

# HAWAI'I WATER WORKS ASSOCIATION CONFERENCE

Lohala Const. Hawaii Island October 25-27, 2023







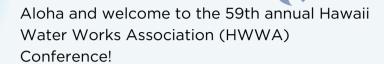
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# WELCOME MESSAGE FROM 2023 HWWA PRESIDENT

Keith K. Okamoto, P.E.

2023 HWWA President





Last held on O'ahu in 2019, this year will mark the much anticipated in-person return of our annual conference since the COVID-19 pandemic.

We are thrilled that the beautiful Mauna Lani Auberge Resort on the Kohala Coast of

Hawai'i Island are our hosts, as we connect with fellow drinking water professionals, hear from various speakers, learn from technical presentations, and enjoy the overdue camaraderie of water-minded friends and colleagues.

Featuring a well-rounded program, a private and educational huaka'i, a golf tournament at the world-class Mauna Lani South Course, as well as exceptional resort and accommodations, this conference is sure to be a memorable event.

This year's chosen conference theme is "Mālama I Ka Wai" or "Take Care of the Water." Let this theme help serve as a reminder for us all and our kuleana (responsibility) to care for our water for our future generations.

The Hawai'i Water Works Association, in coordination with the Hawai'i County Department of Water Supply, humbly welcomes you and hope you all have a wonderful experience.

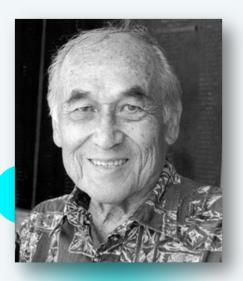
Mahalo!

Keith K. Okamoto. P.E.

HWWA 2023 President

# WILLIAM Y. THOMPSON, P.E. 'FATHER OF HWWA'

William "Bill" Yoshito Thompson had water in his veins. Sometimes, that water boiled. Other times, it was ice water. Like when the then-20-year-old ignored the advice of fellow soldiers from the famed 442nd Regimental Combat Team and retrieved the wounded from a battlefield in Italy. The heroics earned "Wild Bill," one of monikers he used for himself, the first Bronze Star of his anti-tank platoon.



"I think this example best illustrates the character of Bill Thompson," his longtime friend, colleague, and successor as DWS Manager-Chief Engineer, William Sewake, wrote in a 1993 letter asking the Hawai'i Water Works Association to create an award in his name. Bill was the "father of HWWA" and the "the real 'spark plug' of this association," Sewake added. Born in Hilo, William "Bill" Thompson joined the County of Hawai'i Board of Water Supply, as it was known then, in 1950 after graduating from the University of Hawai'i with a degree in civil engineering. He became the Department's second-ever Manager-Chief Engineer in 1960. During his eight-year tenure, Bill secured State funding to create more public water systems. The switch to concrete reservoirs, ductile iron pipes, and copper laterals were among the new construction standards he implemented.

Bill started the HWWA in 1961 by organizing the first statewide Water Officials Conference in Kona. That meeting gave birth to the Hawai'i Water Works Association, which provides "an opportunity for those interested in Hawai'i's water utilities to meet, seek solutions to problems, and work toward "the general betterment of the water works industry." So, it's in William Y. Thompson's honor that we recognize an outstanding water industry individual who demonstrates dedication of service, superior work performance, and love for the people of Hawai'i.

### TECHNICAL PROGRAM Wednesday, October 25, 2023

<u>Time</u>	<u>Description &amp; Presenter</u>	<u>Location</u>
8:00 AM	Registration Opens (8:00am - 4:30pm daily)	Main Ballroom Lobby
9:00 AM	Opening Oli and Protocol Kanani Aton, Kapuahi LLC	Main Ballroom
9:30 AM	<b>Hawaiʻi County Administration's Vision and Goals</b> Mitch D. Roth, Hawaii County Mayor	Main Ballroom
10:00 AM	MORNING BREAK	Main Ballroom Lobby
10:30 AM	Department of Land and Natural Resources - Commission on Water Resource Management Dawn Chang, DLNR	Main Ballroom
11:00 AM	The Ulupono Initiative's Fresh Water Resources Sector Jeremy Kimura, Ulupono Initiatives	Main Ballroom
11:30 AM	Asset Management Implementation Road Michael Flores, HDR	Main Ballroom
12:00 PM	LUNCH BREAK	Canoe House Restaurant

<u>Time</u>	<u>Description &amp; Presenter</u>	<u>Location</u>
1:30 PM	Cultural Aspect of Ka Wai A Kane & Mālama I Ka Wai Kanani Aton, Kapuahi LLC	Main Ballroom
	Chlorine & Ammonia Gas Conversion to On-Site Generation Ethan Brooke, Aqueous-Vet	Ballroom 4
2:00 PM	One Water Honolulu for Climate Resilience (Part 1) Barry Usagawa, Honolulu Board of Water Supply Christin Reyn <mark>ol</mark> ds, One Water	Main Ballroom
	Contaminants of Emerging Concern: Preparing for 21st Century Water Quality Challenges  Damon Roth, Brown and Caldwell	Ballroom 4
2:30 PM	One Water Honolulu for Climate Resilience (Part 2) Barry Usagawa, Honolulu Board of Water Supply Christin Reynolds, One Water	Main Ballroom
	<b>Lālāmilo 10-Million-Gallon</b> <b>Water Reservoir Project</b> Ken Kawahara, Akinaka & Associates, Inc., Matt Ford, DN Tanks, & DWS, County of Hawai'i	Ballroom 4

