance framework that supports consistent, accurate, and trusted GIS data across GWA, directly supporting recommendations within the GIS Strategic Plan. Strong data governance enables better operational decisions, regulatory compliance, emergency response, and effective management of the agency's critical infrastructure.

ArcGIS Pro: An Overview (2:30PM)

This introductory session provided a foundational understanding of ArcGIS Pro, including map creation, data editing, geodatabase management, visualization, and spatial analysis. Although designed for new GIS users, the session provided valuable context for understanding the tools used by GWA's GIS staff. As Project Lead for the GIS Strategic Plan implementation, this knowledge will improve communication with technical teams, support more informed project oversight, and strengthen decision-making throughout implementation. A better understanding of GIS capabilities ultimately supports GWA's efforts to improve infrastructure management and operational efficiency.

Designing and Implementing Well-Architected Systems (4:00PM)

This session presented best practices for designing scalable, resilient, and sustainable GIS systems using the ArcGIS Well-Architected Framework. The presentation emphasized designing systems that align with organizational goals while incorporating principles such as reliability, scalability, security, maintainability, and user adoption. These architectural concepts will help guide GWA's GIS implementation to support future growth, system integrations, and long-term sustainability. Building a well-designed GIS environment enhances operational resilience, improves decision-making, and supports GWA's responsibility to effectively manage critical water and wastewater infrastructure.

GUAM WATERWORKS AUTHORITY

Travel Report

WEDNESDAY, JULY 15, 2026

Strategic Asset Management: A GIS-Driven Approach (8:30AM)

This session demonstrated how GIS can be used to implement a strategic, risk-based approach to managing water and wastewater infrastructure assets. The presenters shared how GIS was integrated with customized risk frameworks, decision trees, and visualization tools to prioritize maintenance, improve system reliability, and support long-term infrastructure planning. These concepts provide GWA with practical examples of how GIS can strengthen asset management by enabling data-driven investment decisions, proactive maintenance, and improved resilience of critical infrastructure. Adopting similar approaches supports GWA's responsibility to provide safe, reliable, and sustainable water and wastewater services while maximizing the value of its infrastructure assets.

Empowering Your Workforce with GIS (10:00AM)

This session supported the trip objective by highlighting best practices for increasing GIS adoption through workforce development and organizational change. The presentation emphasized aligning training resources with business objectives, reducing barriers to technology adoption, and equipping employees with the knowledge and confidence to effectively use GIS tools. These strategies reinforce the importance of workforce readiness as GWA implements its GIS Strategic Plan and provide practical guidance for improving user adoption across departments. Developing a knowledgeable workforce will help GWA maximize its investment in GIS technology, improve collaboration, and support more efficient operations and decision-making.

Resilient Right-of-Way Management with Trimble and Esri (11:30AM)

This session demonstrated how integrating high-accuracy geospatial data with GIS-based permitting and right-of-way management improves infrastructure coordination and regulatory compliance. The presentation showed how precise field data and streamlined workflows reduce conflicts, improve data quality, and create a more resilient utility environment. Although focused on right-of-way management, the concepts highlighted the broader value of integrating accurate GIS data with operational business processes. GWA can apply these principles to improve coordination of utility projects, reduce construction conflicts, maintain accurate infrastructure records, and support efficient management of assets located within public rights-of-way.

Gas Utility Network Information Management Journeys (1:00PM)

This session provided real-world implementation experiences from utilities that successfully migrated from legacy GIS platforms to the ArcGIS Utility Network. The presenters emphasized the importance of careful planning, stakeholder collaboration, standardized GIS configuration, and balancing user needs with system modernization. Lessons learned regarding dynamic labeling, standardized naming conventions, and phased implementation demonstrated how thoughtful configuration decisions can improve usability while reducing system complexity. Although focused on gas utilities, these implementation strategies are directly applicable to GWA's GIS modernization efforts and support the agency's responsibility to maintain accurate infrastructure information that enables efficient operations and informed decision-making.

ArcGIS Utility Network: Migration Strategies (2:30PM)

This session presented practical strategies for planning and implementing a successful migration to the ArcGIS Utility Network. The presentation reviewed migration tools, implementation approaches, and the tradeoffs between adopting industry-standard data models versus highly customized organizational models, emphasizing the importance of balancing cost, scalability, and long-term maintainability. These insights provide GWA with valuable guidance for evaluating future Utility Network implementation options and selecting an approach that aligns with organizational needs and available resources. Careful planning of GIS modernization efforts will help GWA build a scalable, sustainable system that supports reliable management of its water and wastewater infrastructure.

Geospatial Change Management: Preparing Your Organization for GIS (4:00PM)
This session emphasized that successful GIS implementation depends as much on organizational change as it does on technology. The presentation explored strategies for increasing user adoption, effectively communicating the business value of GIS, engaging stakeholders across departments, and building the skills necessary to support long-term success. These best practices align closely with GWA's GIS Strategic Plan implementation, where organizational buy-in and cross-functional participation are critical to achieving program goals. Applying these change management principles will help GWA increase adoption of GIS solutions, strengthen collaboration across the agency, and ensure that GIS investments translate into measurable operational improvements and enhanced service delivery.

Esri Advantage Program Social (6:00PM)
Attending conference social events provided an opportunity to meet in person with Esri staff who are already supporting GWA's GIS Strategic Plan implementation and with whom I had previously only interacted virtually. Strengthening these professional relationships facilitated more meaningful discussions on GWA's implementation efforts, provided additional opportunities to exchange ideas and best practices, and established stronger connections for ongoing collaboration and technical support throughout the implementation of GWA's enterprise GIS program.

THURSDAY, JULY 16, 2026
ArcGIS Solutions: Water Utilities (8:30AM)
This session provided an overview of ArcGIS Solutions designed specifically for water utilities and demonstrated how standardized applications and workflows can improve asset management, inspections, regulatory compliance, and information sharing. The presentation highlighted practical tools for streamlining asset inventories, conducting routine inspections, and providing stakeholders with timely, accurate information. These solutions offer GWA proven implementation approaches that can accelerate deployment of GIS capabilities while improving operational efficiency and data consistency. Adopting standardized workflows will help GWA better manage its water distribution infrastructure, support regulatory obligations, and enhance the delivery of reliable water services.

Water Resources SIG (11:30AM)
This special interest group provided an opportunity to engage with Esri staff and water utility professionals on the emerging use of artificial intelligence (AI) within GIS and water resources management. Discussions focused on current AI capabilities, practical applications, implementation challenges, and lessons learned from organizations already exploring AI-enabled workflows. Hearing directly from industry peers provided valuable perspectives on how AI can improve data analysis, decision-making, and operational efficiency while highlighting considerations for responsible implementation. These insights will help GWA evaluate future opportunities to leverage AI in support of its GIS program while continuing to improve the management of water and wastewater resources.

Change Management for Continuous Adoption (1:00PM)
This session emphasized that successful GIS implementation extends beyond system deployment and requires sustained organizational adoption. The presentation outlined practical change management strategies for communicating the value of GIS, engaging stakeholders, securing executive support, and providing ongoing training to build user confidence and encourage continuous learning. These best practices reinforce the importance of maintaining momentum throughout GWA's GIS Strategic Plan implementation and ensuring that GIS becomes integrated into everyday business processes. Fostering long-term adoption across departments will maximize the value of GWA's GIS investment and support more efficient operations and informed decision-making.

Field Workflows with ArcGIS: Best Practices (4:00PM)
This session highlighted best practices for designing and managing GIS field workflows using ArcGIS Field Maps, ArcGIS Survey123, and ArcGIS QuickCapture. The presentation covered data collection methods, location accuracy, offline

capabilities, integration with business systems, security considerations, user adoption, and strategies for scaling field operations across an organization. These concepts provide GWA with practical guidance for improving the quality, consistency, and efficiency of field data collection while supporting seamless integration with enterprise systems. Strengthening field workflows will enable GWA to maintain more accurate infrastructure data, improve operational responsiveness, and support informed decision-making for the management of water and wastewater assets.

FRIDAY, JULY 17, 2026

Aligning Geospatial and IT Strategies: Best Practices (9:00AM)

This session explored best practices for aligning geospatial initiatives with broader information technology (IT) strategies to ensure that GIS investments support organizational priorities and long-term business objectives. The presentation emphasized early collaboration between GIS and IT teams, agile planning, and governance practices that enable organizations to adapt to evolving technology needs while maintaining secure, scalable, and sustainable systems. These insights reinforce the importance of strong coordination between GWA's GIS implementation efforts and its IT organization to ensure successful system integration, efficient use of resources, and long-term supportability. Aligning GIS and IT strategies will help GWA build a resilient enterprise GIS environment that improves operational efficiency, supports informed decision-making, and enhances the delivery of water and wastewater services.

User Conference Closing Session (10:30AM)

The closing session summarized key themes, innovations, and feedback shared throughout the conference, reinforcing the importance of collaboration, continuous innovation, and customer engagement in advancing GIS technology. Esri leadership reflected on emerging trends, common challenges, and future priorities while encouraging ongoing partnerships between Esri and its user community. The session provided a valuable opportunity to consolidate the knowledge gained during the conference and identify key takeaways that can be applied as GWA implements its GIS Strategic Plan. The insights gathered throughout the week will help inform GWA's continued GIS modernization efforts, support strategic planning, and strengthen the agency's ability to manage critical infrastructure and deliver reliable utility services.

8/4/2026

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Jennifer O. Cruz	Title/Unit Position: Utility Compliance Laboratory Administrator
Travel Date Begin: 7/20/26	Travel Date End: 7/24/26
TA No.: 26-502	Travel Location: Sacramento, California

Trip Objective:

Attend the 2026 West Coast Wastewater Surveillance for Public Health Conference to learn current wastewater surveillance practices and support development of GWA's Wastewater Surveillance Program under the 2025 NWSS2/2+ MOA between DPHSS/BCDC/ELC and GWA.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

Conference Value and Objective

The conference met the trip objective by providing practical insight into current wastewater surveillance practices and their role in public health. It also created opportunities to connect with experienced professionals involved in surveillance program development, implementation, and laboratory support.

Key Topics Learned

The most useful topics included large-scale event monitoring, utility engagement, sample shipment, laboratory analysis, ethical considerations, and the use of wastewater surveillance as an early-warning tool for identifying potential disease trends.

Program Challenges and Utility Participation

The conference highlighted common challenges faced by health department-led programs, including reliance on utility cooperation, sample transport logistics, and limited laboratory capacity. These issues are eliminated with GWA establishing the wastewater surveillance program.

Networking and Training Resources

Networking was especially valuable. I met professionals and researchers who offered assistance and resources, including a Hawaii State Department of Health partner who will be providing training on pathogen testing in an upcoming trip to Hawaii.

GWA Benefit and Agency Responsibility

GWA can benefit by applying these lessons to program planning, DPHSS cooperation and support, laboratory testing, data management, and reporting under the 2025 NWSS2/2+ MOA. Building this capability would strengthen GWA's role in disease surveillance and provide an additional public health service to Guam.



7-29-26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: N'tasha Perez	Title/Unit Position: Biologist III/ Compliance & Safety
Travel Date Begin: July 20, 2026	Travel Date End: July 24, 2026
TA No.: 26-503	Travel Location: Sacramento, California

Trip Objective:
Attend the West Coast Wastewater Surveillance for Public Health Conference to learn about current and emerging wastewater surveillance practices, connect with public health and laboratory professionals, and identify ideas that can be applied to improve Guam Waterworks Authority's wastewater surveillance program.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

The purpose of attending the West Coast Wastewater Surveillance for Public Health Conference was to gain a better understanding of current wastewater surveillance practices, laboratory methods, and public health applications, while connecting with agencies and professionals involved in National Wastewater Surveillance System (NWSS) programs. This objective was met through participation in technical presentations, panel discussions, poster sessions, and networking opportunities with representatives from public health agencies, utilities, laboratories, and the Centers for Disease Control and Prevention (CDC). Topics included laboratory innovations, metagenomics, epidemiological methods, utility engagement, ethical considerations, and practical examples of how wastewater surveillance data is being used to support public health decision- making.

GWA's participation in this conference was a critical step in establishing the Authority's wastewater surveillance capacity. It also provided a better understanding of the administrative, operational, and financial resources required to develop, manage, and sustain a successful wastewater surveillance program. Presentations and discussions throughout the conference reinforced the level of coordination, resources, and long- term planning required to successfully implement and sustain wastewater surveillance efforts. While GWA has made progress in establishing sampling and laboratory capabilities, most state programs rely on multiple agencies to share responsibilities. In many cases, utilities are responsible for collecting wastewater samples, while state public health laboratories perform the testing, and epidemiologists analyze and interpret data. GWA, however, has assumed a much broader role. As Guam's public utility, GWA is responsible not only for sample collection but also for developing and operating the laboratory capabilities needed to support the program. This integrated approach allows GWA to play a more active role in supporting public health surveillance but also requires the Authority to develop capabilities that are typically shared across several agencies in most other jurisdictions. Consequently, this dual responsibility requires additional expertise, equipment, staffing, quality assurance, and operational coordination that are typically divided among multiple organizations. Understanding how other programs are structured provided valuable perspective and will help GWA better plan for the resources, partnerships, and organizational framework needed to sustain the program over the long term.

The information shared throughout the conference can be applied to strengthen laboratory workflows, quality assurance practices, data management, and long- term planning for equipment, staffing, and training. Discussions with other utilities and public health laboratories also provided practical insight into program implementation, common challenges, and strategies that can help GWA continue developing an effective and sustainable wastewater surveillance program. In addition, the conference provided an opportunity to connect with public health agencies, utilities, and other professionals across the country, establishing professional contacts that GWA can rely on for future collaboration and technical support.

Attending this conference supports GWA's role in protecting public health and the environment by strengthening the Authority's ability to operate and expand Guam's wastewater surveillance program. Wastewater surveillance has

GUAM WATERWORKS AUTHORITY

Travel Report

become an important public health tool for monitoring disease trends and providing early warning of emerging health concerns. By serving as both the wastewater utility and the laboratory supporting surveillance activities, GWA plays a unique and expanded role in Guam's public health infrastructure. This integrated approach places greater operational responsibility on GWA than is typical for most wastewater utilities and highlights the importance of continued development of laboratory capacity, technical expertise, and interagency collaboration. The knowledge and professional relationships gained through this conference will help strengthen GWA's ability to fulfill that responsibility while continuing to build a sustainable wastewater surveillance program for the island.

RGutierrez 07/27/2026

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Arden Crisostomo	Title/Unit Position: Utility Laboratory Technician Leader
Travel Date Begin: 07/20/26	Travel Date End: 07/24/26
TA No.: 26-504	Travel Location: Sacramento, California

Trip Objective:
To acquire advanced technical protocols and learn methods to establish GWA's Wastewater Laboratory Surveillance capabilities.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

I attended the 2026 West Coast Wastewater Surveillance Conference in Sacramento to learn how to scale up our lab's testing capabilities and standardize data quality. The event focused heavily on moving beyond Covid-19 to test for multiple pathogens such as Flu, Mpox and Norovirus.

Collaboration with CDC's NWSS team, I acquired validated protocols for managing heavy sample inhibitions and normalizing pathogen counts. These hands-on technical updates ensure our laboratory can deliver reliable data. Implementing new multiplexing workflows will directly improve our lab's efficiency and lower operational cost. By packing multiple targets into a single PCR well, we can significantly cut down on reagent and plasticware usage while expanding our testing capabilities using our existing equipment and staff.

