



STATE OF HAWAII
DEPARTMENT OF HEALTH
KA 'OIHANA OLAKINO
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File: SDWB
Minutes 2-16-24 Rev 1

BOARD OF CERTIFICATION OF PUBLIC WATER SYSTEM OPERATORS
MINUTES OF THE MEETING

DATE: February 16, 2024

TIME: 10:00 a.m.

MEMBERS PRESENT: Jodi Yamami (2nd term expires 6/30/24)
Mark Prescott (2nd term expires 6/30/24)
James Landgraf (1st term expires 6/30/25)

A. Call to Order

- The meeting began at 10:00 a.m.

B. Old Business

- The Board unanimously approved the November 29, 2023 meeting minutes.

C. New Business

- DSO Certification Applications

The Board unanimously approved the following applications for certification:

	Name	Grade Requested	Grade Approved
1	Fukamizu, Alan	1	1
2	Kaiwi, Lester	1	1
3	McDonald, Darrell	1	1
4	Reynolds, Teva	1	1
5	Saiki, Ryan	1	1
6	Silva, Andrew	1	1
7	Stacy, Robert	1	1
8	Keanini, Noah	2	2
9	Bush, Cody	3	3
10	Carbonell, Elijah	4	4

11	Evans, Troy	4	4
12	Flory, Juleen	4	4
13	Gibson, Steven	4	4
14	Warren, Joshua	4	4
15	Wick, Eric	2 Reciprocity	2 Reciprocity

For detailed information on the DSO applications, please refer to Attachment 1.

- WTPO Certification Applications

The Board unanimously approved the following applications for certification:

	Name	Grade Requested	Grade Approved
1	Gaspar, Matthew	OIT	OIT
2	Ishii, Jarrick	OIT	OIT
3	Lungay, Micah	OIT	OIT
4	Ramos, Tenille	OIT	OIT
5	Ihara-Takase, Colby	1	1
6	Kauhola, Matthew	1	1
7	Viernes, Roque	1	1
8	Ynigues, Morgan	2	2
9	Wick, Eric	2 Reciprocity	2 Reciprocity
10	Manna, Raymond	4 Reciprocity	4 Reciprocity

For detailed information on the WTPO applications, please refer to Attachment 2.

- CEU Requests

The Board unanimously approved the following CEU requests:

	Course	Date	Sponsor	CEUs Approved
1	How Your Control Valve Can Really Help You to Manage Your System	6/8/23	NRWA	0.1
2	Energy Efficiency as It Applies to Water and Wastewater Systems	6/29/23	NRWA	0.1

3	Pacific Islands SDWB PWSS Inspector Training	12/4-6/23	US EPA	1.2
4	Unlocking Operational Excellence: Managing the Data Deluge for Water System Operators	1/18/24	NRWA	0.1
5	Preparing for the Lead and Copper Rule Improvements	1/24/24	AWWA	0.15
6	Tools, Training, & Technical Assistance to Increase Water System Resilience	1/30/24	US EPA	0.1
7	AI/ML Applications & Implementations in the Water Sector: Harnessing Technology	2/7/24	AWWA	0.15
8	Looking Ahead to Compliance with round 2 of AWIA	2/21/24	AWWA	0.15
9	Achieving Net Zero 2050	2/22/24	AWWA	0.1
10	2024 Pacific Water Pre- Conference (Water Operators)	2/20/24	AWWA Hi/HWEA	0.7
11	2024 Pacific Water Conference	2/21- 22/24	AWWA Hi/HWEA	60 sessions for 0.05 each
12	Lead Service Line Inventory Guidance	2/27/24	US EPA	0.1
13	From the Trenches: System Experiences Developing Service Line Inventories	3/13/24	AWWA	0.15
14	Safeguarding Tomorrow: Unraveling the Risks of Artificial Intelligence	4/3/24	AWWA	0.15
15	Microplastics 2024: Practical State-of-the-Science in Drinking Water	4/10/24	AWWA	0.15
16	Optimizing Water Resources: Tools for Water Optimization and Energy Efficiency	4/17//24	AWWA	0.15
17	Part 1: Inorganics 101, Material Accumulation and	5/8/24	AWWA	0.15

Mitigation				
18	Part 2: Sensory Diagnostics, pH Impacts and Inorganic Chloramines	5/15/24	AWWA	0.15
19	Intelligent Water Systems: Navigating the Waters of Tomorrow	6/5/24	AWWA	0.15
20	Backflow Testing Education	Various	The Water Connection	4.0
21	Introduction to Water Basics	Various	Maryland Center for Environmental Training	0.7
22	Disinfection through Chlorination	Various	Maryland Center for Environmental Training	0.7
23	Coagulations, Flocculation, Sedimentation and Filtration	Various	Maryland Center for Environmental Training	0.7
24	Developing Operations Plans	Various	RCAC	0.2
25	Hydrant Installation	Various	RCAC	0.2
26	Chromium in Drinking Water: Return of the Chromium-6 MCL	Various	RCAC	0.2
27	Water Supply & Sources	Various	RCAC	0.2
28	Seasonal Star-up Operations	Various	RCAC	0.2
29	California's New Cross-Connection Control Handbook	Various	RCAC	0.2
30	Get the Lead Out: Lead & Copper Rule Revisions	Various	RCAC	0.2
31	Groundwater Well Operation & Maintenance	Various	RCAC	0.2
32	Revised Total Coliform Rule	Various	RCAC	0.2
33	Distribution System Review	Various	American Water College	1.6

For detailed information on the CEU requests, please refer to Attachment 3.