# TECHNICAL PROGRAM - CONTINUED Wednesday, October 25, 2023

<u>Time</u>	<u>Description &amp; Presenter</u>	<u>Location</u>
3:00 PM	AFTERNOON BREAK	Main Ballroom Lobby
3:30 PM	Using Data to Improve Utility Bill Payment Rates Glenn Barnes, Water Finance Assistance	Main Ballroom
	<b>Ductile Iron Pipe Research Association (DIPRA)</b> Jeffery Butters, DIPRA	Ballroom 4
4:00 PM	Hydraulic Modeling: A Discussion of Benefits, Best Practices and Lessons Learned from Recent Hawaii Projects Stan Kowalczyk, Brown & Caldwell	Main Ballroom
	<b>Growing Hawaii's Engineering Talent Pipeline</b> Nimr Tamimi, Engineering Partners Brennon Morioka, University of Hawaii-Manoa	Ballroom 4
4:30 PM	<b>Hawaii Mesonet</b> Dylan Giardina, University of Hawaiʻi Water Resources Research Center	Main Ballroom
	Water Loss Management - Using Technology to Supercharge Results Dewayne Self, Pacific Pipe/Core & Main	Ballroom 4
5:00 PM	MEET & GREET	TBD

# SPEAKER BIOS Wednesday, October 25, 2023



# Dawn Chang, Department of Land and Natural Resources

#### **Commission on Water Resource Management**

In Hawai'i, water is a public trust and the State the trustee. The Commission on Water Resource Management has a duty and obligation to protect Hawai'i's water resources while ensuring reasonable and beneficial uses. The Commission's authorities rest under Article XI, Section 7 of Hawai'i's Constitution, Chapter 174C, Hawai'i Revised Statutes, and Hawai'i Case Law. Water conflicts have existed throughout Hawai'i's history and water conflicts continue to exist today. The question is how to balance protection of water for public trust purposes with reasonable and beneficial uses, and how does the Commission fairly adjudicate these competing needs for water? This presentation will discuss some challenges and issues the Commission faces while fulfilling its important role, focusing on the Ka Pa'akai analytical framework, expectations of the permit applicant – including community outreach, and what are feasible actions that can be employed to ensure that Hawaiian traditional and customary practices are reasonably protected.

#### Jeremy Kimura, Ulupono Initiatives

#### The Ulupono Initiative's Fresh Water Resources Sector

A mission-driven venture of The Omidyar Group, Ulupono Initiative was founded in 2009 and strives to improve the quality of life for the people of Hawai'i by working toward sustainable solutions that support and promote locally produced food, renewable energy, clean transportation choices, and better management of fresh water resources. This presentation will provide a brief overview of the Ulupono Initiative and its focus on fresh water through its newly established fresh water resources sector.

#### Jeremy Kimura

Jeremy Kimura is the director of the fresh water sector and is responsible for developing strategy and leading implementation of Ulupono Initiative's efforts focused on fresh water resource management and its impact on the people of Hawaii. His depth of experience in the sector will enable a holistic approach to complex water-centered issues. Jeremy joined the Ulupono team in March 2023 after a 16-year career in state government. In his previous role at the Hawaii Commission on Water Resource Management, Jeremy had the good fortune to work with stakeholders from across the water sector on the Hawaii Water Plan.





#### Michael Flores, HDR

#### **Asset Management Implementation Roadmap**

Implementing improvement to an asset management program can involve many elements of an organization including multiple business units, processes, data, and information systems. This presentation will focus on how to assess your organizations asset management program implementation to identify the improvements that will support achieving your goals. You will learn how to prioritize and organize opportunities for improvements and how to develop a multi-year roadmap to move your program forward

#### **Michael Flores**

Michael has 29 years of experience in the water and wastewater field with a primary focus on infrastructure management, operations, maintenance, and capital program planning. He is the Asset Management Practice Group Chair for HDR and is a certified asset management practitioner by the Institute of Asset Management. Michael has managed or served as a senior technical resource on several large and complex projects with agencies such as the City of San Diego, San Francisco Public Utilities Commission, and the City of Los Angeles.

#### Kanani Aton, Kapuahi LLC

#### Cultural Aspect of Ka Wai A Kane and Malama I Ka Wai

#### Kanani Aton

Kanani is an independent community outreach consultant for developers and renewable energy companies. She also teaches Hawaiian culture-based business strategies in corporate environments and manages community-based native Hawaiian leadership development projects for Kamehameha Schools. Prior to her current work, she was an Education and Public Information Specialist for Hawaii County Civil Defense Agency as well as Department of Water Supply for a combined length of over 10 years. She is naturally communicative with small-kine moments of poetic insight. She is ready to share an insightful Hawaiian cultural practitioner perspective coupled with a balanced overview from governmental and private enterprise experience.





#### **Ethan Brooke, Aqueous-Vet**

**Chlorine & Ammonia Gas Conversion to On-Site Generation** 

#### **Ethan Brooke**

Ethan Brooke is an internationally recognized expert on aeration technologies for trihalomethane (THM) removal. His master's thesis on THM aeration was published in the Journal American Water Works Association and resulted in three patents which are held by the University of New Hampshire. Ethan has a background in civil engineering and product management and has worked on a variety of water, wastewater and distribution system infrastructure improvement projects.

#### Barry Usagawa, Honolulu Board of Water Supply

#### One Water Honolulu, a Collaboration Framework for Climate Adaptation

Most climate impacts involve water, too much or too little of it... One Water is an integrated water resource management strategy that considers the water cycle as an integrated system recognizing the interconnectedness of freshwater, stormwater, wastewater, recycled water, and seawater. In 2020, The City and County of Honolulu enacted Ordinance 20-47 to create a One Water climate adaptation policy that will proactively adapt to climate disruption, inform community planning, improve infrastructure resilience and mitigate damages and costs. The One Water Panel convenes directors and divisions of eight City departments to coordinate a unified response to the myriad challenges that face public water infrastructure in the age of climate change. One Water Honolulu provides a platform to share learning and collaborate across City agencies to capture synergies and efficiencies that would not be apparent otherwise. Current projects and initiatives being undertaken by One Water Honolulu include a Federally funded One Water Plan, Collaboration Framework and Roadmap to Climate Resilience. The One Water Honolulu program received the US Water Alliance's US Water Prize for Outstanding Public Sector Organization in 2022.