In conclusion, this training aligns perfectly with our agency's core responsibility to protect public health. Keeping our laboratory methods aligned with national NWSS standards provides several advantages for our day-to-day operations and data integrity.

7/27/26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Richard M. Nauta Emp no. 1061	**Title/Unit Position: Safety Inspector III, Compliance & Safety**
Travel Date Begin: July 28, 2026	**Travel Date End: August 1, 2026 (Arrived Guam August 2, 2026)**
TA No.: #26-480	**Travel Location: San Antonio, Texas**

Trip Objective: To remain current on relevant OSHA matters and ensure quality training and to update my OSHA Trainer's Authorization status.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

This OSHA-503 course covered OSHA training policies, procedures and standards, to include the updated General Industry Safety & Health principles as they relate to the real-world situations and case studies. Emphasis was placed on the utilization of the 29 CFR 1910, General Industry Standards as a guide for conducting awareness trainings here at GWA. Other topics discussed in detail were the latest OSHA updates regarding the objectives in the deliverances of our lectures. This 503 Course was offered for current OSHA instructors to re-certify their training credentials in order to be able to teach the OSHA 10- & 30-Hour outreach classes.

With the completion of this OSHA 503 training course, I have gained a comprehensive and thorough knowledge of the updated OSHA Standards as it relates to the General Industry and developed additional adult teaching techniques as I prepare to conduct the GWA 10-hour OSHA Safety Awareness course. Also, I am now recognized as an OSHA Outreach Trainer under the University of Texas at Arlington (UTA) – Extension Trainer number #26-0085882 (Credentials Attached: Training Certificate 18.5 CEU's & OSHA Training Card expiring on 07-31-2030)

Richard M. Nauta Employee No. 1061
Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Jennifer O. Cruz	Title/Unit Position: Utility Compliance Laboratory Administrator
Travel Date Begin: 8/3/26	Travel Date End: 8/7/26
TA No.: TA 26-505	Travel Location: Honolulu, Hawai'i

Trip Objective:
The peer-to-peer visit will provide training from the Hawai'i State Department of Health Laboratory team and practical insights from its established wastewater surveillance laboratory, supporting GWA's establishment of a Wastewater Surveillance Program under the 2025 NWSS2/2+ MOA with Department of Public Health and Social Services Epidemiology and Laboratory Capacity Program.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

Training Value and Objective

The training fulfilled the trip objective by providing comprehensive, step-by-step instruction in viral analysis, specifically that of Covid-19, using polymerase chain reaction (PCR) methods. It covered wastewater sample handling and storage, preparation, concentration, extraction, and analysis.

Key Topics Learned

Beyond the full workflow procedures, the training addressed the supplies and environmental controls needed at each stage. This information is critical in the entire process.

GWA Benefit and Gency Responsibility

The training strengthened the wastewater surveillance team's knowledge and readiness to perform the analytical method. Developing this capability will enhance GWA's role in pathogens surveillance, expand public health services in Guam, and fulfill the requirements of the 2025 NWSS2/2+ MOA.

8-19-26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: N'tasha L. Perez	Title/Unit Position: Biologist III/ Compliance & Safety
Travel Date Begin: August 3, 2026	Travel Date End: August 7, 2026
TA No.: 26-506	Travel Location: Honolulu, HI

Trip Objective:
The objective of the peer-to-peer site visit to Hawaii was to provide GWA staff with direct exposure to an established wastewater surveillance laboratory operating under conditions comparable to Guam. The visit provided an opportunity to observe laboratory workflows, equipment configuration, testing methods, QA/QC practices, and facility design, as well as discuss operational challenges and best practices with experienced laboratory personnel. Knowledge gained from the visit will help guide GWA's laboratory expansion, equipment procurement, and development of a sustainable wastewater surveillance program.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

The objective of the peer-to-peer site visit was met through direct observation of Hawaii's wastewater surveillance laboratory and discussions with the personnel performing the testing. We observed the process used to analyze wastewater samples for various viruses using the KingFisher Apex and QIAcuity systems, both of which GWA is currently in the process of procuring. Seeing the analytical process firsthand gave us a better understanding of the overall workflow, including sample preparation, testing, and how staff troubleshoot issues that arise during analysis.

One of the most important things we learned was the amount and configuration of laboratory space needed for wastewater surveillance testing. The Hawaii laboratory utilizes two dirty rooms and one clean room with specific positive and negative pressure requirements to help prevent contamination. Based on these observations, we determined that GWA will require more laboratory space than initially anticipated. We also identified additional equipment, supplies, and consumables that will be needed and obtained specific product names and numbers to assist with procurement. In addition, we reviewed the laboratory's logbooks, records, and other documentation used for the program.

We also met with a QIAGEN representative who provided information on the QIAcuity system and will assist GWA with its procurement. She also discussed staffing needs and advised that the laboratory include a biologist, microbiologist, or other appropriately trained scientific professional. Laboratory technicians can assist with sample preparation and routine tasks, but personnel with the appropriate scientific background are needed to perform and oversee the technical aspects of the testing.

The information gained during the visit will help GWA make better-informed decisions regarding laboratory space, equipment and supply purchases, staffing, testing procedures, and documentation as the wastewater surveillance program is developed. The program complements GWA's responsibility for wastewater collection and treatment, regulatory compliance, and protection of Guam's water resources while providing useful public health information on viruses and other pathogens circulating in the community. Overall, the visit provided practical information that we can directly apply as GWA develops its wastewater surveillance laboratory.

N Gutierrez 08/14/2026

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Arden Crisostomo	*Title/Unit Position: Utility Laboratory Technician Leader*
Travel Date Begin: August 3, 2026	*Travel Date End: August 7, 2026*
TA No.: 26-507	*Travel Location: Hawaii*

Trip Objective:

The purpose of the travel was to participate in hands-on laboratory training at the State of Hawaii Department of Health Laboratory Facility to gain practical knowledge and experience in the complete workflow for QIAGEN QIAcuity dPCR testing and the KingFisher Apex automated nucleic acid extraction of wastewater samples.

HIGHLIGHTS: *(Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)*

While visiting the State of Hawaii Department of Health Laboratory Facility i was able to gain practical knowledge and hands-on experience in wastewater molecular testing. This visit was a valuable learning experience because it allowed me to see how the concepts and procedures I have learned about are applied in an actual laboratory setting. Being able to observe the workflow firsthand and interact with laboratory personnel gave me a better understanding of the analysis.

The training began with receiving wastewater samples at the laboratory. I learned that sample receiving is an important first step in the testing process because proper identification, documentation, and handling are necessary to maintain sample integrity and traceability. I observed how samples are checked upon receipt and how information is recorded before the samples move on to the next stage of processing.

Following sample receiving and preparation, I learned about the concentration process used to prepare wastewater samples for molecular testing. I was able to observe the workflow used to concentrate the samples. Proper sample handling during this stage helps ensure that the target material is retained and that the sample is suitable for the extraction process. After concentration, the samples proceed to Nucleic Acid Extraction using the KingFisher Apex. The KingFisher Apex automates several steps of the extraction process, which helps improve consistency and efficiency when processing multiple samples.

Another important part of the training was the preparation of the master mix for the dPCR assay. Preparing the master mix requires careful attention to the assay components and accurate handling to ensure that the reactions are prepared consistently. The master mix provides the necessary components for amplification and detection of the target nucleic acid. The training also emphasized the importance of maintaining good laboratory practices during master mix preparation. Proper organization and careful handling help minimize the risk of contamination and variation between reactions.

The next stage of the workflow involved QIAGEN QIAcuity digital PCR. This was one of the most valuable parts of the visit because I was able to see how digital PCR is performed in practice. I learned about the preparation of the PCR reactions and the process of loading the prepared samples onto the QIAcuity nanoplate. The nanoplate allows the reactions to be divided into a large number of individual partitions. After the plate is prepared and loaded, it is processed using the QIAcuity instrument. The instrument performs the required thermal cycling and reads the partitions to determine the presence or absence of the target nucleic acid.

The knowledge gained from this visit is particularly relevant because it focused on the complete laboratory workflow, rather than only on the operation of individual instruments. Understanding the process from sample receiving, concentration, nucleic acid extraction, master mix preparation, QIAcuity dPCR testing, and data interpretation provides a better foundation for supporting or strengthening wastewater surveillance activities within the agency.

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Travel Report

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Travel Report

Employee Name: Christopher Budasi	Title/Unit Position: Assistant General Manager-Administration
Travel Date Begin: August 17, 2026	Travel Date End: August 21, 2026
TA No.: 26-521	Travel Location: San Francisco, California

Trip Objective:
Participate in the San Francisco rating agency presentations for the Guam Waterworks Authority (GWA) Water and Wastewater System Revenue and Refunding Bonds, Series 2026ABC. This included rating preparation sessions with the financing team and formal presentations to S&P Global Ratings and Moody's Investors Service in support of the credit ratings, pricing, and issuance of the bonds.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to
Agency's responsibility. You may use an extra sheet if necessary.)

How the objective was met:
The trip objective was fully met. GWA representatives, together with the financing team — RBC Capital Markets (RBCCM), Raymond James, and Montague DeRose and Associates — completed rating preparation and delivered the formal rating presentations to both rating agencies:

- Monday, August 17 –Traveled to and arrived in San Francisco.
- Tuesday, August 18 – Rating preparation at the RBCCM offices (Two Embarcadero Center, Suite 1200) from 10:00–11:30 a.m., followed by a working lunch and final rating preparation from 12:00–2:00 p.m. The team reconvened for a working dinner meeting at Sens (4 Embarcadero Center) at 5:15 p.m.
- Wednesday, August 19 – The team met at the RBCCM offices at 8:00 a.m., presented to S&P Global Ratings from 9:00–11:00 a.m., and, following lunch, presented to Moody's Investors Service from 12:30–2:30 p.m.

What was learned:
The preparation sessions sharpened GWA's presentation of its financial performance, capital improvement program, rate-setting framework, and system operations. The meetings provided direct insight into the analytical priorities and credit concerns of both rating agencies, including questions on debt service coverage, liquidity, capital needs, and rate affordability.

How GWA can benefit from the trip:
Strong, well-supported presentations to S&P and Moody's directly support the credit ratings assigned to the Series 2026ABC bonds. Favorable ratings lower borrowing costs, reduce debt service, and improve GWA's access to the capital markets for financing critical water and wastewater infrastructure. The relationships reinforced with the agencies also benefit future financings.

How the trip relates to the Agency's responsibility:
Securing financing for the water and wastewater system is central to GWA's mission of delivering safe, reliable water and wastewater services to Guam. The rating presentations are a necessary step in issuing the Series 2026ABC bonds, which fund system improvements and refund outstanding obligations in the interest of GWA's ratepayers.

Christopher M Budasi 08/24/2026

Traveler Signature and Date

CELEBRATING 30 YEARS
OF WATER, LIFE, SERVICE AND COMMUNITY

Employee Name: Taling M. Taitano, CPA, CGMA, CGFM	Title/Unit Position: Chief Financial Officer
Travel Date Begin: August 16, 2026 (Sunday)	Travel Date End: August 20, 2026 (Thursday)
TA No.: 26-523	Travel Location: San Francisco, California

Trip Objective:

To attend rating agency presentation meetings in San Francisco, California in connection with GWA's Water and Wastewater System Revenue and Refunding Bonds, Series 2026, including a ratings meeting preparation session with RBC Capital Markets and presentations to S&P Global Ratings and Moody's Investors Service.

HIGHLIGHTS:

I traveled to San Francisco, California from August 16 through August 20, 2026, together with General Manager Miguel Bordallo, AGM of Administration Christopher Budasi, and CCU Chair Francis Santos, to represent GWA at rating agency presentation meetings in connection with the Series 2026 Water and Wastewater System Revenue and Refunding Bonds. I arrived on Sunday, August 16 to be available to the General Manager ahead of the scheduled meetings.

On Tuesday, August 18, the delegation met at the offices of RBC Capital Markets (RBC) for a ratings meeting preparation session to finalize the rating presentation and align on key messaging, joined by GWA's financial advisor Eric Rothstein and GEDA's financial advisor Frank Perdue-Rossi. On Wednesday, August 19, the delegation presented to S&P Global Ratings in the morning and to Moody's Investors Service in the afternoon on GWA's financial position, capital improvement program, and management plans in support of the Series 2026 Bonds. Representatives of RBC, Raymond James, and the Guam Economic Development Authority (GEDA), along with Mr. Rothstein and Mr. Perdue-Rossi, also participated in the preparation session and both rating meetings.

How the objective was met: Direct, in-person engagement gave the GWA delegation the opportunity to respond to analysts' questions in real time on financial performance, debt service coverage, the capital improvement program, and rate-setting plans supporting the Series 2026 Bonds.

What was learned: Gained direct insight into the areas of greatest focus for the S&P and Moody's analysts – including debt service coverage trends, liquidity, capital funding needs, and GWA's rate-setting process – which will help the Authority anticipate and prepare for future rating reviews.

How GWA benefits: The presentations directly support the successful marketing and pricing of the Series 2026 Bonds. A well-prepared, well-received presentation supports maintaining or improving GWA's bond ratings, which affects the interest cost of the financing and, in turn, the cost borne by ratepayers.

How this relates to Agency responsibility: This travel directly supports the CFO's responsibility for GWA's debt issuance and capital financing program, and the Authority's mission to fund critical water and wastewater infrastructure investments through cost-effective access to the capital markets.

9/21/2026

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913 • P.O. Box 3010, Hagåtña, Guam 96932
Tel. No. (671) 647-7800/3 • Fax No. (671) 648-3290 • guamwaterworks.org

CELEBRATING 30 YEARS
OF WATER, LIFE, SERVICE AND COMMUNITY

Employee Name: FRRANCIS E. SANTOS	Title/Unit Position: Chairman, Consolidated Commission on Utilities
Travel Date Begin: August 16, 2026	Travel Date End: August 21, 2026
TA No.: 26-524	Travel Location: San Francisco, CA

Trip Objective:

To attend rating agency presentation meetings in San Francisco, California in connection with GWA's Water and Wastewater System Revenue and Refunding Bonds, Series 2026, including a ratings meeting preparation session with RBC Capital Markets and presentations to S&P Global Ratings and Moody's Investors Service.

HIGHLIGHTS:

The rating agency meeting was August 16 through August 20, 2026, together with General Manager Miguel Bordallo, AGM of Administration Christopher Budasi, Chief Financial Officer , Taling Taitano, and I represented GWA at rating agency presentation meetings in connection with the Series 2026 Water and Wastewater System Revenue and Refunding Bonds.

On Tuesday, August 18, the delegation met at the offices of RBC Capital Markets (RBC) for a ratings meeting preparation session to finalize the rating presentation and align on key messaging, joined by GWA's financial advisor Eric Rothstein and GEDA's financial advisor Frank Perdue-Rossi. On Wednesday, August 19, the delegation presented to S&P Global Ratings in the morning and to Moody's Investors Service in the afternoon on GWA's financial position, capital improvement program, and management plans in support of the Series 2026 Bonds. Representatives of RBC, Raymond James, and the Guam Economic Development Authority (GEDA), along with Mr. Rothstein and Mr. Perdue-Rossi, also participated in the preparation session and both rating meetings.