- DSO Certification Exam Results

The Board was notified of the following results of the DSO certification exam administered from December 2023 to date. Paper-based exams were administered on Oahu, Molokai, Kauai, and the Big Island. Computer-based exams were administered on Maui. Seven out of 23 operators passed for an overall passing rate of 30%.

	Examinee	Grade	Certification
1	Augustiro, Franklin	1	None
2	Blankenfeld-Kaheiki, George	1	None
3	Echallas, Roland	1	None
4	Florendo, Benjamin	1	None
5	Flory, Juleen	1	D1-550
6	Gago, S'mon	1	D1-551
7	Greenleaf, Ricky	1	None
8	Kaheiki, George	1	None
9	Kealoha-Hall, Christopher	1	None
10	Nishihira, Kasey	1	None
11	Poepoe, Myron	1	None
12	Tranilla, Riccardo	1	None
13	Bitancor, Romel	2	None
14	Kauhane, Dean	2	None
15	Larson, Roland	2	D2-328
16	Oguma, Garrett	2	None
17	Pa-Kala, Namakana	2	None
18	Ramos, Briceson	2	None
19	Ewen, Daniel	3	D3-166
20	Melchor, Florendo	3	D3-167
21	Hale, Devin	4	D4-303
22	Hooks, Ash	4	D4-302
23	Inouye, Alvin	4	None

DSO Exam Results			
Grade	Passed	Examinees	Passing Rate
DSO 1	2	12	17%
DSO 2	1	6	17%
DSO 3	2	2	100%
DSO 4	2	3	67%
Total	7	23	30%

- **WTPO Certification Exam Results**

The Board was notified of the following results of the WTPO certification exam administered from December 2023 to date. Paper-based exams were administered on Oahu, Molokai, Kauai, and the Big Island. Computer-based exams were administered on Maui. Six out of 8 operators passed for an overall passing rate of 75%.

	Examinee	Grade	Certification
1	Arengo, Jarreth	1	None
2	Hadama, Kelly	1	T1-261
3	Kamai, Rosaleen	1	T1-262
4	Matsu, Lindo	1	T1-263
5	Namakaeha, Brennan	1	T1-264
6	Victorino, Matthew	1	T1-265
7	Weber, Daniel	1	T1-266
8	Martin, Francis	4	None

WTPO Exam Results			
Grade	Passed	Examinees	Passing Rate
WTPO 1	6	7	86%
WTPO 2	--	--	--
WTPO 3	--	--	--
WTPO 4	0	1	0%
Total	6	8	75%

D. Announcements

- The next board meeting will be scheduled on May 22, 2024.

E. Adjournment

- The meeting was adjourned at 11:00 a.m.

Respectfully Submitted,



Jodi Yamami
Board of Certification of
Public Water System Operators

JY:sw

- c: Anna Yen, U.S. EPA Region IX [via yen.anna@epa.gov only]
Stephanie Hung, U.S. EPA Region IX [via hung.stephanie@epa.gov only]
James Landgraf, Board Member [via jlandgraf@hawaiiintel.net only]
Mark Prescott, Board Member [via mprescott90@gmail.com only]