#### **Barry Usagawa**

Barry Usagawa is the Program Administrator for the Water Resources Division of the Honolulu Board of Water Supply and has worked for 38 years at BWS. Water Resources conducts long-range water resource and capital planning for Oahu to ensure sustainable water resources and dependable water systems for current and future customers. Barry has led the development of Oahu's 8 regional Watershed Management Plans for resource protection and water use and development. Barry is a member of the Hawaii Community Foundation's Freshwater Council which developed the State Freshwater Blueprint for water conservation, reuse and recharge targets to ensure 100 mgd of resilient water by 2030. Barry is co-leading the development of the One Water Honolulu Collaboration for Climate Resilience in coordination with the City's Office of Climate Change, Sustainability and Resiliency. Barry is a licensed professional engineer in Hawaii with a BS in Civil Engineering from the University of Hawaii at Manoa. Water Resources monitors rainfall, groundwater aquifers and streams, protecting the long-term viability of Oahu's water resources.

#### Christin Reynolds, Director One World One Water, LLC

One Water Honolulu, a Collaboration Framework for Climate Adaptation

#### **Christin Reynolds**

One World One Water company founder and owner Christin Reynolds' expertise includes policy, engineering, mapping, and modeling. As a specialist in coastal and water management issues, she has provided/provides support for federal and local governments in Hawai'i and American Samoa. With over two decades of professional experience in Geographic Information Systems, water resources, project management, and engineering, her career spans the public and private sectors. A Rotary ambassadorial scholar, Christin holds a master's degree in engineering and policy analysis from the Technische Universiteit Delft in the Netherlands and Harbin Institute of Technology in Harbin, China. She received her bachelor's degree in civil and environmental engineering from Worcester Polytechnic Institute in Massachusetts.





#### **Damon Roth, Brown and Caldwell**

#### **Contaminants of Concern: Preparing for 21st Century Water Quality Challenges**

In recent years, several contaminants have been at the forefront of the drinking water industry. Focus on certain contaminants, such as lead and PFAS, is driven by recent regulatory actions by the United States Environmental Protection Agency that seek to limit these contaminants to ever lower levels in drinking water. Other water quality concerns, such contaminants resulting from wildfire events, are driven by changes in climate and development patterns. This presentation will focus on these contaminants of concern and will discuss actions water systems can take in response.

#### **Damon Roth**

Over the past 20+ years, Damon has managed or served as project engineer on treatment studies, designs, and construcon projects for drinking water, wastewater, and stormwater treatment projects through the United States. In addion to engineering design services, he specializes in water treatment opomizaon evaluaons, treatment feasibility studies, and corrosion control treatment.

# Ken Kawahara, Akinaka & Associates, Inc. Matt Ford, DN Tanks

#### Department of Water Supply 10 Million gallon storage tank project

Once constructed, the Lalamilo 10 million gallon (mg) storage tank will provide Hawaii DWS with a significant increase in water storage capacity so it can maximize the use of windgenerated electricity from the adjacent Lalamilo Wind Farm that power DWS' Lwells in the Lalamilo water system.





#### **Glenn Barnes, Water Finance Assistance**

#### **Using Data to Improve Utility Bill Payment Rates**

It is in every utility's interest to have as many customers as possible pay their bills on time and in full. This presentation tells the story of Opelika Utilities, a water utility serving 50,000 people in Alabama that, based on demographics, should not have significant affordability challenges but still saw a relatively high rate of late payments. Using innovative data analysis, the utility discovered several likely reasons customers were paying late—legitimate affordability challenges, forgetting to pay their bill or intentional non-payment. With this information, the utility designed appropriate programs to boost on-time payments. Opelika Utilities is in the process of instituting a data system that will allow them to track non-payments in real time. With the right data, our utilities can replicate this methodology and improve on-time bill payments.

#### **Glenn Barnes**

Glenn Barnes is the director of Water Finance Assistance, a training and technical assistance organization dedicated to building the financial and managerial skills of drinking water utility employees. He specializes in rate setting, affordability, workforce planning, accessing infrastructure funding, water loss and conservation, and utility resilience. Water Finance Assistance grounds its work in innovative data analysis, and Glenn is a great lover of Excel. He has worked for more than 15 years with utilities across the country including several utilities in Hawai'i.

#### **Jeffery Butters, DIPRA**

**Ductile Iron Pipe Research Association (DIPRA)** 

#### Jeffery Butters

Member of AWWA, the American Society of Civil Engineers (ASCE), and the National Association of Corrosion Engineers (NACE). He is a NACE Certified CP1 Cathodic Protection technician. He received his Bachelor of Science degree in Environmental Engineering from Penn State University. Jeffrey's prior experience includes more than eight years in the U.S. Air Force. He also has worked for the Pennsylvania Department of Environmental Protection, Golden State Water Company in California, and as an emergency medical technician.





#### Stan Kowalczyk, Brown and Caldwell

# Hydraulic Modeling: A Discussion of Benefits, Best Practices and Lessons Learned from Recent Hawaii Projects

Hydraulic models provide water utilities with powerful analysis tools to support planning, project design, and system operations. This presentation will focus on hydraulic model development and calibration best practices and lessons learned from projects recently completed in Hawaii. The presentation will also touch on the benefits of developing a hydraulic model and discuss various analysis applications.

#### Stan Kowalczyk

Stan Kowalczyk is a project manager and engineer with Brown and Caldwell, where he has worked for eight years with a focus on hydraulic modeling and master planning projects related to water distributions systems, sewer systems, wastewater treatment plants, and pumping systems. Stan graduated from Portland State University with a Bachelor's degree in Civil Engineering and is a licensed professional engineer in Hawaii.

#### Nimr Tamimi, Engineering Partners, Inc. Dr. Brennon Morioka, University of Hawaii - Manoa

#### **Growing Hawaii's Engineering Talent Pipeline**

#### **Nimr Tamimi**

Mr. Tamimi is one of the co-founders and Principals of Engineering Partners, Inc. He has practiced extensively as a Mechanical Engineer and Project Manager for over three decades. Throughout his extensive career, many of his designs specialties have included work for: HVAC, energy analysis, feasibility studies, domestic plumbing, air conditioning, medical gas systems, fire protection, LEED certification, solar water heating, climate control systems, wastewater, water treatment, water pumping, industrial process, deep well systems and wastewater pump systems.