Meeting in person allowed GWA to answer analysts' questions immediately regarding finances, debt, upgrade programs, and future rates for the Series 2026 Bonds. GWA learned what matters most to S&P and Moody's analysts—specifically debt trends, cash reserves, funding needs, and how rates are set—which helps them prepare for future reviews. These presentations helped successfully market and price the bonds. Strong presentations protect or improve GWA's credit ratings, lowering interest costs and ultimately saving money for customers. Finally, this travel helps the CFO secure affordable market funding to update crucial water and wastewater infrastructure.

10/29

Traveler Signature and Date

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GUAM WATERWORKS AUTHORITY

Trip Report

Employee Name: MICHAEL T. LIMTIACO	Title/Unit Position: CCU COMMISSIONER
Travel Date Begin: August 28, 2026	Travel Date End: September 4, 2026
TA No.: TA26-510	Travel Location: Indianapolis, IN

Trip Objective: Continuous learning and skill building to enable me to perform better at my position as a Commissioner on the CCU

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

Pre Conference

AI in action: A Workshop for Water Utility Professionals

I learned practical AI skills to improve productivity and support technical analysis. Rather than concentrating on AI theory, participants work through real-world water utility applications, including:

* Pump performance analysis — using AI to analyze operating data, identify performance trends, and potentially recognize efficiency degradation.
* Water-demand analysis — examining consumption patterns, identifying trends or anomalies, and using data to better understand system demand.
* Hydraulic modeling — exploring how AI can assist with analyzing and working with water distribution system models.
* Everyday productivity — learning how AI tools can help utility professionals analyze information and complete routine technical tasks more efficiently.

Conference

MON01 – Building Utilities Ready for Anything

I attended the session "Building Utilities Ready for Anything," which focused on how water utilities can strengthen organizational resilience and prepare for an increasingly complex range of operational risks.

One of the key points from the session was that utility resilience needs to extend beyond regulatory compliance, emergency response plans, and infrastructure replacement programs. While these remain important, utilities need to develop an organizational capability to anticipate, respond to, recover from, and adapt to changing conditions.

The discussion highlighted several challenges currently affecting utilities, including climate impacts, aging infrastructure, cybersecurity threats, workforce shortages and turnover, artificial intelligence and emerging technologies, supply-chain disruptions, financial pressures, and changing customer expectations. These challenges are increasingly interconnected and therefore cannot be addressed independently.

A significant takeaway for me was the importance of moving from a compliance-driven approach to a resilience-driven approach. Rather than preparing only for known emergencies, utilities should incorporate resilience into everyday decision-making, capital planning, asset management, workforce development, cybersecurity, procurement, and operational planning.

From a Guam perspective, several of these lessons are particularly relevant. Our utilities must operate with the added challenges of typhoons and other natural hazards, geographic isolation, extended supply chains, aging infrastructure, limited specialized workforce resources, and the need to maintain continuity of critical water and wastewater services.

Overall, the session reinforced that resilience is not a single project or emergency plan. It is an ongoing organizational strategy that should influence how a utility manages its people, infrastructure, technology, finances, supply chain, and operational risks.

Key takeaway: Utilities that build resilience into their normal business practices will be better positioned to maintain reliable service when confronted with both anticipated emergencies and unexpected disruptions.

Module Summary: "Planning and Paying for Future Water Systems"

This one-hour session focuses on how water utilities can finance infrastructure expansion while keeping customer rates fair and predictable as communities grow.

The module covers two approaches that work together: long-term financial planning to anticipate future capital needs, revenues, and rate impacts, and System Development Fees (SDFs) to recover an appropriate share of growth-related infrastructure costs from new development.

Key themes include funding future infrastructure, fairly allocating costs between existing customers and new development, maintaining predictable utility rates, and improving long-term financial resilience. The session also uses real-world utility practices to demonstrate how SDFs and financial planning can support sustainable system expansion.

Main takeaway: Utilities should plan for growth well before infrastructure is needed and develop a financing strategy that balances rates, capital investment, debt, reserves, and development-related fees. Done properly, this helps avoid placing the full cost of expansion on existing customers while ensuring new development contributes appropriately to the infrastructure capacity it requires.

For a utility such as Guam Waterworks Authority, this topic could be particularly relevant to infrastructure expansion associated with population changes, housing and commercial development, and major government or military-related growth.

MON10 – Lost and Found: Leveraging Hydraulic Modeling to Track and Capture Non-Revenue Water Losses

I attended the session "Lost and Found: Leveraging Hydraulic Modeling to Track and Capture Non-Revenue Water Losses," which focused on using existing hydraulic models as a practical tool for identifying, managing, and reducing non-revenue water (NRW) in water distribution systems.

A key takeaway from the session was that hydraulic models can provide value beyond traditional uses such as system planning and capital improvement projects. Utilities can leverage these models to better understand where water is being lost, how losses affect system performance, and where water-loss reduction efforts should be concentrated.

The discussion emphasized the growing importance of water-loss management as utilities deal with water shortages, increasing operating costs, aging infrastructure, and regulatory requirements. Hydraulic modeling can support these efforts by helping utilities analyze distribution-system behavior and identify areas where actual system performance differs from expected conditions.

The session reinforced the value of combining hydraulic modeling with operational and consumption data to investigate non-revenue water. Information such as system flows, pressures, customer meter consumption, and other field data can be compared with model predictions to help identify potential leakage or other unexplained losses.

Another important takeaway was that reducing NRW should be approached as an ongoing system-management and asset-management program, rather than simply responding to individual leaks. Modeling can help utilities prioritize investigations and improvements so limited maintenance and capital resources are directed toward areas offering the greatest opportunity for water recovery.

For Guam, these concepts could be particularly valuable. Applying hydraulic modeling together with bulk-meter, customer-meter, pressure, flow, and GIS data could help identify areas with unusually high losses, establish water balances for different portions of the distribution system, and prioritize leak detection and infrastructure rehabilitation.

Key takeaway: A well-developed and calibrated hydraulic model can become an important water-loss management tool. By integrating the model with actual operating and consumption data, a utility can move from simply calculating its overall NRW percentage toward identifying where losses are occurring and prioritizing actions to recover that water.

TUE03 – Pressure and Energy in Water Systems

I attended the session “Pressure and Energy in Water Systems,” which focused on how better pressure management, system configuration, and energy-conscious operations can improve water-system performance while reducing water losses and extending infrastructure life.

A key takeaway was that pressure and energy are closely connected. Maintaining pressures higher than necessary can increase leakage, place additional stress on pipes and other assets, and require additional pumping energy. Effective pressure management therefore provides opportunities to improve both water efficiency and energy efficiency.

The session highlighted the importance of system segmentation. Dividing a distribution network into manageable pressure zones or monitoring areas can give operators greater visibility into flows and pressures and make it easier to identify abnormal conditions, excessive pressures, and areas experiencing higher water losses.

Another important theme was energy-aware system design and operation. Pumping strategies, storage tank operation, pressure zones, control valves, and system configuration should be evaluated together rather than independently. Better coordination can reduce unnecessary pumping and energy consumption while maintaining adequate pressure and service reliability.

The session also reinforced the relationship between pressure management and non-revenue water. Leakage rates can be influenced by system pressure, so identifying areas with excessive or highly variable pressure may provide opportunities to reduce physical water losses while also reducing stress on aging pipelines.

For Guam, these concepts could be particularly useful because water must be moved across systems with varying elevations and multiple pumping requirements. Combining pressure monitoring, flow data, pump performance information, AMI, GIS, and hydraulic modeling could help identify areas where pressure can be optimized without compromising customer service.

This session also connected closely with the other sessions I attended on hydraulic modeling, leak detection, AMI analytics, water hammer, and pipeline asset management. Together, they demonstrate that pressure management can play an important role in reducing NRW, lowering energy costs, preventing pipe failures, and extending asset life.

Key takeaway: Pressure should be managed as both an operational and asset-management variable. Maintaining the appropriate pressure—not simply the highest available pressure—can reduce leakage and energy consumption, decrease infrastructure stress, and improve the overall efficiency and reliability of the water distribution system.

TUE09 – Innovations and Advancements in Leak Detection

I attended the session "Innovations and Advancements in Leak Detection," which focused on emerging technologies and data-driven approaches for identifying, locating, and reducing water losses within distribution systems.

A major theme of the session was the transition from traditional leak detection toward a more integrated and proactive approach. Utilities are increasingly combining live hydraulic models, AI-powered digital twins, system operating data, and advanced leak-detection technologies to identify potential water losses and narrow down their location before sending crews into the field.

The session highlighted how digital twins and live hydraulic models can continuously compare expected system behavior with actual operating conditions. Differences in pressures, flows, and consumption patterns can provide indications of potential leaks or other system abnormalities. Artificial intelligence can further assist by analyzing large amounts of system data and identifying patterns that may be difficult to detect manually.

Another technology discussed was K9 leak detection, including approaches aligned with AWWA M36 water-audit and water-loss-control practices. The session emphasized that technology should ultimately produce actionable information that can be validated in the field rather than simply generating additional data.

One of my main takeaways was that successful leak detection increasingly depends on integrating multiple sources of information. AMI consumption data, bulk meters, pressure sensors, flow meters, GIS information, hydraulic models, digital twins, and field leak-detection results can work together to progressively narrow the search area for water losses.

This session directly complemented the earlier discussions on non-revenue water, hydraulic modeling, and AMI analytics. Together, these approaches provide a potential framework for moving from simply measuring NRW at the system level to identifying where losses are occurring and prioritizing specific areas for investigation and repair.

For Guam, this approach could be particularly valuable for targeting limited field resources. A utility could combine AMI, district or bulk-meter data, pressure and flow monitoring, GIS, and a calibrated hydraulic model to identify high-loss areas and then deploy field leak-detection technologies to confirm and locate individual leaks.

Key takeaway: Modern leak detection is becoming a data-to-field process. The greatest opportunity is not necessarily one individual technology, but the integration of hydraulic modeling, AI/digital twins, metering and sensor data, and field verification into a coordinated NRW reduction program.

TUE12 – Real-Time and Advanced Asset Management Tools for Better Pipeline System Management

I attended the session "Real-Time and Advanced Asset Management Tools for Better Pipeline System Management," which focused on using advanced sensors, real-time system information, and asset-management tools to make better decisions about pipeline operation, maintenance, and investment.

A key takeaway was the value of moving from a primarily reactive approach to pipeline management toward a proactive, data-driven approach. Rather than waiting for a pipe failure or other operational problem to occur, utilities can use system monitoring and asset information to identify changing conditions and potential risks earlier.

The session demonstrated how advanced sensors and monitoring technologies can provide utilities with better information about pipeline-system performance. Real-time data can give operators and engineers greater visibility into system conditions and help them recognize abnormalities that may indicate leakage, deterioration, operational problems, or an increased risk of failure.

An important point was that sensor data becomes more valuable when it is integrated with existing asset-management information. Combining operating data with information such as pipe age, material, diameter, break history, location, condition, and consequence of failure can provide a stronger basis for prioritizing maintenance and replacement.

This approach also supports risk-based capital planning. Instead of replacing pipelines based primarily on age, utilities can evaluate both the probability of failure and the consequence of failure. This can help direct limited capital funding toward pipelines where failure would create the greatest operational, financial, or customer-service impacts.

For Guam, this could provide an effective framework for managing aging water infrastructure. Integrating GIS asset records, work-order and break history, pressure and flow sensors, AMI, hydraulic modeling, and condition-assessment information could help identify higher-risk pipelines and establish defensible priorities for rehabilitation and replacement.

The concepts also complement the other sessions I attended on non-revenue water, leak detection, AMI analytics, hydraulic modeling, and sensor-network optimization. Together, they demonstrate the value of developing an integrated utility data environment rather than managing these systems independently.

Key takeaway: Advanced sensors are most valuable when their real-time information is combined with asset condition, failure history, GIS, and operational data. This allows a utility to progress from "repair when it breaks" toward predictive and risk-based pipeline management, improving reliability while making better use of limited maintenance and capital resources.

WED02 – Strategic Asset Management Planning

I attended the session "Strategic Asset Management Planning," which focused on how utilities can use structured asset-management practices to proactively manage infrastructure risk, prioritize maintenance and replacement, and improve long-term system reliability.

A key takeaway was that effective asset management goes beyond maintaining an inventory of pipes, pumps, tanks, facilities, and equipment. Utilities need an asset-management framework that connects asset condition, performance, risk, maintenance history, operational importance, and long-term capital planning.

The session emphasized moving from reactive maintenance toward targeted and preventive maintenance. Rather than allocating resources primarily in response to failures, utilities can use asset information to identify infrastructure that presents the greatest risk and intervene before failures occur.

An important concept was risk-based prioritization. Assets should not necessarily be replaced simply because they are old. Utilities should consider both the likelihood of failure and the consequence of failure. A critical pipeline, pump station, or facility with significant service consequences may warrant higher priority even if another asset is older.

The session also highlighted the importance of coordinating infrastructure renewal with strategic and capital planning. Asset-management information can help establish defensible rehabilitation and replacement priorities and support multi-year capital improvement programs based on system needs and risk.

For Guam, this approach could be particularly valuable given aging infrastructure and limited capital and maintenance resources. Integrating GIS asset records, condition assessments, break and maintenance history, work orders, hydraulic modeling, operational data, and replacement costs could provide a systematic method for identifying and prioritizing critical infrastructure investments.

This session tied together many themes from the other sessions I attended. AMI, sensors, hydraulic models, leak detection, pressure monitoring, and real-time operational data can provide valuable information, but strategic asset management provides the framework for converting that information into maintenance, rehabilitation, and capital-investment decisions.

Key takeaway: Utilities should move from “replace what is oldest or fix what breaks” to “invest where risk is greatest.” A structured asset-management program can help prioritize limited resources, coordinate infrastructure renewal, reduce unexpected failures, and improve long-term system reliability.

WED09 – Leveraging Digital Tools for Water System Planning

I attended the session “Leveraging Digital Tools for Water System Planning,” which focused on how utilities can transform large amounts of Advanced Metering Infrastructure (AMI) data into actionable information for system operations, hydraulic modeling, and long-term planning.

One of the key takeaways was that collecting AMI data by itself does not provide the full benefit. Utilities need the appropriate data-management, analytical, and visualization tools to convert raw meter information into useful insights that engineers, operators, managers, and other stakeholders can apply to real-world decisions.

The session highlighted the use of AMI information to improve hydraulic model calibration. Actual customer consumption patterns can replace or refine generalized demand assumptions within a hydraulic model, providing a more accurate representation of when and where water is being used. Better demand information can improve confidence in pressure, flow, storage, pumping, and capacity analyses.

GUAM WATERWORKS AUTHORITY

Trip Report

Another important theme was the transition toward enterprise-scale AMI programs. AMI can support much more than customer billing. When integrated with GIS, SCADA, hydraulic models, asset-management systems, and other utility information, it can support demand forecasting, leak and anomaly detection, non-revenue water analysis, operational decision-making, and capital planning.

The session also emphasized the importance of making complex utility data understandable to decision-makers. Interactive dashboards, maps, and other visualization tools can allow engineers and operators to explore system information while also helping management and other stakeholders understand infrastructure needs and the basis for investment decisions.