In addition to being a successful business owner and expert in the field of mechanical engineering, Mr. Tamimi has also served as the President of ACECH, and currently Chairs the organizations Workforce Development Committee.

# SPEAKER BIOS Wednesday, October 25, 2023



#### Dr. Brennon Morioka

Dr. Brennon Morioka is currently the Dean of the College of Engineering at the University of Hawai'i at Mānoa. The College educates and prepares nearly 1,500 students to face real world challenges in the areas of mechanical, electrical, civil, environmental, construction, computer, biomedical, aerospace engineering and space science. Students of the College work with over 60 faculty to do innovative research in all of these engineering fields.

Dr. Morioka is a licensed civil engineer in Hawai'i and California. He has served in multiple executive positions in Hawai'i. He was the General Manager for Electrification of Transportation at Hawaiian Electric Company (HECO), the former Director for the State of Hawai'i Department of Transportation (HDOT), and the Deputy Executive Director for the Honolulu Authority for Rapid Transportation (HART). He has served as Vice President and Area Manager for CH2M HILL in the Honolulu Office and the Executive Vice President of Shioi Construction. All of these positions have provided him with extensive experiences in both the public and private sectors in the engineering and business world. Dr. Morioka received his Bachelor's and Master's of Science degrees in Civil Engineering from the University of California at Berkeley, and completed his doctoral studies here at the University of Hawai'i at Mānoa.

#### Dylan Giardina, UH Water Resources Research Center

#### Hawaii Mesonet

A comprehensive climate observing system has been identified by the State of Hawai'i as a critical need for the state's researchers, resource managers, and decision makers. Until now, the existing climate observing network in Hawai'i has been fragmented, unmanaged, declining in spatial coverage, and inadequate to meet the needs of researchers, resources managers, and stakeholders who are dependent on the data and the research the data support. To meet this need, we are working to establish the Hawai'i Mesonet as a statewide network of around 100 telemetered weather/climate stations, each with sensors for rainfall, air temperature, relative humidity, wind speed, wind direction, four components of net radiation including solar radiation, soil moisture, soil heat flux and soil temperature, providing 5-minute data transmitted every 15 minutes. With Hawai'i's remote mountainous terrain, extreme climate gradients, and multi-island geography, establishing and maintaining this large network presents numerous challenges. Site selection must consider multiple, often conflicting criteria: filling spatial gaps in the existing networks, and prioritizing groundwater recharge source areas, steep gradient zones, water use areas, and areas with greater sensitivity to climate change.

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#### **Dylan Diardina**

Dylan Giardina is a mechanical engineer with a background in low-cost air quality instrumentation. He is coordinating Mesonet station siting and station deployment for Hawai'i island. As a mechanical engineer, Dylan applies his technical background to developing and implementing data quality control strategies, building data products for the network, and developing network management processes. Dylan is from Hilo, and is passionate about improving climate monitoring and climate data availability for Hawai'i.

#### **Dewayne Self, Pacific Pipe / Core & Main**

#### **Water Loss Management Using Technology to Supercharge Results**

The purpose of this presentation is to explore different perspectives on Water Loss and look at various technologies to help locate and mitigate loss. By looking at unaccounted for water from new perspectives the utility may decide to alter where they focus the water loss management efforts and approach taken. We will also explore a broad overview of how a wide range of technologies can be utilized to track and address non-revenue water. As consumer trends change and low flow appliances proliferate, managing water loss and measurement are evolving with technology offering a wide range of responses and opportunities for utilities.

#### **Dewayne Self**

Dewayne has worked in the water industry for the last 18 years. During this time, he has worked with customers to develop metering and technology projects ranging in size from 500-meter utilities to 200,000-meter utilities, utilizing a range of technologies and project approaches. In his current position as a Smart Utility initiative manager at Core and Main, Dewayne works with a team of employees that support customers in 7 US states as well as the international branch of Core and Main. With the addition of Pacific Pipe to the Core & Main family of companies, Dewayne is excited to team with our Pacific Pipe customers in Hawaii and to develop projects and solutions. Dewayne graduated from the University of Arkansas in 2001 with a degree in Business Finance. Over his life he has held various jobs in several industries including agriculture, construction, oil & gas distribution and served 5 years in the US Army providing tactical voice, data, and imagery communications utilizing both satellite and traditional Radio frequency technologies. Dewayne currently resides in Arkansas with his wife of 29 years and son.

# TECHNICAL PROGRAM Thursday, October 26, 2023

<u>Time</u>	<u>Description &amp; Presenter</u>	<u>Location</u>
8:00 AM	Registration Opens (8:00am - 4:30pm daily)	Main Ballroom Lobby
9:00 AM	Everything, Everywhere, All at Once (in the Regulated Drinking Water World) Joan Corrigan and Zhaohui Wang, Department of Health, Safe Drinking Water Branch	Main Ballroom
9:30 AM	Hawaiian Electric's Climate Adaptation Transmission & Distribution Resilience Program Colton Ching, Hawaiian Electric	Main Ballroom
10:00 AM	MORNING BREAK	Main Ballroom Lobby
10:30 AM	<b>Department of Hawaiian Home Lands (DHHL)</b> Kali Watson, DHHL	Main Ballroom
11:00 AM	PFAS Emerging No More: A Quick Start Guide for PFAS Compliance Chance Lauderdale, HDR	Main Ballroom
12:00 PM	LUNCH BREAK	CanoeHouse Restaurant

<u>Time</u>	<u>Description &amp; Presenter</u>	<u>Location</u>
	Kohala Watershed Partnership – Projects & Updates Mahina Patterson, Kohala Watershed Partnership	Main Ballroom
1:30 PM	A Small System's Approach to Developing and Maintaining a Service Line Inventory Joy Gannon, Rural Community Assistance Corporation Mark Prescott, Hawaiian Beaches Water System	Ballroom 4
2:00 PM	There's an App for that! An Innovative Public- Private-Philanthropic Approach to Community- Based Rainwater Management Lauren Roth Venu, Roth Ecological	Main Ballroom
	Maui Dept. of Water Supply - Greywater Systems Robert DeRobles, Maui Dept. of Water Supply Jim Mothersbaugh, Water Tectonics	Ballroom 4
2:30 PM	Maui County Lead & Copper Rule Revision Update and Compliance Roadmap Christopher Kim, Maui Dept. of Water Supply, Troy Ching, Tyler Smith, HDR	Main Ballroom
	<b>DWS Asset Management</b> Vincent Yee, NexGen	Ballroom 4

#### **TECHNICAL PROGRAM - CONTINUED**

Thursday, October 26, 2023

<u>Time</u>	<u>Description &amp; Presenter</u>	Location
3:00 PM	AFTERNOON BREAK	Main Ballroom Lobby
3:30 PM	<b>Mahinahina Disinfection Project</b> Cari Ishida, Mike Miyahira, Carollo Engineers Maui Department of Water Supply	Main Ballroom
	Electrical Safety in the 21st Century Clay Ozaki-Train, Brown and Caldwell	Ballroom 4
	Panel Discussion for Future CIPs Costs County Water Departments	Main Ballroom
4:00 PM	Benefits of Deploying Pressure Monitoring Devices in your Water System Colin Reardon, Clow Valve	Ballroom 4
4:30 PM	Improving Employee Retention Glenn Barnes, Water Finance Assistance	Main Ballroom
	Using a Carbon-based Treatment Approach for Advancing Water Treatment of Emerging Contaminants  Christina Alito, HDR	Ballroom 4
5:30 PM	Surf Shack Lū'au & William Y. Thompson Award Ceremony	Surf Shack Mauna Lani





#### Joan Corrigan & Zhaohui Wang (aka Wang), Department of Health, Safe Drinking Water Branch

#### **Everything, Everywhere, All at Once (in the Regulated Drinking Water World)**

The regulated drinking water community is seeing a lot of changes coming down the pipeline. Some days, it may Feel like all of it is coming from so many directions that it's difficult to track. This presentation will do a rundown of those changes as well as provide a refresher of other things water systems need to know. Topics include:

PFAS, cybersecurity, Consumer Confidence Reporting, Lead Service Line Inventories and Replacement Plans, Emergency Response and Cross Connection Control Plans, system inventory updates, certified labs, potential updates in state lab support, emergency source and well activation requests, first detection requirements, substantial modifications, and the use of certified water haulers.

#### Joan Corrigan

Joan Corrigan has been with the Department of Health, Safe Drinking Water Branch for almost 10 years, starting as the Drinking Water State Revolving Fund engineer, then the Compliance and Enforcement Section supervisor, and since June 2023, she has been filling the role of acting Engineering Section supervisor. She earned her Electrical Engineering degree at the University of Hawaii at Manoa and worked for private consulting companies before finding her place with the State in 2014.

#### **Zhaohui Wang**

Zhaohui Wang (aka Wang) has been the engineer in the Compliance Section at the Safe Drinking Water Branch of the Hawaii Department of Health since 2014. Majority of his work focuses on Revised Total Coliform Rule; Phase II/Phase V chemical monitoring; Radionuclides monitoring; the Consumer Confidence Report; and violations and enforcement. Wang has over 15 years of experience in the fields of environmental engineering and monitoring in the private and public sector. Wang received his B.S. and M.S. in Chemical Engineering from East China University of Science and Technology, in 1995 and 1998, respectively, and his Ph.D. in Chemistry from University of Hawaii at Manoa (UHM) in 2005.





#### **Colton Ching, Hawaiian Electric**

Hawaiian Electric's Climate Adaptation Transmission & Distribution Resilience Program Update on Hawaiian Electric's proposed \$190 million Climate Adaption Transmission and Distribution Resilience Program. The U.S. Department of Energy has approved \$95 million in federal funds to help harden the energy grids on the five islands served by Hawaiian Electric and enable them to better withstand severe weather-related events fueled by climate change. The proposed five-year resilience plan includes a slate of initial, foundational grid resilience investments as the first phase of long-term climate adaption effort. The high-level elements of the program including critical transmission and circuit hardening, critical pole hardening and replacement, wildfire mitigation, undergrounding portions of certain distribution circuits,

hazard tree removal and control center resilience. Colton will also address how Hawaiian

Electric works with their partners on planned outages and restoration of service.

#### **Colton Ching**

Colton Ching is senior vice president of planning and technology. He has responsibility for planning Hawaiian Electric's 100% renewable energy grid and the procurement of cost-effective, reliable, and resilient renewable resources to fulfil its plans. Colton is also responsible for developing and managing Hawaiian Electric's strategies and budgets for the transmission and distribution system. Colton previously served as Vice President of Energy Delivery as well as Vice President of System Operation and Planning and has 32 years of utility experience.

In addition to his work at Hawaiian Electric, Colton serves on the IEEE Power & Energy Society External Advisory Board, Department of Energy Advanced Research on Integrated Energy Systems (ARIES) External Advisory Board, the Pacific Energy Institute Advisory Board, Metro Board of Directors of the YMCA of Honolulu and the Executive Board of the Aloha Council of the Scouts BSA. Colton is also one of 13 inaugural cohorts in the Omidyar Fellows Leadership program.

Thursday, October 26, 2023



#### Kali Watson, Department of Hawaiian Home Lands

Kali Watson was appointed Chairman of the Hawaiian Homes Commission by Governor Josh Green and confirmed by the Senate on March 23, 2023. He previously served as Chairman from 1995 to 1998 under Governor Cayetano where he was responsible for coordinating the development of over 3,100 residential lots on Hawaiian Homes Lands, and implementation of the \$600 million State settlement, including transfer of 16,518 acres of State lands to make the trust whole. He was also instrumental in the passage and transfer of over 900 acres of Federal lands into the trust under the Hawaiian Home lands Recovery Act of 1995.