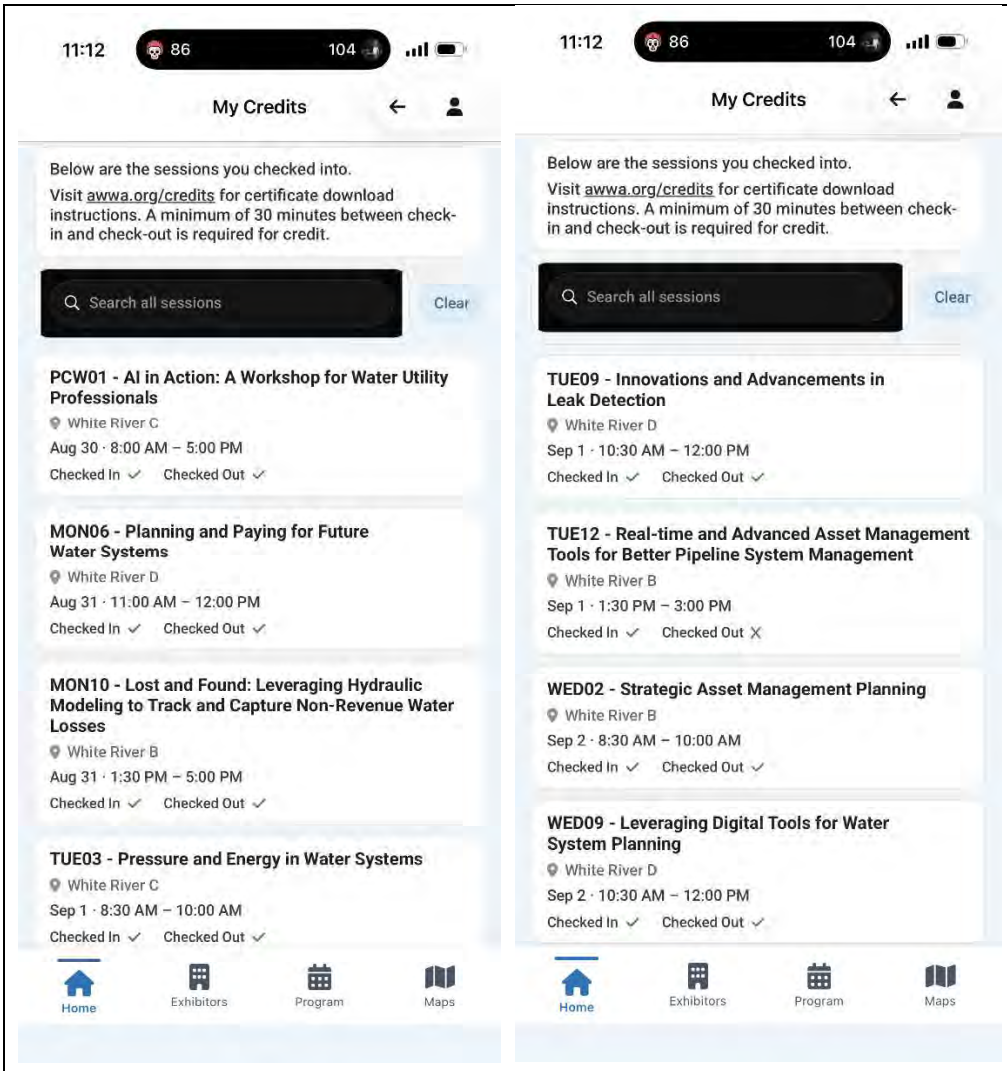
This session reinforced several themes from the other conference sessions I attended involving AMI analytics, hydraulic modeling, leak detection, and non-revenue water. Collectively, these technologies point toward an integrated digital approach where customer consumption, system flow, pressure, infrastructure, and operational data are analyzed together rather than maintained in separate systems.

For Guam, a significant opportunity would be to integrate AMI, bulk-meter data, GIS, SCADA, pressure and flow monitoring, and hydraulic modeling into a common analytical environment. This could improve hydraulic model accuracy while providing better tools for identifying water losses, forecasting demand, evaluating system capacity, and prioritizing capital improvements.

Key takeaway: AMI should be treated as a system-planning and operational data resource, not simply a meter-reading technology. The greatest value comes from integrating AMI with hydraulic modeling and other utility systems and converting that information into actionable analytics that support day-to-day operations and long-term infrastructure decisions.

GUAM WATERWORKS AUTHORITY

Trip Report



Michael Limtiaco

Digitally signed by Michael Limtiaco
Date: 2026.09.29 11:16:41 +10'00'

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Evangeline Lujan	Title/Unit Position: Senior Regulatory Analyst, C&S
Travel Date Begin: 8/29/2026	Travel Date End: 9/07/2026
TA No.: 26-519	Travel Location: Papeete, Tahiti

Trip Objective:

To attend the 2026 PWWC and to support the CCU Chairman at the Ministers Meeting in preparation for GWA's hosting of the 2027 PWWC.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

I attended the Pacific Water and Wastewater Associations (PWWA) annual conference. There are 21 Pacific Island countries and territories are members of PWWA. PWWA is a not- for-profit organization that provides a platform to discuss and find solutions for shared water and wastewater challenges. There are 21 countries and territories that are members of PWWA. GWA is Guam's member.

The primary reason for me attending the Pacific Water and Wastewater Conference (PWWC) is to observe the conference in preparation for the 2027 PWWC, when GWA will be hosting the event.

I was able to meet the CEO and staff of the Pacific Water and Wastewater Association(PWWA). The Pacific Water Ministers Forum is held concurrently with the PWWC. At this meeting, the CCU Chairman, Francis Santos attended on behalf of GWA. At this meeting, the Chairman invited the countries to Guam for the 2027 PWWC and Ministers Forum. At the Ministers Forum, the primary discussion surrounded the results of the benchmark report. Utilities are evaluated on production availability, customer satisfaction, operational efficiency , human resources, environment, and financial performance. The result of the meeting was a discussion on a communique that outlines the challenges of the countries and territories. The intend is to elevate the water and wastewater issues to the Pacific Island Forum (PIF).

Part of the PWWC, are sessions specifically for Young Water Professionals Program. These are young water professionals who are employees of the utility. The Young Water Professionals did a presentation on their issues of concern to the Ministers. Their main concerns are related to impact of climate change and water availability as well as out-migration of professionals to other areas where the wages are higher.

After the Minister's Forum, I attended the remaining sessions. The session highlighted the issues of human resources, water security, and the impact of climate changes to Pacific Islands.

What I learned was that many islands have challenges related to water security. Many of the low islands do not have a robust aquifer. Many of these island relay solely on rain as a primary water source. During rainy season, water can be stored in water tanks; however, during dry season or prolong periods of draught, water needs to be shipped in or is produced through desalination. Guam is extremely fortunate. Guam is a high island. We have a robust aquifer and surface water sources. We need to ensure that the aquifer is protected from contaminants and that we do not over pump that we introduce salt water into the lens.

I will be leading the planning for the 2027 PWWC. Attending this year's conference will help in ensuring that next year's conference is successful.

GUAM WATERWORKS AUTHORITY

Travel Report

Evangeline D. Luyan

September 15, 2026

Traveler Signature and Date

GUAM **WATERWORKS** AUTHORITY

Trip Report

Employee Name: Francis E. Santos	Title/Unit Position: CCU Chairman
Travel Date Begin: August 30, 2026	Travel Date End: September 5, 2026
TA No.: TA26-520	Travel Location: Pape'ete, Tahiti French Polynesia

Trip Objective:

The objective of the joint event was to advance regional collaboration, innovation, and climate resilience while sharing best practices to ensure sustainable water and wastewater services across Pacific communities.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

The 10th Pacific Water and Wastewater Ministers Meeting took place from August 31 to September 4, 2026, in Papeete, Tahiti, alongside the 17th Pacific Water & Wastewater Association Conference & Expo. Guided by the central theme *"Vai Ora | Living Water: From Source to Reef,"* the high-level gathering emphasized a holistic approach to water security, explicitly linking clean drinking water, proper sanitation, and environmental preservation to the overarching health of the Pacific Ocean. A primary focal point was the unique vulnerability of small island states, which face severe freshwater scarcity, heavy reliance on costly desalination, and geographic isolation.

The ministerial session culminated in the official endorsement of the Pape'ete Declaration, a regional commitment outlining strategic, actionable steps toward building a climate-resilient Blue Pacific. Leaders concluded that robust physical infrastructure must be matched by sustainable, long-term financing, ongoing technical training, and regional knowledge sharing. Additionally, the forum prioritized the active engagement of Young Water Professionals, ensuring that youth perspectives are fundamentally woven into the future of Pacific water governance and resilience planning.

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Teresa Marie B Camacho	Title/Unit Position: Utility Customer Care Supervisor
Travel Date Begin: August 29, 2026	Travel Date End: September 7, 2026
TA No.: 26-526	Travel Location: Papeete, Tahiti

Trip Objective:
To attend the Pacific Water and Wastewater Association Conference

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.

The theme for the 2026 PWWC is "Living Water – From Source to Reef, Water Shaping Life in the Pacific Islands"

Utilities, development partners, water stakeholders, ministers, and exhibitors from across the Pacific came together to share knowledge, build partnerships, and advance water and wastewater management.

They discussed the challenges each island faces in water and wastewater treatment, security, climate resilience, water quality, and public health. We need to protect the entire water cycle from source to reef, not just focus on drinking water and wastewater treatment.

Presenters shared how their water systems connect to the islands' livelihoods, economic development, and the ocean environment. It was interesting to hear about other islands' water and wastewater systems, including some with none at all. Some atolls still catch rainwater from their roofs, and each home stores it in a tank, hoping it lasts until the dry season ends. There is no treatment, but the whole community works together to keep the water safe. Children learn early to protect and conserve water, so it lasts throughout the dry season, which is getting longer due to the environment.

During Tuesday's session, presenters described their experiences implementing island water-metering and billing systems. Topics included meter accuracy, creation of tariffs, community engagement, and customer resistance.

Exhibitors presented innovative utility technologies and solutions. Presentations from financial institutions also presented on bridging the gap between climate adaptation planning and actual infrastructure financing, and stabilizing utility funding models across Pacific Island countries and territories.

The conference concluded with Thursday evening's awards ceremony at a local hotel. As hosts of next year's PWWC, we built excitement by distributing giveaways to attendees. On the final day, we toured the Papeete Water Treatment Plant and learned that its safe drinking water comes from mountain streams, rivers, and groundwater catchments. We also viewed a vertical well that draws pristine water from a natural catchment between two steep volcanic mountains. Papeete's water safety standards are so firmly established that local law requires restaurants to provide patrons with free tap water.

Teresa Camacho 9/22/26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Christopher M. Budasi	Title/Unit Position: Assistant General Manager – Administration & Support
Travel Date Begin: September 1, 2026	Travel Date End: September 7, 2026
TA No.: 26-517	Travel Location: Papeete, Tahiti, French Polynesia

Trip Objective: To attend the 17th Pacific Water and Wastewater Association (PWWA) Conference & Expo 2026 and the 10th Pacific Water & Wastewater Ministers Forum (August 31 – September 4, 2026, The Presidency, Papeete, French Polynesia), representing the GWA General Manager/CEO to ensure full utility-level representation for GWA.

Attended in coordination with CCU Chairman Francis E. Santos, GWA's Ministerial representative to the Pacific Water Ministers Forum, Vangie Lujan and Tessie Camacho to engage PWWA leadership and member utilities and advance Guam's bid to host the 2027 PWWA Annual Conference & Water Ministers Forum.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to
Agency's responsibility. You may use an extra sheet if necessary.)

Tuesday, September 1, 2026

I departed Washington, D.C. on the morning of September 1 and connected through Houston and Honolulu. I arrived at Faa'a International Airport in Papeete that evening and checked into the Hotel Reva Tahiti. Because of my late arrival time, I was not able to take part in the conference activities held earlier in the week. CCU Chairman Francis E. Santos, Vangie Lujan and Tessie Camacho represented Guam at those sessions, including the opening of the 10th Pacific Water & Wastewater Ministers Forum.

Wednesday, September 2, 2026

On Wednesday, September 2, I joined the 17th Pacific Water and Wastewater Conference & Expo at The Presidency. I started the day with the Pacific Café in the Presidency Marquee. The session was facilitated by Manua Guehennec, Commercial and Customer Director of PDE, and Bronwyn Powell of the PWWA Technical Committee. The Pacific Café is an open-dialogue format that brings together utilities, development partners and practitioners to exchange perspectives on challenges and opportunities shared across the region. Participants worked in small groups on topics important to Pacific utilities: strategic direction for the water sector, customer service, workforce development, the use of digital tools to improve operations, and building resilience for sustainable utilities. The session gave me a useful opportunity to hear first-hand how other island utilities are approaching these issues. It also allowed me to share GWA's perspective as a utility facing many of the same pressures.

I then attended the panel discussion "From Data to Dollars: How Benchmarking Strengthens Utility Performance, Policy and Investment," featuring Shona Fitzgerald of the World Bank. The panel opened with a presentation on why benchmarking matters. Benchmarking gives comparable reference points to utilities so they can understand their own performance, learn from relevant peers, and adjust course as conditions change. The presenters stressed that benchmarking is not a regional league table for ranking utilities. Instead, it is a repeatable cycle of collecting data, validating and contextualizing it, comparing, diagnosing, acting and tracking, and improving. That cycle is built around three practical questions: Where are we now? Are we improving? What should we do next?

The presentation then reviewed findings from the PWWA Benchmarking Report 2025. The 2025 cycle covered 20 utilities and service organizations across 14 Pacific countries and territories, using indicator data mainly from 2023–24. Benchmarking complements Sustainable Development Goal 6 (SDG 6) reporting by showing how utility services perform in practice, connecting SDG 6 goals with the realities of day-to-day operations.

GUAM WATERWORKS AUTHORITY

Travel Report

On service continuity, six of the 20 utilities reported less than 24-hour water supply. Four of those six still reported at least 80% coverage within their service areas, with some providing as little as 2 to 16 hours of water per day. The key message was that coverage figures must be read alongside service continuity, water quality and the experience of communities.

Water losses remain the region's most persistent challenge. Average non-revenue water was 44% across 13 reporting utilities, and 9 of the 14 organizations with usable data recorded losses of at least 40%. Among 12 utilities with comparable data from 2019 and 2025, median losses stayed at about 43%; six improved and six got worse.

Metering has strengthened considerably over the same period. Median metering among matched utilities rose from about 92% in 2019 to 100% in 2025, and 13 of 18 reporting organizations recorded at least 95% metered connections. However, high metering coverage has not yet translated into lower water losses. Connection metering is essential but not enough on its own. Production metering, meter accuracy, leakage management, billing systems and operational capability must work together to reduce losses.

Financial sustainability also remains weak. The median revenue collection rate was high at 96%, and it rose slightly from about 93% to 94% among matched utilities. Even so, 7 of 12 reporting utilities did not fully recover their operating costs. High water losses combined with weak cost recovery reduce a utility's capacity to sustain reliable service and increase its dependence on outside capital financing for asset renewal. The quality of drinking water was mixed, with no consistent regional improvement. Changing participation and incomplete wastewater and financial data continue to limit regional trend analysis.

The presentation concluded that benchmarking serves two connected purposes. The first is learning and improvement: understanding performance, identifying trends, diagnosing constraints and tracking whether actions are working. The second is advocacy and investment: communicating needs, establishing credible priorities and mobilizing support for practical improvements. The central message was that the objective is not to collect more data, but to use trusted, contextual evidence to deliver safer, more reliable, financially sustainable and resilient services. The panel then discussed two questions:

1. What would change in how utilities, governments and financiers make decisions if benchmarking became something organizations genuinely trusted and used, rather than simply submitted?
2. What needs to change in governance, financing and institutional practice for benchmarking evidence to shape which investments are prioritized and sequenced?

The session is directly relevant to GWA's responsibilities. The issues it highlighted mirror the priorities GWA manages on Guam: non-revenue water, meter accuracy, operating cost recovery, and the link between performance data and capital investment decisions. Taking part in regional benchmarking lets GWA measure its performance against peer Pacific utilities. It also strengthens the evidence base GWA presents to the CCU, PUC, GEPA and US EPA and financiers when justifying rate and investment decisions.

That afternoon, from 1:30 to 2:15 p.m., I attended the session "Sustainable Development Opportunities 1: Water–Energy Nexus." It featured a presentation on upgrading the water supply systems on the Cook Islands' outer islands of Aitutaki and Mitiaro under Infrastructure Cook Islands' (ICI) Climate Resilient Aitutaki Water Supply project. The presentation showed how solar-powered pumping can cut a utility's energy costs while making its water supply more reliable. Neither island has surface water, so both depend on rainwater and on groundwater drawn from infiltration galleries. Aitutaki has nine galleries and often faces water shortages. Before the project, there was a mix of pumps from different suppliers in varying condition. Some no longer worked, there were no spare parts, and none had well probes, level sensors or protection against running dry.

Aitutaki Water Services staff also worked out of a shipping container, and one gallery, Pukoe, had been offline for five to six years.

The project standardized the pumps on both islands. Each gallery now has a solar-hybrid pump of the same make, sized to the gallery's yield for continuous 24-hour operation. The upgrade added dry-run protection, well probes and level sensors, brought two unused galleries back into the network and provided a stock of spare components. Pulse water meters, pressure gauges, conductivity meters and tank and well level sensors were installed, linked by 4G communicators so staff can monitor the systems remotely and daily. Power consumption fell at every gallery measured, by as much as 72% at one site, and overall pumping costs dropped by about 20%. Tank level data now shows which areas of the network still receive too little water, which guides where new galleries should go. Local staff can now identify problems, diagnose them and replace components themselves. The presenters noted several challenges: demand still exceeds supply in places even though the original targets were met, shipping delays held up the pumps from Australia, and managing finances and reporting across five separate funding sources was complicated. Next steps include new galleries, a hydraulic model of Aitutaki's distribution network, close monitoring of production, rainfall and salinity through an expected El Niño drought, residential water meters, and a feasibility study on desalination.

This presentation is relevant to GWA because, like Aitutaki, Guam depends on groundwater. GWA also faces many of the same issues, including high energy pumping costs, pumps from many different suppliers, the risk of saltwater intrusion and the need for reliable operational data. Several of Aitutaki's approaches could inform GWA's planning for its own well fleet: standardizing pumps and keeping spare parts on hand, remote monitoring of well levels and conductivity, using solar-hybrid power to reduce electricity costs, and training local staff to maintain equipment.

From 2:15 to 3:00 p.m., I attended the session "Water Services & Climate Resilience 4." The first presentation, "Selecting a Climate-Resilient Replacement Water Source for Port Vila," was given by Brooks Rakau of Vanuatu's Department of Water Resources and Antoine Jude of the engineering firm Beca. Port Vila is one of the fastest-growing towns in the Pacific, adding more than 5,000 residents a year. Its current water source is expected to fall short of demand within the next five to ten years and faces growing pressure from nearby development. With ADB funding, Beca is carrying out a feasibility study for the Department. The study is comparing four candidate catchments (Teouma, Mele, Tagabe and La Colle) to identify the most resilient long-term source, with a preference for groundwater, which is generally more resilient and less costly than surface water. The presentation walked through the selection approach, which combines desktop analysis and data gathering with field assessments to test each option against future demand and climate risks.

The second presentation, "Delivering Water Differently: Compact Systems for Sustainable Island Futures," was given by Margaux Luc of SUEZ. She focused on compact, prefabricated drinking water treatment units that can be scaled to local needs and installed quickly where building a conventional treatment plant is impractical. SUEZ has deployed these units widely in the Pacific. In Fiji, compact units at ten sites now supply about 250,000 people for the Water Authority of Fiji. Units are also in use on Moorea in French Polynesia, and solar-powered desalination units have been provided to Kiribati and Tuvalu.

Both presentations bear on GWA's long-term planning. Port Vila's experience shows the value of planning new supply sources well ahead of demand growth and evaluating them against climate risk, which is relevant to GWA's management of the Northern Guam Lens Aquifer as development continues. Compact systems offer a possible option for supplementing supply in specific areas, or for restoring service quickly after a typhoon.

From 3:30 to 4:15 p.m., I attended the session "Water Services & Climate Resilience 5." The first presentation, "Advancing Hydrological Services in Pacific Island Countries and Territories: A Regional Strategy," was given by Jacqui Reid of the Pacific Community (SPC) and Erikson Sammy of Vanuatu's Department of Water

Resources. Many Pacific Island countries have limited capacity to monitor rainfall, streamflow and groundwater. That limits their ability to manage water resources, forecast floods and droughts, and plan for climate change. SPC is developing a Pacific Regional Hydrological Services Strategy to strengthen these services across the region. The strategy covers more than 20 Pacific countries and territories, Guam among them, and focuses on improving monitoring networks, data sharing and early warning systems. Mr. Sammy shared Vanuatu's perspective on the practical challenges of maintaining hydrological monitoring with limited staff and resources.

The second presentation, "Monitoring the Lagoon and Combating Underwater Noise Pollution," given by Vincent Sturny of Polynésienne des Eaux, was particularly interesting. Polynésienne des Eaux manages sanitation in Bora Bora and, with SUEZ and research partners, has developed the Bor'acoustic project to monitor the health of the lagoon. Connected buoys fitted with acoustic recorders listen to underwater life and log water temperature, currents and water quality. They also measure noise from boats, jet skis, aircraft and other human activity. Underwater noise is an often-overlooked form of pollution: it stresses marine life, causing fish to hide and feed less. The data is analyzed using artificial intelligence and can be shared with residents, schools and visitors as a simple color-coded indicator of lagoon health. The approach gives the community and decision makers evidence to support protective measures, such as traditional rahui closures or a shift to quieter electric boat motors.

Both presentations are relevant to Guam. SPC's regional strategy includes the North Pacific (possibly Guam), and stronger hydrological monitoring supports GWA's management of the Northern Guam Lens Aquifer and its drought planning.

From 5:00 to 6:00 p.m., I attended the PWWA Annual General Meeting (AGM) in the Presidency Marquee. Members reviewed the association's governance and finances for the past year. As I did last year, I cast proxy votes on behalf of GWA General Manager Miguel C. Bordallo, P.E. on each item (*) of the agenda:

*Acceptance of the minutes of the last AGM, held on August 27, 2025, in Honiara, Solomon Islands.
Receipt of the 2025 Profit and Loss Account and Balance Sheet.
Receipt of the 2025 Annual Report of the Board of Directors.
Receipt of the 2025 Auditor's Report.
*Election of two Pacific Utility Member (PUM) Directors to the Board, to serve the remainder of the current three-year term through the 2028 AGM.

The two Board vacancies followed the resignations earlier this year of former Chairperson Fuimaono Dominic Schwalger and former Deputy Chairperson Elizabeth Wright-Koteka. In March, the Board appointed Frank Kyota, CEO of the Palau Public Utilities Corporation, as Chairperson and Erickson Sammy, Director of Vanuatu's Department of Water Resources, as Deputy Chairperson. Members elected two women to fill the vacancies:

1. Leota Namulau'ulu Irasa Mauala Alafau, Chief Executive of the Samoa Water Authority.
2. Asifangalua Pasilio, Director of Economic Development, Natural Resources and Environment for Tokelau.

Their election strengthens women's representation in the association's leadership. That fits in a year when Samoa Water Authority was recognized with the PWWA's Gender Balance award at the Awards Night.

It was also announced at the AGM that Guam will be hosting the PWWC in 2027. Participating in the AGM keeps GWA engaged in the governance of the regional association, which is important because the Board and Secretariat set the conference program, the association's priorities and its partnerships with development

partners. As host of the 2027 conference, GWA will work closely with both over the coming year, and an active voice in the association's governance helps ensure Guam's interests and the needs of its utilities are represented in the region.

Thursday, September 3, 2026

On Thursday, September 3, I began the day with the Spotlight session "Financing and Managing Wastewater in the Pacific," held from 9:00 to 9:45 a.m. in the CESEC Big Room and presented by Manasa Tusulu of the Water Authority of Fiji (WAF). The presentation drew on Fiji's experience to examine the institutional, environmental and financial bottlenecks that Pacific Island utilities face in delivering wastewater services. A central theme was the gap between the cost of maintaining and upgrading aging wastewater infrastructure and the revenue available to pay for it. Fiji has among the lowest residential water rates in the Pacific, so WAF relies heavily on national government grants rather than its own revenue to fund capital works. Centralized sewer service also covers only part of the urban population, and treatment plants operate under significant strain from heavily depreciated assets.

Mr. Tusulu described WAF's strategy for addressing these constraints. WAF is shifting away from its long-standing reliance on septic tanks by systematically connecting more customers to centralized wastewater treatment plants. He also pointed to the Fiji Urban Water Supply and Wastewater Management Investment Program as a model for financing this kind of work in the region. The program is co-financed by the Asian Development Bank, the Green Climate Fund and the European Investment Bank. It uses climate finance to build resilient pumping stations, reduce leakage in the distribution system and improve the quality of treated effluent discharged to the environment. Beyond capital investment, he emphasized that managing these systems requires investment in people. He highlighted WAF's workforce training and its partnerships with other regional utilities, such as Solomon Water, to strengthen skills in treatment technology, environmental compliance and trade waste management.

The session is directly relevant to GWA as it plans and finances its own wastewater system and promotes household abandoning septic tanks and connecting to the GWA system. GWA faces similar pressures from aging assets, the cost of meeting environmental discharge requirements, and the need to balance affordable rates with full cost recovery. Fiji's experience shows how climate-resilience financing can be combined with traditional funding sources to support large wastewater investments. It also reinforces the value of regional partnerships and sustained workforce development in operating these systems effectively.

Later that morning, from 11:00 to 11:45 a.m., I attended the IMPACT Summit, "Strengthening Utility and Donor Partnerships for Water Security," in the CESEC Big Room. The session was facilitated by Frank Kyota, PWWA Chairman and CEO of the Palau Public Utilities Corporation. It brought utility leaders together with the region's major development partners: the Asian Development Bank (Allison Woodruff), the New Zealand Ministry of Foreign Affairs and Trade (Richard Cassidy), the World Bank (Michael Webster) and the Australian Department of Foreign Affairs and Trade. PWWA CEO Pitolau Lusia Sefo-Leau also gave an update on the association's strategic planning. The central question was how investment, technical support and capacity building can respond to the realities utilities face and lead to stronger, more sustainable water services.

The discussion opened with the changing water security picture in the Pacific. Droughts, floods, cyclones and saltwater intrusion are adding pressure to utilities that already contend with aging infrastructure, rising costs, limited data and capacity gaps. Roughly nine million people in the region still lack basic sanitation and about five million lack basic drinking water, with remote, rural and atoll communities facing the greatest barriers. A recurring message was that infrastructure alone cannot deliver water security. Systems must also be operated, maintained, financed and adapted over time, which depends on sound governance, asset management, skilled staff and reliable data.

The partners described their priorities. MFAT spoke to balancing immediate needs such as drought response with longer-term infrastructure and policy support. The World Bank highlighted its long-running benchmarking partnership with PWWA as a tool that helps utilities use performance data to identify gaps and justify investment. ADB noted its longstanding support for PWWA, the conference and the Ministers Forum, alongside its direct investment in Pacific utilities. The panel also examined the limits of the traditional project-by-project approach to development assistance. It considered what utilities and governments would need to put in place to attract finance directly, both for infrastructure and for human capital through programs such as the Pacific Water Academy, the Young Water Professionals program and peer learning.

The session was valuable for GWA because it clarified how development partners decide where to direct support. As a U.S. territory, Guam does not generally qualify for the same multilateral financing as many Pacific island nations. Even so, the same principles apply when GWA seeks federal funding and other financing: credible performance data, strong governance and asset management, and a demonstrated ability to operate and maintain what is built. The discussion also highlighted the role GWA can play as a partner to its Pacific neighbors through peer learning and technical exchange. That role is especially relevant to Guam's bid to host the 2027 conference.

Just before the lunch break on Thursday, the conference played a short promotional video introducing Guam as the host of PWWC 2027. The video featured GWA General Manager Miguel C. Bordallo, P.E., who welcomed the Pacific water community from a scenic overlook of Guam's coastline. It showcased GWA's operations and infrastructure: aerial views of its water and wastewater treatment plants, reservoirs and well sites, along with GWA field crews and customer service staff at work. It closed with the "Next Stop: Guam – PWWC 2027" banner. The video drew an enthusiastic response from the attendees, with many delegates expressing excitement about traveling to Guam next year. It set the tone for GWA's promotional efforts at the Awards Night that evening.

That afternoon, from 1:30 to 2:15 p.m., I attended the session "Innovation & Territorial Resilience 2: Wastewater" in the Presidency Marquee. It included a presentation by Dr. Daniel H. Yeh of the University of South Florida on the Honu Hub, an Adaptive Decentralized Wastewater Infrastructure Solution (ADWIS) for Pacific Islands. Dr. Yeh framed the problem around communities that are not served by sewers. About 25% of the U.S. population relies on onsite systems such as septic tanks and cesspools. Hawai'i alone has about 83,000 cesspools discharging an estimated 52 million gallons of sewage into the ground each day, and state law requires all of them to be replaced by 2050 at an average cost of $30,000 to $50,000 per household. That discharge harms coral reefs, fisheries, aquifers and public health. Islands also make conventional solutions difficult because of remoteness, high energy costs, long supply chains, difficult soils and high-water tables.
The Honu Hub is a compact, above-ground, off-grid treatment unit that needs no leach field. It is designed to meet four needs identified in interviews with prospective customers and regulators:

- nitrogen removal to protect nearshore waters
- recycled water for onsite reuse such as toilet flushing, landscaping and fire-fighting reserves
- automation and remote monitoring, with machine learning "soft sensors" to support predictive maintenance
- energy independence through solar or other onsite power

The system builds on the NEWgenerator technology developed under the Gates Foundation's Reinvent the Toilet Challenge. That technology was field-tested in an informal settlement in South Africa, where it met California recycled water criteria. A Honu Hub unit arrived on O'ahu in June 2026 for a 12-month pilot with the City and County of Honolulu. The pilot includes six months of NSF testing toward Hawai'i Department of Health approval.

The presentation is relevant to Guam. Like Hawai'i, Guam has many homes and businesses on septic systems over a sole-source aquifer and near coastal waters. Dr. Yeh suggested that decentralized units like the Honu Hub could serve as an alternative to cesspools and septic tanks where extending sewer lines is impractical. Because the units sit above ground, they are not dependent on soil conditions and are more resilient to flooding. They could also be deployed quickly after a disaster to restore sanitation and prevent the spread of disease. GWA should follow the results of the O'ahu pilot, particularly the regulatory approval pathway and long-term operating costs, as a possible option for areas of Guam beyond the reach of the sewer system.