As the President and CEO of the native Hawaiian nonprofit Hawaiian Community Development Board, he worked with Nanakuli Hawaiian Homestead Community Association and oversaw the development of the Nanakuli Village Center, which includes a commercial center, several medical clinics, the Kalanihoʻokaha Cope Hawaiian Cultural-Learning Center and a 48-unit Hale Makana O Nanakuli affordable housing project. Over the last 10 years, to expand HCDB's reach into the private non-homesteading areas, Kali established successful HCDB partnerships with various private developers of low-income housing tax credit projects primarily on Oahu, Maui, and Kauai. Projects include single family residential, townhouses, mid-rise and high-rise buildings.

He is a graduate of UH Law School, Business School and Kamehameha Schools. Wife Judith Pavey and three sons, Kala, Kealii, and Nainoa.

#### **Chance Lauderdale, HDR**

#### PFAS Emerging No More: A Quick Start Guide for PFAS Compliance

Much has been said about the draft PFAS rule, but not so much about how utilities should plan for and implement their response. Please join us for a webinar where we'll discuss how you can develop a PFAS Strategic Roadmap. We'll explore strategies that address One Water considerations, funding and delivery models to meet aggressive deadlines. You'll walk away with ideas on how to implement an effective PFAS compliance program.

#### **Chance Lauderdale**

Chance Lauderdale is an engineer that serves as HDR's Drinking Water Director. He has supported utilities across the U.S., as they prepare for compliance with the Proposed PFAS Rule.

Thursday, October 26, 2023



#### Mahina Patterson, Kohala Watershed Partnership

Kohala Watershed Partnership: Protecting Forests for Water Supply Sustainability in Kohala, Hawai'i

The forests of Kohala Mountain are a primary water resource for the Kohala region on Hawai'i Island. In 2003, the Kohala Watershed Partnership (KWP) was established to work collaboratively across landownership boundaries to improve the quantity and quality of water supplies in Kohala by protecting its remaining native forest from threats. KWP's members include seven major landowning partners and three associate partners, including the County of Hawai'i Department of Water Supply. Mahina Patterson, the KWP Coordinator, will share about KWP, our current work, and the impact of our work on water supply sustainability in Kohala.

# Joy Gannon, Rural Community Assistance Corporation Mark Prescott, Hawaiian Beaches Water System

A Small System's Approach to Developing and Maintaining a Service Line Inventory

A discussion on Hawaiian Beaches approach to completing and maintaining their service line inventory. Hawaiian Beaches is working with RCAC to utilize low cost GIS tools to develop their inventory and we will also discuss funding strategies if replacement locations are identified during the survey.

Thursday, October 26, 2023



#### Lauren Roth Venu, Roth Ecological

There's an App for that! An Innovative Public-Private-Philanthropic Approach to Community-Based Rainwater Management

Climate change in the Hawaiian Islands is predicted to cause prolonged droughts and increases in rainfall intensity. These effects compounded with increased development mean there is less rainwater entering into the ground to support future water supply and more flooding that has both direct and indirect impacts on communities and ecosystems. With the support of the Hawaii Community Foundation and the State of Hawaii Water Security Advisory Group, 3Rwater developed the Follow the Drop mobile application (FtD) to help build community-based water security. The app supports both stormwater and water conservation initiatives by helping property owners identify and size rainwater capture solutions and track volumes of water (and money) saved using real-time rainfall data. Beginning in 2020, an innovative public-privatephilanthropic-partnership was created to test FtD as a community engagement tool to support the City and County of Honolulu Department of Facility Maintenance (DFM) green stormwater infrastructure program and future Stormwater Utility. The goal was to gain community feedback on the software and initiate market research that would be used to help develop a 'new' incentive program to promote rainwater to be captured and/or retained on private properties. The presentation will present the background and findings of this innovative initiative and how this program was leveraged to receive additional federal funding support as well as its current applications outside of Hawaii.

#### Lauren Roth Venu

Lauren Roth Venu is an ecopreneur, a TEDx speaker and published author, who is passionate about developing strategic, innovative solutions to build climate resiliency. In 2006, she formed Roth Ecological Design International that provides integrated water resource management planning, green infrastructure design and delivery of innovative solutions for onsite water reuse. She formed 3Rwater, Inc that developed a software and a data platform to help cities and their communities adapt to climate change by increasing accessibility to rainwater capture solutions. She has held advisory positions for the State of Hawaii and named a finalist for the Entrepreneur-of-the-Year for Climate-Tech by HVCA, Top Emerging Designers by Pacific Edge Magazine, and Top Forty Under Forty Business Leaders by Pacific Business News. She also is a published author, TEDx speaker and holds an MSc in Oceanography from University of Hawaii and a BA in Environmental Science - Water Resources from the University of Colorado at Boulder.





# Robert DeRobles, Maui Department of Water Supply Jim Mothersbaugh, Water Techtonics

**Maui Department of Water Supply Greywater Systems** 

# Christopher Kim, Maui Department of Water Supply Troy Ching, Tyler Smith, HDR

#### **Maui County LCRR Update and Compliance Roadmap**

This presentation will cover the latest Lead & Copper Rule Revision (LCRR) Updates and feature Maui County's approach and roadmap to LCRR Compliance. The history and background of the Maui County drinking water systems will be presented along with an overview of the latest LCRR updates. An approach for compliance, including project chartering, GAP assessment, lead service line inventory development, and more, will be covered in addition to Maui County's current progress and planned next steps for their drinking water systems.

#### **Christopher Kim**

Christopher Kim is a Civil Engineer for the County of Maui Department of Water Supply, Capital Improvement Program Section.

#### **Troy Ching**

Troy Ching is HDR's Water Group Manager for the Hawaii and Pacific Area. His experience has focused on site and infrastructure development across Hawaii and the Pacific Region.