At the conclusion of the session at 2:15 p.m., Vangie Lujan, Tessie Camacho and I left the conference to prepare for the evening and then traveled approximately one hour by taxi to the venue for the PWWA Awards Night and Closing Dinner.

That evening, Chairman Francis Santos, Vangie Lujan, Tessie Camacho and I attended the PWWA Awards Night and Closing Dinner in Punaauia, Tahiti. The event celebrated excellence across Pacific water utilities and recognized the results of the 2026 PWWA Benchmarking Awards. The main award winners were:

- Polynésienne des Eaux (French Polynesia): Best Utility Overall 2026, plus technical performance for higher-income utilities and customer service (tied)
- American Samoa Power Authority: co-winner for higher-income utilities and customer service
- Samoa Water Authority: winner among middle-income utilities, plus the Gender Balance special award
- Tonga Water Board: technical performance for middle-income utilities
- To Tatou Vai (Cook Islands): water coverage for utilities in transition
- Palau Public Utilities Corporation and UNELCO Vanuatu: co-winners of the Female Manager special award
- Zion Cam Young (Samoa Water Authority): Young Water Professional Award 2026

Because Guam will host the 2027 conference, GWA used the evening to promote Guam to the regional water community. We handed out gift bags to all attendees. Each bag held guyuria cookies, a Next Stop Guam luggage tag, a Guam–U.S. flag pin and a glossy promotional booklet about Guam. The marketing effort was very successful. Attendees enjoyed the gift bags, and many delegates expressed excitement about attending PWWC 2027 on Guam.

The evening closed with the ceremonial handover of the PWWA flag from Tahiti to Guam, officially marking Guam as host of the next Pacific Water and Wastewater Conference & Expo. This moment was the culmination of the effort GWA began in 2025, when it submitted Guam's bid to host. It sets the stage for GWA's planning and coordination with the PWWA Secretariat over the coming year.

Friday, September 4, 2026

Friday, the final day of the conference, was set aside for facility tours. I did not take part in the tours because urgent GWA matters required my attention, so I spent most of the day completing regular GWA work remotely.

Saturday, September 5 – Monday, September 7, 2026

Because of limited flight availability, I remained in Papeete through Saturday. That night I departed at 11:30 p.m. on Alaska Airlines flight AS 882 to Honolulu. On Sunday, September 6, I continued on United Airlines

flight UA 201 from Honolulu, arriving in Guam on Monday, September 7, after crossing the International Date Line.

Conclusion

I attended the 17th Pacific Water and Wastewater Conference & Expo on behalf of the GWA General Manager, alongside CCU Chairman Francis E. Santos, Vangie Lujan and Tessie Camacho. The trip served two purposes: to ensure full utility-level representation for GWA, and to advance Guam's role as host of the 2027 conference. Both objectives were met. The sessions gave GWA practical insight from regional peers and development partners on issues central to its own operations, including water loss, energy costs, wastewater financing and the use of performance data to support investment. The conference also positioned Guam well for next year. Through the GM's video, the gift bags and the PWWA flag handover, GWA introduced itself to the Pacific water community as the incoming host, and the response from delegates was very positive. GWA now moves into planning PWWC 2027 with strong regional interest and a well-established working relationship with the PWWA Secretariat.



Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Michael Anthony Cura II (142897)	Title/Unit Position: 1302 Safety & Inspections/Safety Inspector II
Travel Date Begin: 09/10/2026	Travel Date End: 09/19/2026
TA No.: 26-499	Travel Location: Indianapolis

Trip Objective:
Attend the NSC Safety Congress & Expo

- Attend the Principles of Occupational Safety & Health 4-Day Course to obtain CEUs to re-certify current credentials.
- Attend the Expo to physically test and source the newest health and safety equipment entering the global industrial market.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

1.) What was learned - By taking the **Principles of Occupational Safety and Health (POSH)** course as a safety refresher, I was able to sharpen my everyday toolkit to improve how I handle field inspections and hazard tracking for my section. Revisiting these fundamentals gave me a fresh perspective on what to look for during physical site walk-throughs, helping me refine our Job Safety Analyses (JSAs) and catch subtle dangers on the ground before they cause an incident. The course clarified recent updates to OSHA standards, which makes it much easier for me to double-check our chemical Hazard Communication labels, verify injury record logs, and ensure our section's daily paperwork is flawless. It also gave me practical, up-to-date insights on industrial hygiene—like identifying ergonomics issues and testing for noise or air hazards—that I can directly apply to improve how our team uses PPE and follows emergency exit plans. Ultimately, this refresher didn't just sharpen my technical skills as an inspector; it gave me the exact tools to lead by example, keep my peers safe, and raise the safety standards across my entire section.

2.) How can GWA benefit from trip - GWA would benefit from sending an inspector to the **NSC Safety Congress & Expo** by bringing modern safety practices and specialized equipment back to the island. Because Guam is geographically isolated, this event gives the inspector a rare chance to physically test advanced utility gear like wastewater gas detectors and trench shoring tools or other specialized equipment in the safety industry.

3.) How trip relates to Agency's responsibility - A trip to the 2026 NSC Expo relates directly to the Guam Waterworks Authority's (GWA) core responsibility to deliver safe, reliable water and wastewater services while maintaining a secure public infrastructure. Because GWA's daily operations require field crews to work in high-risk environments such as permit-required confined spaces, deep water main trenches, and chemical treatment facilities. The agency has a strict legal and ethical duty to protect its workforce from injury. Sending an inspector to the **NSC Safety Congress & Expo** allows GWA to fulfill this responsibility by bringing back ideas for modern confined space safety protocols and hands-on evaluations of specialized safety gear like wastewater gas detectors and chemical PPE. Ultimately, this directly supports GWA's broader mandate to comply with federal OSHA and U.S. EPA regulations, ensuring that critical island utility projects stay on track with safety and environmental standards.

9/21/2026

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Brett Railey	Title/Unit Position: AGME
Travel Date Begin: 9/19/26	Travel Date End: 9/27/26
TA No.: 26-515	Travel Location: San Francisco

Trip Objective:
Attend Federal Convening with Guam delegation, represent GWA, meet with USEPA and other Federal Agencies.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

Along with GM Miguel Bordallo, CCU Chairman Frances Santos and PUC Chairman Dr. Jeff Johnson, participated in Federal Convening where Guam and the CNMI presented impacts created by the ongoing military buildup. The Guam delegation to the Federal Convening, led by Governor Lou Leon Gurerro, presented over $11 billion in needs created on Guam by the buildup including roads, the port, the airport, power, water, housing, public health and the hospital.

GWA's priority projects included addressing needed secondary treatment upgrades for the Hagatna WWTP that will be needed for any additional military growth in the central basin (Nimitz, Naval Hospital and Radio Barrigada); and addressing Non-revenue water (NRW) needed to protect the shared Northern Guam Lens Aquifer (NGLA) resource.

Attended Monday rehearsal presentations, met with USEPA, attended Guam presentations on Wednesday, met with federal agencies on Thursday including OLDCC, attended Governor's debrief, and met with Stephen Field and Garney Federal.

DOW showed interest in partnering with GWA to address wastewater issues both at the HWWTP and the Navy's Apra Harbor WWTP.

Brett E Railey 9/30/26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Arden Crisostomo	Title/Unit Position: Utility Laboratory Technician Leader
Travel Date Begin: Sep 24, 2026	Travel Date End: Oct 03, 2026
TA No.: 26-527	Travel Location: New Orleans, LA

Trip Objective: The purpose of attending WEFTEC 2026 was to enhance technical knowledge and professional understanding of current developments in environmental microbiology, molecular testing, infectious disease surveillance, and occupational health and safety. The trip aimed to identify scientific knowledge, monitoring approaches, and practical strategies that could support Guam Waterworks Authority's wastewater operations, laboratory capabilities, environmental monitoring, and public health protection responsibilities.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

Although several sessions were attended, this report focuses on two sessions that were particularly relevant to wastewater microbiology and emerging biological hazards.

Microbiology 101: The Good, The Bad, The Ugly

This session covered foundational microbiology concepts and their relevance to wastewater treatment processes, *E. coli* monitoring, biological treatment, and laboratory and occupational biosafety. The presentations addressed wastewater microbiology fundamentals, microorganisms involved in nutrient removal, and applications of DNA and RNA beyond COVID-19 testing.

The session supported the objective of improving technical understanding of the biological processes that influence wastewater quality and treatment performance. It also provided exposure to the potential applications of molecular methods in environmental monitoring and the importance of biosafety practices in laboratory and wastewater operations. The session reinforced the importance of understanding microbial communities and their functions in wastewater treatment. Microorganisms contribute to biological treatment processes, including nutrient removal, while microbiological indicators such as *E. coli* can provide important information about contamination and water quality. The presentations also highlighted the broader potential of DNA- and RNA-based methods for detecting and studying microorganisms in environmental samples. The knowledge gained may help GWA evaluate opportunities to strengthen microbiological testing, improve interpretation of wastewater monitoring results, and assess the potential usefulness of molecular methods for specialized environmental investigations. These methods may complement conventional testing where appropriate, subject to technical validation, available resources, and applicable regulatory requirements. The session also reinforced the importance of maintaining appropriate laboratory biosafety procedures and staff competency.

Emerging Infectious Disease Outbreaks

This interactive session explored emerging biological hazards affecting wastewater utilities and their personnel. Topics included wastewater surveillance, novel pathogens, antimicrobial resistance, occupational exposure risks, personal protective equipment (PPE), operational practices, and emergency preparedness.

The session addressed the objective of understanding how wastewater utilities can respond to evolving biological hazards while protecting employees and the community. Its emphasis on practical risk mitigation and real-world case studies provided a framework for considering how monitoring, safety procedures, and preparedness measures can be incorporated into utility operations. The session highlighted the importance of recognizing changing biological hazards and assessing the risks they pose to wastewater personnel. Wastewater surveillance may provide useful information about the presence or circulation of certain infectious agents within a population, depending on the pathogen, sampling strategy, and analytical method. Effective risk management also requires appropriate PPE, established operating procedures, staff awareness, and coordinated emergency response planning. The information may help GWA review its existing biosafety and occupational health practices for employees who work in wastewater facilities, collection systems, and laboratories. It also provides a basis for evaluating whether wastewater surveillance or targeted molecular testing could support future public health collaborations. Lessons from the session may be useful in strengthening biological hazard assessments, staff training, exposure prevention, and preparedness for emerging infectious disease events.

The knowledge gained from WEFTEC 2026 is relevant to GWA's responsibilities for providing essential water and wastewater services and supporting the protection of public health and the environment. Understanding wastewater microbiology helps inform the monitoring and evaluation of biological treatment processes and wastewater quality. Awareness of emerging infectious disease hazards is also relevant to protecting employees who may encounter biological hazards while performing their duties. In addition, knowledge of molecular testing and wastewater surveillance provides a foundation for assessing new monitoring opportunities in coordination with public health partners. The conference therefore supported professional development in areas that may contribute to safe wastewater operations, reliable monitoring, informed technical decision-making, and the continued improvement of GWA's services.

Attending WEFTEC 2026 provided an opportunity to strengthen technical knowledge in wastewater microbiology, molecular testing, emerging infectious diseases, and occupational health and safety. The two highlighted sessions were particularly relevant to GWA because they addressed the biological processes underlying wastewater treatment as well as the need to recognize and manage evolving biological hazards.

The knowledge gained can support GWA's continued efforts to maintain safe working conditions, strengthen laboratory and monitoring practices, and protect public health and the environment.

10/16/26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Jennifer O. Cruz	Title/Unit Position: Utility Compliance Laboratory Administrator
Travel Date Begin: September 24, 2026	Travel Date End: October 1, 2026
TA No.: 26-528	Travel Location: New Orleans, Louisiana

Trip Objective:
To provide GWA's wastewater surveillance team with an opportunity to bolster current understanding of monitoring health threats and pathogen emergence through technical sessions and learning exchanges from experts and professionals. It also supports development of GWA's Wastewater Surveillance Program under the 2025 NWSS2/2+ MOA between DPHSS/BCDC/ELC and GWA.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

Conference Value and Objective

The conference met the objective by expanding knowledge of current issues and challenges associated with monitoring public-health threats and emerging diseases through wastewater. Sessions on wastewater surveillance, wastewater microbiology, laboratory practices, and worker safety provided relevant technical information and practical perspectives. Participation also created opportunities to ask questions, exchange experiences, and connect with subject-matter experts and laboratory professionals from the water and wastewater sectors. These interactions helped build professional relationships that may support future information sharing and collaboration.

Key Topics Learned

The conference showed that wastewater surveillance and wastewater microbiology are emerging fields that continue to gain interests as tools for identifying and monitoring potential health threats. Although the number of sessions devoted to these subjects was limited, strong audience participation demonstrated growing demand for additional training and discussion. The introductory microbiology session reinforced the role of microorganisms in wastewater treatment and the importance of understanding their behavior in environmental samples. Session on molecular methods, particularly PCR, attested how these techniques provide precise and timely results. An interactive session on emerging infectious disease highlighted worker safety that addressed current and emerging hazards. It encouraged participants to share workplace experiences and identified safety practices that may be overlooked when working with wastewater samples.

GWA Benefit

The information presented at the conference supports GWA's efforts to establish and strengthen a wastewater surveillance program that can provide meaningful benefits to the community of Guam. Professional contacts developed during the conference may provide GWA Lab with additional resources for technical guidance, collaboration, and future program development/improvement.

GWA Responsibility

The trip directly supports GWA's responsibility to provide reliable wastewater services, maintain sound laboratory practices, protect employees, and contribute to the protection of public health and the environment. A well-planned wastewater surveillance program can help identify trends and potential health concerns within the community while supporting informed coordination with partners. The emphasis on biological hazards and safe work practices aligns with GWA's responsibility to provide a safe working environment for employees who are exposed to wastewater.

Overall, the trip provided knowledge, professional connections, and practical considerations that can assist GWA in improving technical capabilities and continuing to serve the community of Guam effectively.



10-22-26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: N'tasha L. Perez	Title/Unit Position: Biologist III/ Compliance Laboratory
Travel Date Begin: September 24, 2026	Travel Date End: October 2, 2026
TA No.: 26-529	Travel Location: New Orleans, LA

Trip Objective: The objective of attending WEFTEC 2026 was to learn about current developments, technologies, and practices related to wastewater surveillance and public health. Participation in relevant technical sessions and discussions provided an opportunity to identify information and approaches that may support and strengthen GWA's wastewater surveillance program and enhance the use of wastewater data for public health monitoring.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

The trip objective was met through attendance at technical sessions focused on wastewater surveillance, emerging infectious diseases, antimicrobial resistance (AMR), microbiology, laboratory technologies, and water policy. The conference also provided opportunities to speak directly with USEPA representatives and laboratory equipment vendors about issues that are relevant to GWA.

The Emerging Infectious Disease Outbreaks session was especially relevant to GWA because it addressed both wastewater surveillance and worker safety. A major part of the discussion focused on understanding the risks wastewater workers face from pathogens and the importance of consistent PPE use. The session emphasized wastewater pathogen training for new employees, keeping safety instructions simple and easy to follow, and making employees aware that organisms encountered at work can potentially be carried home to their families. The discussion also covered ways to improve PPE compliance, including recognition or incentives for employees who consistently follow safety practices. Another useful takeaway was that exposure risk can be greater closer to the source, where pathogens are more likely to still be viable. Resources available through CDC and WEF for worker protection, organism-specific information, safety guidance, and job safety analysis were also discussed. These topics are applicable to GWA not only as we expand wastewater surveillance for emerging pathogens, but also in reviewing how laboratory, plant, and other wastewater employees are trained and protected from potential biological hazards.

Another session focused specifically on the use of wastewater data to better understand antimicrobial resistance. Presentations discussed national wastewater sampling efforts and showed that AMR trends can vary depending on the organism or resistance gene being measured as well as the season. The speakers also stressed the importance of standardized sampling, analytical methods, targets, and reporting so that results can be compared over time and between locations. One of the more useful takeaways was that surveillance should focus on organisms and resistance markers that have meaningful public health relevance rather than simply testing for as many targets as possible. This is an area that may become increasingly important as wastewater surveillance programs continue to expand beyond the pathogens currently being monitored.

The Microbiology 101 session was also useful because it covered both traditional microbiological testing and new molecular methods. Presentations discussed culture, microscopy, PCR, digital PCR, LAMP, and sequencing and explained that each method provides different information depending on the question being asked. This was particularly relevant as GWA develops its molecular testing capabilities for wastewater surveillance. An important point was that PCR and digital PCR detect genetic material and do not necessarily indicate whether an organism is alive or infectious. Molecular methods therefore complement traditional microbiological methods rather than replacing them in every application. The session also covered the use of microscopy and microorganisms as indicators of activated sludge conditions, providing information that may be useful beyond surveillance for evaluating wastewater treatment performance.

GUAM WATERWORKS AUTHORITY

Travel Report

In addition to the technical sessions, we met with IDEXX representatives and learned about the TECTA automated microbiology system. The system can test for *E. coli*, total coliforms, and enterococci and, depending on the concentration present, can provide positive results in as little as two hours. While this technology is not limited to wastewater surveillance, it could be useful to GWA when rapid microbiological results are needed and waiting for the normal incubation period could delay an operational or public health decision. The discussion provided an opportunity to learn about another testing option that GWA may and should consider.

We also attended USEPA's Water Policy Update and met directly with USEPA representatives during their office hours. We used this opportunity to ask about PFAS and potential monitoring and permitting requirements for GWA's wastewater facilities. The representative we spoke with was based in Washington D.C. and was not familiar with Region 9- specific requirements, so we were not able to obtain detailed clarification on how these requirements may apply to GWA. However, the discussion helped identify the need to follow up directly with Region 9 for guidance as PFAS requirements continue to develop. The Water Policy Update also provided information on broader USEPA priorities related to PFAS, water reuse, technical assistance, wastewater research, and future Clean Water Needs Survey activities.

The information gained at WEFTEC is relevant to both GWA's wastewater surveillance activities and its broader responsibility for wastewater treatment, laboratory testing, regulatory compliance, and protection of public health and the environment. The surveillance-related sessions provided information that can help GWA as the program continues to develop, particularly when considering future pathogens or public health targets, selecting appropriate analytical methods, and interpreting molecular results.

The trip also provided benefits outside of the surveillance program. Information on rapid microbiological testing, process microbiology, PFAS, regulatory developments, and laboratory technologies can be applied when evaluating future laboratory needs and preparing for changes that may affect GWA's wastewater permits and treatment operations. Overall, WEFTEC provided an opportunity to learn from other utilities and industry professionals, speak directly with federal regulators and technology providers, and bring back information that can be considered as GWA continues to improve its wastewater laboratory, surveillance, and compliance.

RGutierrez 10/06/26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Nicholas Rupley Lee	Title/Unit Position: Community Outreach Program Director
Travel Date Begin: September 24, 2026	Travel Date End: October 2, 2026
TA No.: 26-531	Travel Location: New Orleans, Louisiana USA

Trip Objective:
To attend technical sessions and obtain professional development credit in communications and outreach at the Water Environment Federation's 2026 Technical Exhibition and Conference (WEFTEC 2026).

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

The Guam Waterwork's Authority's (GWA) Community Outreach Program Director (COPD) attended six (6) technical sessions and earned professional development credit from five (5) of these sessions. As GWA's lone communications professional, attendance and participation at WEFTEC 2026 helped build a better understanding of the scale and complexity of the water sector, network with industry leaders in public outreach communities, and gather compelling stories and technical trends to shape public perception and opinion of the Authority and its mission.

With the compliance deadline for PFAS looming, attendance also provided the COPD with strategies to help GWA develop an effective PFAS communication program thgrough plain-language education, transparent updates on monitoring and treatment, inclusive two-way engagement, partnerships with credible agencies and community organizations, and ongoing evaluation of outreach effectiveness.

While there is no exact science in communicating PFAS risk to build public trust in the community, GWA can improve its partnership with the community by integrating communication into PFAS response programs. The session provided sound guidance on how GWA can support informed communities, improve transparency, build lasting public trust, and move beyond regulatory compliance by treating communication as an operational discipline.

GWA COPD learned that effective PFAS communication programs are comprised of several program areas:

1. Communication and Education – GWA should consider helping the island understand the health concerns of PFAS exposure without causing unnecessary fear by providing facts on regulatory limits, dosages, frequency and geological and individual risks. We could also consider educating the community on PFAS reduction by sharing information on pretreatment, product substitutions, regulatory coordination and everyday PFAS sources.

2. Transparency and Updates – GWA must communicate clearly to the island about what the Authority is doing in terms of treatment actions, sampling frequency, results and provide any regulatory updates, especially as EPA regulations receive revisions.

3. Community Engagement and Response – GWA should consider reaching out to the island community through a variety of methods including, in-person meetings, websites, social media, inserts in papers, podcasts, and hotlines. This information needs to be delivered to all villages, prioritizing impacted communities with multilingual, easily accessible materials. Ideally we should also consider providing opportunities to the community to address concerns and misinformation through Q&A sessions, online forums, surveys, information hotlines and dedicated PFAS contact points.

4. Community Partnerships – In order to strengthen the credibility and relevance of the information presented by the Authority, we could coordinate with DPHSS, GEPA, MCOG, GDOE, and other community and advocacy groups.

5. Program Evaluation – GWA must maintain the compliance program's effectiveness by tracking program engagement, community concerns and determine opportunities to improve communication.

Overall improvements in our communication strategy could benefit from lessons shared and learned from other municipal water utilities across the country. Many others face an on-going challenge regarding how to best connect and communicate with their customers – and

GUAM WATERWORKS AUTHORITY

Travel Report

GWA is no exception. Sessions provided strategy on eliminating and minimizing communication gaps which can negatively impact construction schedules and regulatory timelines.

Strategies not currently practiced by the Authority include combined us of traditional outreach methods with digital tools like geographic information system (GIS) mapping, project dashboards, work order management systems and data-driven messaging. Applying multiple layers of data can identify commonalities within different parts of the island's villages and inform communications and outreach strategies so they reach different customer segments in ways that resonate with their unique concerns or questions.

Strategies meant to build the island's trust and confidence in the Authority were highlighted throughout overarching themes in communications-related sessions and the government affairs community meeting. Effective communication can bolster trust and confidence in GWA if we re-strategize and return to basic fundamentals by:

1. Considering our audience and messengers.
2. Making things relatable
3. Using audio-visual aids wisely
4. Acknowledging emotional tolls and realities
5. Being honest about risks

Based on what was shared during the WEFTEC 2026, the utilities that communicated early, with clear and consistent messages, were positioned stronger than those responding to negative publicity or attempting to reframe a narrative. Basic talking points in future GWA public addresses should require communicating about our water supply challenges, growth pressures, limited options, and other constraints, and communicating about them early and often.

Dispatch, operators, and customer service representatives are among the Authority's most frequent public touchpoints. COPD should develop clear talking points and help them practice so they can explain our water realities consistently and in their own words. This could be bolstered with contractor support.

10/14/26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Tristan Jake Castino	Title/Unit Position: Associate Engineer
Travel Date Begin: 9/25/26	Travel Date End: 10/05/26
TA No.: 26-491	Travel Location: New Orleans, Louisiana

Trip Objective:

The objective of attending WEFTEC 2026 is to engage with industry vendors and participate in technical workshops/sessions to enhance professional knowledge that would help support future projects and improve current operations.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

Attending WEFTEC 2026 was very beneficial to me as an engineer that is not familiar with the current technologies that are being used in the industry. As an example, with the rising concern of PFAS and other emerging contaminants, I have met with vendors that offer a variety of treatment technologies, such as Granular Activated Carbon (GAC) filtration and foam fractionation. As GAC is currently used in GWA's water system and we are seeing effective results in treatment, it would be of GWA's benefit to explore other methods that are suited for the other water and wastewater infrastructure as well.

The conference also provided an opportunity to strengthen relationships with vendors currently under contract with GWA. While communication had previously been conducted remotely, meeting with vendor representatives in person allowed for more meaningful discussions, a better understanding of their organizations and technical teams, and firsthand demonstrations of their products and technologies.

The conference also provided an opportunity to attend technical workshops and sessions. I attended a Microbiology Workshop that focuses on the micro-organisms found in the aerobic digestion tanks of the typical wastewater treatment process. Through this workshop, I have gained insight on how these organisms break down organic matter and the opportunity to identify different organisms under a microscope. As an outcome, I have come to a greater appreciation that a treatment plant functions as a living system, and effective management requires operators and engineers to respond to the system's needs rather than forcing the system to fit predetermined approaches.

GWA can continue to benefit from WEFTEC by providing employees with opportunities to attend and participate. The ability to engage directly with vendors and attend technical workshops and educational sessions enhances our understanding of emerging technologies and best practices to address challenges within the water and wastewater sector. By staying informed of industry developments, GWA can strengthen its commitment to providing safe, reliable, and efficient water and wastewater services while ensuring that the agency's infrastructure incorporates cost-effective, and proven technologies and methodologies identified through conferences such as WEFTEC.

GUAM WATERWORKS AUTHORITY

Travel Report

Tristan Castro 10/21/26

Traveler Signature and Date

GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Ryan-Cole C. Duenas	Title/Unit Position: Plant Operator 2
Travel Date Begin: 09-26-2026	Travel Date End: 10-03-2026
TA No.: 26-508	Travel Location: New Orleans, Louisiana

Trip Objective:

Please see attached word document

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

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Ryan-Cole C. Duenas 10-05-2026

Traveler Signature and Date

TRIP OBJECTIVE

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Attend WEFTEC 2026 in New Orleans, Louisiana, to participate in technical education, visit the wastewater industry Expo, learn about emerging treatment technologies and operational practices, and network with current and potential GWA vendors, manufacturers, engineers, and industry partners. The objective was to gain practical knowledge that can be applied to wastewater treatment operations, process optimization, equipment maintenance, and future improvements at GWA Northern Treatment Plant.

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The objective of this trip was to attend the annual Water Environment Federation's Technical Exhibition and Conference (WEFTEC) in New Orleans, Louisiana to gain technical knowledge about the wastewater industry and bring that knowledge back to Guam to help improve wastewater operations at my workplace. This conference provided opportunities to learn about new wastewater treatment technologies, equipment, and operational practices while connecting with vendors, manufacturers, engineers, and other industry professionals. The knowledge and experience gained from WEFTEC can be applied to improve treatment processes, equipment maintenance, daily operations, and future projects at the Guam Waterworks Authority (GWA).

HIGHLIGHTS

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Technical Education: WEFTEC provided valuable technical training directly related to wastewater treatment operations. Sessions attended included:

- **Optimizing Anaerobic Digestion Operations –** Improved understanding of digester process optimization, monitoring, solids management, process stability, and methods to improve digestion performance. This knowledge is directly applicable to GWA's ATAD/SNDR processes.

- **Planning, Selecting, and Optimizing Dewatering Systems –** Increased knowledge of factors affecting sludge dewatering, equipment selection, process optimization, and solids handling. This is applicable to GWA's centrifuge and sludge management operations.

- **AI and the Future of the Utilities Workforce –** Learned about the growing role of artificial intelligence, automation, data analysis, and digital tools in utility operations and how these technologies can support operators, asset management, and operational decision-making.

- **Microbiology 101 –** Strengthened understanding of microorganisms involved in biological wastewater treatment and how microbiology affects treatment performance, process control, and troubleshooting.

Expo and Networking: The WEFTEC Expo provided an opportunity to evaluate current wastewater treatment equipment, instrumentation, automation, process-control systems,

pumps, dewatering equipment, sludge-handling technology, and other industry solutions. Networking with current GWA vendors and potential future vendors/industry partners was especially valuable. These relationships provide GWA with additional resources for technical support, equipment evaluation, operator training, troubleshooting, and future projects.

ATAD SYSTEM – COLLABORATIVE ACTION PLAN

A significant outcome of the trip was a meeting involving GWA operators, GWA engineers, and the thermal process team to discuss a plan of attack for getting the ATAD system back up and running properly. The discussion focused on identifying the equipment and process conditions that need to be evaluated before the thermal process team proceeds with a site visit.

An ATAD equipment assessment checklist was provided to GWA to systematically evaluate the major equipment and supporting systems. The completed assessment will give the thermal process team information needed to prepare for a site visit and provide targeted assistance with troubleshooting and restoration of the ATAD process.

Immediate actions identified include:

• Complete the ATAD equipment assessment checklist and document equipment condition, operational issues, deficiencies, and known process concerns.

• Provide the completed assessment information to the thermal process team.

• Coordinate a site visit with the thermal process team to assist GWA with troubleshooting and returning the ATAD system to proper operation.

• Use the assessment and site-visit findings to establish corrective actions, priorities, and a path toward reliable ATAD operation.

Importance to GWA: Restoring and properly operating the ATAD system would provide GWA with a valuable treatment process for sludge management and overall plant operations. The technical knowledge and industry contacts gained through WEFTEC can help GWA operators and engineers work more effectively with specialists and vendors to maximize the capability of existing treatment infrastructure.

Technical Education:

Attending WEFTEC provided valuable technical education related to wastewater treatment operations. The sessions I partook in provided practical information that can be applied to GWA's current operations, maintenance needs, and future improvements.

Key Sessions included:

- Optimizing Anaerobic Digestion Operations – This session provided a better understanding of digester operations, process monitoring, solids management, process stability, and methods for improving digestion performance. The information gained can support GWA's efforts to improve sludge treatment and optimize related treatment processes.
- Planning, Selecting, and Optimizing Dewatering Systems – This session provided information on factors that affect sludge dewatering, equipment selection, process optimization, and solids handling. This knowledge can be applied to GWA's centrifuge operations and overall sludge management practices.
- AI and the Future of the Utilities Workforce – This session provided insight into how artificial intelligence, automation, data analysis, and other digital tools are being used within the utility industry. These technologies have the potential to support plant operations, asset management, equipment monitoring, troubleshooting, and operational decision-making.
- Microbiology 101 – This session strengthened my understanding of the microorganisms involved in biological wastewater treatment and their role in treatment performance. This knowledge can help operators better understand process conditions, identify potential treatment issues, and improve process control and troubleshooting.

Expo and Networking:

The WEFTEC Expo provided an opportunity to explore wastewater treatment equipment, instrumentation, automation and process-control systems, pumps, dewatering equipment, sludge-handling technologies, and other industry solutions. In addition, it provided valuable opportunities to meet with current GWA vendors and establish connections with potential vendors, manufacturers, engineers, and other industry professionals. These connections can provide additional resources for technical support, equipment evaluation, troubleshooting, operator training, and future GWA projects.