#### **Tyler Smith**

Tyler Smith is an assistant project manager and senior engineer at HDR with over eight years of experience. She specializes in drinking water treatment with experience in water treatment plant evaluations, designs, construction, and startup and commissioning projects. She's presented and published on technical topics including ion exchange, asset management, lime softening, disinfection byproducts, and compliance with the lead and copper rule.

Thursday, October 26, 2023



#### Vincent Yee, NEXGEN Asset Management

#### **Asset Management for Hawaiian Water Utilities**

We all recognize the value of implementing an enterprise asset management program for an organization to manage assets, maintenance, regulatory compliance, lifecycle planning, funding forecast, risk management and capital planning. Deploying mobile applications can significantly improve efficiency in maintenance management and communication. Asset information can be readily available for field users to make informed decisions. Lifecycle planning and funding forecast can help an organization develop a sustainable plan for the future. Risk management and capital planning can help organization prioritize their expenditures to ensure service levels are met. Finally, with natural disasters looming in islands, documenting all the FEMA work orders can expedite the claims. This presentation will share some industry asset management best practices and case studies from other water utilities.

#### **Vincent Yee**

Vince is a licensed Civil Engineer with over 32 years of consulting and software experience working in the water utility industry. He is President and CEO for NEXGEN Asset Management, an Enterprise Asset Management software company. He implemented the County of Hawaii Wastewater, Water, Traffic and Solid Waste divisions. He spends some of his time living in Mauna Lani on the Big Island.

Thursday, October 26, 2023



#### Cari Ishida, Mike Miyahira, Carollo Engineers

#### Mahinahina Water Treatment Facility: The Little UV System that Could

The Department of Water Supply (DWS) of the County of Maui owns and operates the Mahinahina Water Treatment Facility (MWTF), which serves the Lahaina, Napili, Wahikuli, and Alaeloa areas. The MWTF is a direct filtration facility and has an influent design capacity of 2.5 mgd. The main source of plant water is the Honolua Ditch which runs adjacent to the facility. Between October 2016 and September 2018, the DWS conducted source water monitoring for Cryptosporidium (Crypto). The concentration of Crypto in the Honolua Ditch resulted in a Bin 2 classification, which requires 3.5-log reduction of Crypto in accordance with the Hawai'i Department of Health's (DOH) drinking water guidelines. The MWTF currently receives 2.0-log Crypto removal credit for their current filter operation. While an additional 1-log removal credit could be achieved through modified filter operation, another 0.5 log removal would still be required. Hence, DWS decided to provide 1.5-log treatment of Crypto using ultra-violet (UV) disinfection to meet an October 1, 2021 compliance deadline. The UV system design and construction was fast-tracked to meet the regulatory deadline. This presentation will summarize the planning, design, construction, startup, and first two years of startup data for the first potable water UV system for Crypto reduction in Hawaii.

#### Cari Ishida, PhD

Cari has more than 23 years of experience in water and wastewater projects. She was the project manager for the Mahinahina project and worked closely with Maui County and the Hawaii Department of Health to implement this project. Cari is currently a project manager and office manager in Carollo's Honolulu office.

#### Mike Miyahira

Mike has more than 37 years of experience in water. He was the engineering supervisor at the State of Hawaii, Department of Health, Safe Drinking Water Branch and served over 23 years as a water regulator. He is coming out of retirement to rejoin the workforce as a consultant with Carollo.

Thursday, October 26, 2023



#### Clay Ozaki-Train, Brown and Caldwell

#### **Electrical Safety in the 21st Century**

How do operators and engineers learn to implement safe electrical work practices in industrial environments? This presentation will cover the basics of electrical safety for personnel in industrial environments, review legal requirements and good practice, and explain how power system studies play an important role in a sound electrical safety program that reduces financial risk and creates a safer working environment for personnel.

#### Clay Ozaki-Train

Clay Ozaki-Train is an electrical engineer in Brown and Caldwell's Honolulu office with eleven years' experience working on electrical system designs for drinking water, wastewater, and other industrial and commercial facilities in Hawaii. Clay's primary focus has been electrical power distribution and motor control system design for both low- and medium-voltage systems. He has experience in power system coordination and arc flash hazard studies at facilities ranging from small water and wastewater pump stations to large wastewater treatment plants.

#### **Kevin Kodama, National Weather Service**

#### **National Weather Service Climate and Rainfall Outlook**

Kevin will be providing the climate and rainfall outlook for the October 2023 - April 2024 Hawaiian Islands Wet Season. He will also briefly cover hydrology-related products issued by the National Weather Service during heavy rain events and drought conditions.

#### **Kevin Kodama**

Kevin has been a Senior Service Hydrologist and Meteorologist at the National Weather Service's Honolulu Forecast Office since 1997 and graduated with his B.S. in Atmospheric Sciences from the University of Washington and with his M.S. in Meteorology from the University of Hawai'i at Mānoa. Kevin was born and raised in Hilo, Hawaii and a proud graduate of Waiakea High School. His son Dillon is a Mechanical Engineer for the County of Hawai'i, Department of Water Supply.

Thursday, October 26, 2023



#### Colin Reardon, Clow Valve/iHydrant

#### Introducing iHydrant: Why pressure and temperature monitoring is important

Participants in this session will learn the benefits of pressure monitoring and the challenges with deploying various technologies. Case studies will be shared identifying various hydraulic events and how pressure and transient data has helped the utility realize events that were previously unknown to them.

#### Glenn Barnes, Water Finance Center

#### **Improving Employee Retention**

Many of our utility employees are at or near retirement age, and we expect many of these employees will leave the utility in the next few years. We should not assume, however, that employees who are not near retirement age will automatically stay. This presentation will discuss all the ways that utilities can increase the likelihood of retaining our best employees. Salary and benefits are an important consideration, but there are many factors beyond money that drive retention. For example, employees that enjoy good relationships with their boss and colleagues are more likely to stay. And employees who see career advancement opportunities are also more likely to stay. The presentation will detail a comprehensive approach to employee retention. It will also describe how to lessen the impact on the utility when employees do depart.

#### **Christina Alito, HDR**

# Using a Carbon-based Treatment Approach for Advancing Water Treatment of Emerging Contaminants

With increasing water scarcity, drought, climate change and stringent nutrient regulations, water reclamation facilities (WRFs) are seeking water reuse solutions. Depending on the drivers for implementing water reuse, the approach for implementing reuse and the AWT processes involved can vary greatly. This presentation focuses on evaluating the feasibility of performing indirect potable reuse by adding processes such as ozone, biofiltration and granular activated carbon (GAC) adsorption for advanced emerging contaminant removal.

#### **Christina Alito**

Christina is the chair of our One Water Institute practice group, which connects our professionals and fosters discussion of emerging water quality issues. Her passion is finding the bridge between research, technology and the best practical solutions for utilities.

## **TECHNICAL PROGRAM**

Friday, October 27, 2023

<u>Time</u>	<u>Description &amp; Presenter</u>	<u>Location</u>
8:00 AM	Registration Opens (8:00am - 11:00pm)	Main Ballroom Lobby
8:00 AM	Future of Drinking Water in the State of Hawai'i Department of Health – Safe Drinking Water Branch, DLNR – Commission on Water Resource Management	Main Ballroom
9:15 AM	Climate Rainfall Outlook for the Hawaiian Islands Wet Season (October 2023 - April 2024) Kevin Kodama, National Weather Service	Main Ballroom
9:45 AM	Closing Remarks  Keith K. Okamoto, P.E.,  2023 HWWA Outgoing President,  Hawai'i County DWS Manager-Chief Engineer	Main Ballroom
7:00 AM	2023 HWWA Golf Tournament (8:00 AM Shotgun Start) Must register to attend	Mauna Lani South Golf Course
9:00 AM	Huaka'i to Wahi Pana Kalahuipua'a Loko 'la Private, Guided Walking Tour Must register to attend	Meet @ Hale l'ike



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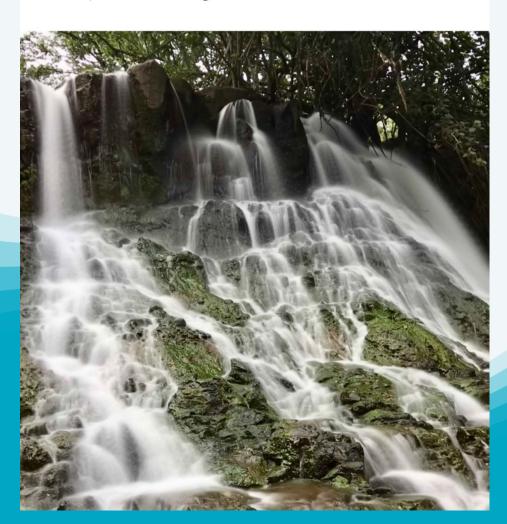
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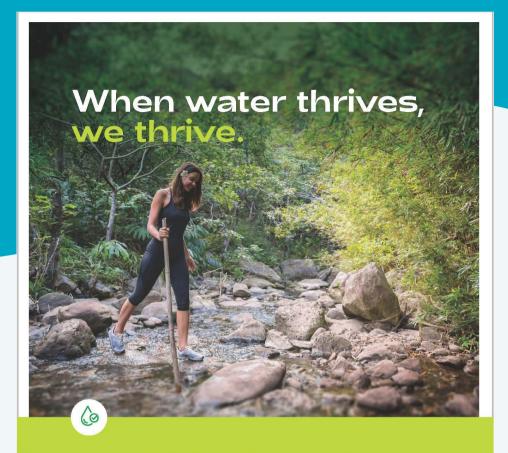
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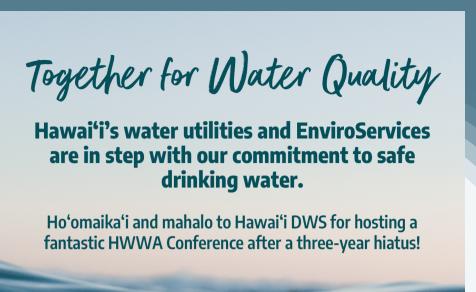
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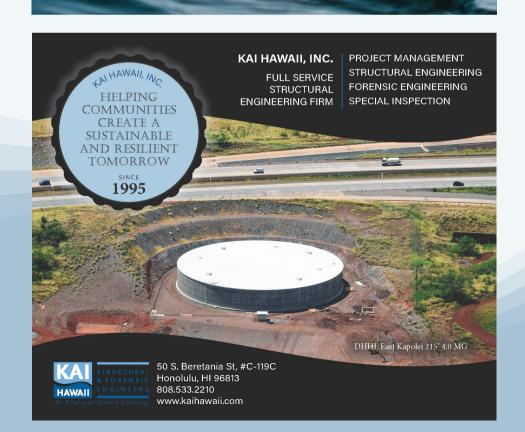






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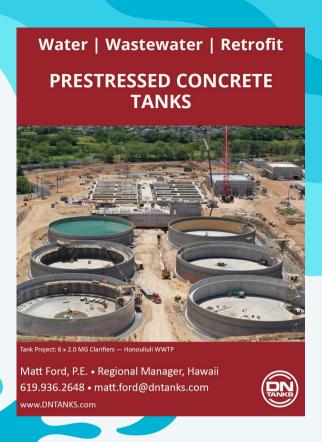
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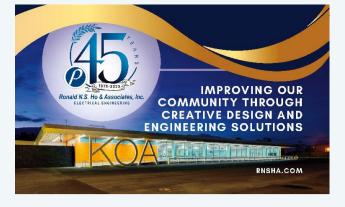




















# MAHALO TO ALL OF YOU FOR YOUR SUPPORT OF THE HWWA, AND WE HOPE THAT YOU ENJOY THE CONFERENCE!

FROM THE



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