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ATAD SYSTEM – COLLABORATIVE ACTION PLAN

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One of the most important outcomes of attending this year's WEFTEC was the opportunity for GWA operators and engineers to meet directly with the thermal process team to discuss the current condition of the ATAD system and develop a plan for moving toward restoring proper operation. The discussion focused on identifying equipment, operational issues, and process conditions that should be evaluated before the thermal process team conducts a site visit. An ATAD equipment assessment checklist was provided to GWA to help evaluate the condition of the system's major equipment and supporting components. Completing this assessment will provide the thermal process team with important information about the current condition of the system and allow them to better prepare for a site visit, troubleshooting, and recommended corrective actions.

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Immediate Actions Identified include:

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- Complete the ATAD equipment assessment checklist and document equipment conditions, operational issues, deficiencies, and known process concerns.
- Provide the completed assessment and supporting information to the thermal process team for review.
- Coordinate a site visit with the thermal process team to further evaluate the system, assist with troubleshooting, and identify the steps needed to restore proper operation.
- Use the results of the assessment and site visit to identify corrective actions, establish priorities, and develop a clear path toward reliable ATAD operation.

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Importance to GWA:

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Restoring the ATAD system would allow GWA to better utilize its existing treatment infrastructure and strengthen its sludge management operations. The technical knowledge, resources, and professional connections gained through attending this conference can also help GWA operators and engineers work more effectively with industry specialists, manufacturers, and vendors when troubleshooting equipment, improving treatment processes, and planning future operational improvements.

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WEFTEC OPERATIONS CHALLENGE – TEAM DEVELOPMENT

WEFTEC also provided an opportunity to learn about the Operations Challenge. Sending a GWA team to participate would provide hands-on professional development while strengthening teamwork, employee motivation, morale, and pride in the wastewater profession.

Participation would allow GWA operators to demonstrate practical skills, learn from other utility professionals, develop stronger teamwork, and represent GWA at the national level. Supporting an Operations Challenge team could also encourage employees to continue developing their technical knowledge, build confidence, and take greater pride in their role as wastewater professionals. This would be a positive investment in both workforce development and employee morale.

The Operations Challenge is an opportunity for wastewater professionals to demonstrate their technical knowledge, practical skills, teamwork, and problem-solving abilities. During the conference, I learned more about the Operations Challenge and how GWA could benefit from developing a team to participate in a future competition. Participation would provide GWA operators with hands-on professional development in areas related to wastewater treatment, maintenance, safety, and plant operations. It would also allow employees to learn from other wastewater professionals, strengthen teamwork, develop their technical skills, and bring new knowledge and ideas back to GWA. Furthermore, participating in the Operations Challenge would give GWA employees the opportunity to represent both GWA and Guam at the national level. Supporting a team would also promote employee confidence, motivation, teamwork, and professional growth while strengthening GWA's workforce through continued training and development.

HOW GWA CAN BENEFIT FROM THE TRIP

The knowledge, contacts, and resources gained can be shared with GWA operators, engineers, maintenance personnel, and management. The information can support ATAD restoration, anaerobic digestion optimization, centrifuge/dewatering performance, biological treatment, equipment reliability, troubleshooting, operator training, and future technology planning. The relationships established with vendors, manufacturers, engineers, consultants, and other utility professionals can provide GWA with additional technical resources when operational issues arise or when the Authority evaluates equipment, upgrades, training, and future projects.

The knowledge, resources, and professional contacts gained from this trip can be shared with GWA operators, engineers, maintenance personnel, and management. The information learned at WEFTEC can help improve areas such as ATAD restoration, anaerobic digestion, centrifuge and dewatering performance, biological treatment, equipment reliability, troubleshooting, and operator training. It can also help GWA evaluate new technologies, equipment, upgrades, and future projects. In addition, the connections made with vendors, manufacturers, engineers, consultants, and other utility professionals can provide GWA with valuable technical support and resources when addressing operational issues or planning future improvements.

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HOW THE TRIP RELATES TO AGENCY RESPONSIBILITY

The training and networking opportunities directly support GWA's responsibility to operate and maintain wastewater treatment facilities safely, efficiently, reliably, and effectively. The experience provided practical knowledge applicable to daily plant operations while establishing industry connections that can assist GWA with current operational challenges and future improvements.

Attending WEFTEC directly supports GWA's responsibility to operate and maintain its wastewater treatment facilities safely, efficiently, and reliably. The technical sessions, exhibits, and networking opportunities at the conference provided valuable knowledge about wastewater treatment technologies, equipment, maintenance, and operational practices that can be applied to GWA's daily operations. The conference also provided opportunities to connect with industry professionals and vendors who can serve as technical resources as GWA addresses operational challenges and plans for future improvements.

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OVERALL TRIP OUTCOME

WEFTEC 2026 provided more than classroom training. It created opportunities for GWA personnel to learn current industry practices, evaluate technologies, establish relationships with current and future partners and vendors, and develop a practical path toward restoring the ATAD system. It also identified opportunities to strengthen operator development, teamwork, motivation, and morale through participation in the WEFTEC Operations Challenge. The knowledge and relationships gained can contribute to continuous improvement and more informed operational and maintenance decisions at GWA Northern District Treatment Plant.

Attending this year's WEFTEC provided valuable learning and professional development opportunities beyond traditional classroom training. The conference allowed GWA personnel to learn about current wastewater industry practices, explore new technologies and equipment, and build relationships with vendors, manufacturers, engineers, and other industry professionals. In addition, the information and resources gained provided valuable guidance that can support GWA's efforts to restore the ATAD system and address other operational and maintenance needs. Moreover, this trip highlighted opportunities to further develop GWA employees through future participation in the WEFTEC Operations Challenge, which could strengthen technical skills, teamwork, motivation, and professional growth. Overall, the knowledge, resources, and professional connections gained from attending this year's WEFTEC can help GWA improve operations, maintenance, and future planning at the Northern District Treatment Plant.

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GUAM WATERWORKS AUTHORITY

Travel Report

Employee Name: Rafael Manuel Rios Viches	Title/Unit Position: Utility Trades Helper/ Hagåtña Wastewater Treatment
Travel Date Begin: 09/26/226	Travel Date End: 10/01/26
TA No.: 26-509	Travel Location: New Orleans,LA

Trip Objective: WEFTECH Conference and Technical Exhibits 2026

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

I want say big thank you to the ones involved with getting a Utility Trades Helper to experience this trip and take a big step into learning more of what is out there involving my field of work. If you don't already know I am currently working with our agency's Wastewater Treatment division, currently posted in Hagåtña. As you would already know the conditions of our plant and equipment, you too would probably be amazed to see things that actually work, how they should or many different equipment that would just be a benefit for many of our plants here on this island. I can honestly say from my perspective it's a lot but I will narrow down some of the takeaways from the trip itself other than the flight. First and foremost, the exhibits hall thoughtfully arranged and was simple to get around. A variety of industrial equipment, safety solutions (PPE's, occupational safety products), technological solutions (Advanced electronics, Digital systems). Many of which would be confusing for any first-year experience because of a really big knowledge gap, meaning that prep going into this trip should be highly recommended, what I mean by this is just knowing your plant or area fully, understanding the many different pump types, Motors, their sizes, how much horse power they produce, how much gallons/minute these pumps are running at, Feed rates for chemicals, Gallons/Day your plant can handle, power consumption, cost for chemicals and many other things to keep in mind. I will not try to bore you too much with that kind of stuff but knowing these things is a first BIG lesson if you really want to be "on par" with this community. Secondly, Great work from the PHD's and Operators involved in this to help counsel and teach at these seminars that were there. Although I will say this, they are at a very extremely different pace from a knowledge standpoint from what I was used to, I tried my best to understand. One class we had a discussion of optimizing anaerobic digestion operations I'll "try" to keep it short and simple, The Central Regional Wastewater system operated by Trinity River Authority of Texas is a Advanced secondary Treatment facility utilizing a low dissolved oxygen A20 process alongside biological phosphorus removal (just means that they run their Aeration tank with very little oxygen, which is just a tank of sludge that has something like pipes that blow air in it to keep it from smelling or just becoming poor quality biosolids, as for the biological Phosphorus removal they just use a special bacteria to pull phosphorus out the water). Moving on they are especially big on using mesophilic anaerobic digestion (process that breaks down organic matter in the absence of oxygen at a moderate temperature) Thermal Hydrolysis pretreatment (using heat and pressure to condition sludge or waste before digesting) but they noticed an upset in their system. Coming down to it they got gas readings of their digesters, they noticed their methane production was not doing well, so they did readings ever four hours for their shift work and noticed the H2S levels (hydrogen sulfide Gas, not good for wastewater treatment plants) was rising. So, they ended up testing their solids concentrations VFA's (Volatile fatty acids) and found those concentrations were decreasing as well, a bad outlook and a solution needed to be made. So, they also tried shift sludge around to decrease severity of the gas build up, didn't work, they moved on to cleaning their H2S scrubber system, although they did have high amounts of sulfur the process did not get better. They tried running a reseeding effort and that failed as well, their main conclusion to all this was from a maintenance to their system, meaning overall they took necessary steps to find solutions but sometimes in this field these kinds of things will never have an answer. Having to try to understand their whole case study on this I was lost, but they eventually broke it down at the end. Only thing I couldn't comprehend was their lingo and boy are they great

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GUAM WATERWORKS AUTHORITY

Travel Report

speakers. I'll Hop on another topic hopefully short, another class that was utilizing Artificial intelligence (AI) to trouble shoot, validate reports, make recommendations and overall, just run their agencies. Please keep in mind, most of these seminars have four different presenters that are in same subject that is given but just present from many different places around the world. One subject with Wastewater treatment plants in particular is overdosing and underdosing and this treatment plant out of Texas as well utilized AI to gauge whether or not it would be underdosing or overdosing on polymer for their Belt filter press. This machine is just another way of drying sludge to minimize constant Hauling or trucking to a nearby landfill. Which would lower costs especially in treatment plants, anyways they would have this tablet set up among their operators, and if something is up or a piece of machinery is down, they can take a picture and this tablet will pull up a listing of possible problems. Now according to both operator and Tech this system that was made for them had somewhat of a 89% troubleshoot success rate. It is linked to their work accounts and they all can access details and reports of every equipment on site, similar to a cloud. Other than that, it is also used as a very good reference tool out on the field for them, it has its cons such as 11% fail rate, cost to maintain and reprogram these devices if issues occur, and to me I would say push a lot of operators out of the mindset of being fully competent of learning. I will say this does save a lot of time, especially with equipment failure and having to constantly probe whether or not its mechanical or electrical most of the time, or man, are we using too much chemicals than we need to? Its great and is having a positive progress moving forward. I've probably said a bunch but I will say this, it was just a small part of a lot of the many things I've learned on this trip. Microbiology In wastewater treatment overall is a big topic, I was amazed with how the many different techniques and procedures that were involved that we have not adopted or have just moved away from in recent years. One thing that they are trying to do more is to incorporate RNA and DNA testing for certain organisms present in wastewater. These tests will reveal more of their traits, whether they are present or not and even if they are human or animal. Main problems are whether they are positively there or dead, unfortunately like our usual tests we can find that out. Another issue seems to be is running many different tests, and targeting the organism in general. When these tests are done it is not an isolated test. When they said it shows everything, meaning everything especially organisms that were there prior. So, this test is still being worked on but has a great benefit especially because discharges in treatment plants globally are into areas with marine wildlife and animals. Great trip although I've said it in the beginning, it was a way different pace from what I thought I would know and to be honest the agency (GWA) did great with getting us involved with trips like this. There is only one way to learn which is constant exposure and failure and believe me without those traits you will never grow or learn without it. We all must take a step back and address the elephant in the room and just know, no matter how many years under our belts or who we know we are not a big fish; we are simply just a speck of what all these things are if we are to think of our community and our islands future. GWA's main benefit from this is not simply just a growth within operations or a way of networking with many different vendors for gain but it helps future leaders, supervisors and trainees understand a great importance of the utility's workforce from a global standpoint. In order to keep this island maintained and our wildlife safe, this job creates that opportunity. We don't just serve the public, we serving a whole system of life and that life begins with safe drinking water. Another thing just as a person view, I can say being sent on this trip and responsibility in regards to the agency is to select many qualified individuals for this. This goes against a lot of what I was saying but as stated, individuals sent are pretty much people you want to have an effect within their perspective areas not just people going to go. We want individuals that will be optimistic in a growth to their positions, other than those around for a paycheck, I feel our group that went out was one of the best guys I could be around. I was formerly molded by Ryan Duenas in terms of operations, his knowledge and drive for his age is great not many can say they are at where he is. He is way beyond what many to believe an ordinary worker. Jason Tudela on the other hand to a great manager on the collections side, very well inverse with comprehending how systems work, importance of material and great leadership. He has many accomplishments in the agency for sure, from the floor to where he is at now and for his age is remarkable, I know in the near future he will play an important role for this agency's growth. Lastly, Jake Quinata a great leader who shall soon go on to become a supervisor, he is another example of failure and growth constantly trying his best at all things to pull out success with his EPA certifications.

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His drive replicating that of Jason has overall let me see the great leadership quality's these men have, being similarly knowledgeable with the operations in his district, the many things to improve on, how to carry oneself professionally. I'd say I was paired up with a great pair of people to learn from, and that's one of the main responsibilities as well. Anyone can go to a work conference but can they learn, and take pride in what they do to move forward for a future of a cause. Thank you all who were involved on helping me go along with this trip, originally, I didn't want to go and I see now what lies ahead and will do my best to climb the ladder as my peers once did.

10/14/26

Traveler Signature and Date

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Travel Report

Employee Name: JAKE QUINATA	Title/Unit Position: W/S MAINTENANCE WORKER LEADER
Travel Date Begin: SEP 26, 2026	Travel Date End: OCT 2,2026
TA No.: TA-26-501	Travel Location: NEW ORLEANS

Trip Objective: The purpose of this trip was to attend the WEFTEC (Water Environment Federation Technical Exhibition) in New Orleans to enhance professional knowledge of wastewater practices.

HIGHLIGHTS: (Minimum data contents: How was objective met; What was learned; How can GWA benefit from trip; How trip relates to Agency's responsibility. You may use an extra sheet if necessary.)

During the conference, I attended technical sessions, workshops, and vendor exhibits focused on wastewater treatment, asset management, utility operations. Discussions with industry professionals and equipment manufactures which provided insight innovative technologies and operational strategies currently being implanted by utilities throughout the United States.

Attendance at WEFTEC will directly benefit the agency by providing access to the latest advancements, technologies, regulatory updates and best practices in the water and wastewater industry. The technical sessions, workshops and vendor demonstrations can be implied to improve operational efficiency, infrastructure, reliability, environmental compliance and cost -effective management of agency resources.

The participation in WEFTEC supports the agency responsibility to protect public health, safeguard water quality, maintain regulatory compliance and provide reliable water and wastewater services to the community. The conference offers opportunities to learn innovative approaches to asset management. treatment process, workforce development, emergency preparedness and sustainability that align with the agency's mission and strategic objectives

The knowledge and insights gained during the conference will be shared with agency personnel. Future planning of operations, decision making processes which will enhance the service delivery and support for continuous improvement.

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10/12/2026

Traveler Signature and Date