ATTACHMENT 1
DSO DECISIONS
2-16-2024

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|--|--|-------------------------------|
| <p>1 Fukamizu, Alan K. Grade 1
114 Punaluu
Supervisor Kelly Rapoza
Utility Worker
2 yrs</p> | <p>Maintain system of well intake, monitor GPM, hours of usage, booster pump, reservoir storage: secure facilities from general public, chlorination dosage: monitor, maintain/record Cl2 residual, monthly bacti samples, annual sample collection, visual inspection of system, meter reads</p> | <p>Approve Grade 1</p> |
| <p>2 Kaiwi, Lester Grade 1
201 Hana Water North
Supervisor Duane Lammers
Water Operator Assistant
4 yrs/10 mos</p> | <p>Daily monitoring of systems, check water usage, check chlorination residual and adjust, do repairs on mains, change valves, change out meters</p> | <p>Approve Grade 1</p> |
| <p>3 McDonald, Darrell Grade 1
345 Schofield Barracks
Supervisor Dann Ewen
Plumbing Work Leader
2 yrs/5 mos</p> | <p>Emergency repairs to water main systems and service lines, line taps for new service connections, installation, maintenance and repairs of service valves/ARV/PRV, fire hydrants, installation, testing, maintenance and repairs of water based fire protection systems, perform flow testing of water mains/fire hydrants, troubleshoot and repair discrepancies, plan and schedule system upgrades, preventative maintenance and component replacement, review contractor submittals, perform construction site visits to insure accuracy and standard compliance</p> | <p>Approve Grade 1</p> |
| <p>4 Reynolds, Teva L. Grade 1
135 Hawaii Water Service
Supervisor Henry Giltner
Utility Worker
1 yr</p> | <p>Customer service and repair water lines, install meters, read meters, flush and repair hydrants, take chlorine readings, adjust flows, repair chlorine valves, exchange chlorine tanks, troubleshoot, locate leaks on water lines, repair cla valves, install curb stop</p> | <p>Approve Grade 1</p> |
| <p>5 Saiki, Ryan Grade 1
400 Lihue-Kapaa
Supervisor Ryan Smith
Assistant Water Plant Operator
1 yr</p> | <p>Control of liquid sodium hypochlorite systems for disinfection, maintain pumps and control valves, maintain back pressure, mix soda ash, check pumps, distribution and transmission lines</p> | <p>Approve Grade 1</p> |
| <p>6 Silva, Andrew Grade 1
331 Honolulu-Windward-Pearl Harbor
Supervisor Pekelo Martin
Water Pumping Plant Mechanic
1 yr/2 mos</p> | <p>Troubleshoot and repair pumps, motor controllers, chlorinators and other equipment within the pump station, maintenance and repair of control valves, sanitary survey correct ions, safety maintenance, overhaul pump units, maintain and upkeep chlorination units including dosing pumps and monitors</p> | <p>Approve Grade 1</p> |

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- 7 **Stacy Jr., Robert W. Grade 1** **Approve Grade 1**
222 Haleakala
Supervisor Owen Waltrip
Maintenance Worker Supervisor
8 yrs
Involved with decisions and process for all repairs like locating leaks, making repairs and making sure water samples are checked before bringing the system back on-line, scheduling annual backflow device testing, making sure valve operation schedule is done annually as well as fire hydrant flushing and other preventative maintenance, schedule water to be hauled during drought conditions, making sure water levels in tanks were maintained at an adequate level, replace the filtration media in slow sand filters
- 8 **Keanini, Noah K. Grade 2** **Approve Grade 2**
248 Kawela Plantation
Supervisor Mervin Dudoit
Water Operator
2 yrs
Daily system checks like checking tank levels, make sure pumps and wells are operating as they should, chlorinate the system, backflow and meter installation, system maintenance on hydrants, main valves, and main lines
 - DSO Grade 1 certified
- 9 **Bush, Cody I. Grade 3** **Approve Grade 3**
248 Kawela Plantation
Supervisor Mervin Dudoit
Water Operator
4 yrs/2 mos
Daily system check on tank level, daily pumpage, tank PSI, chlorine dosage, water main breaks, hydrant flushing, dead-end flushing, chlorides, bacti testing, meter installations, backflow installations, hydrant installation, main gate valve replacements, valve exercising, tank inspection
 - DSO Grade 2 and WTPO Grade 1 certified
- 10 **Carbonell, Elijah Grade 4** **Approve Grade 4**
331 Honolulu-Windward-Pearl Harbor
Supervisor Pekelo Martin
Plant Equipment Repairer
7 yrs/10 mos
Maintain and repair pump station equipment including pumping units, motor control cabinets, chlorination units, overhaul pumping unit, maintain chlorination unit and make repairs, replace carbon and vessel maintenance for GACs, sanitary survey preparations
 - DSO Grade 1 and WTPO Grade 1 certified
- 11 **Evans, Troy P. Grade 4** **Approve Grade 4**
212 Wailuku
Supervisor Marvin Ignacio
WTPO
4 yrs/5 mos
Work on vacuum breakers/air relief valves, backflow preventers, 6 inch ball check-valves, 10 inch swing check-valves, 12 inch flow meters, 6 inch - 24 inch gate valves, flange to flange connections, mechanical joint connections, Romac repair couplers, Romac Alpha restrained joint couplers, pressure reducing valves, y-strainers, etc., take measurements, determine what parts needed, identify worn or broken components, order the parts, guide excavator/backhoe operators while uncovering pipelines, finish digging up components with shovel, help change/install the parts, learn proper techniques from pipefitters, chlorinate replacement sections, flush pipelines via fittings, standpipes and hydrants when air was introduced, etc. control high-lift pumps in the distribution system that pump 3,000+ GPM from Haliimaile up the mountain to Makawao.
 - WTPO Grade 4 certified

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|--|--|-------------------------------|
| <p>12 Flory, Juleen S. Grade 4
212 Wailuku
Supervisor Leonore Amano
Water Microbiologist
5 yrs</p> | <p>Perform chemical and biological examination of water to determine its suitability for intended use, perform standard and special biological analysis of water including quantitative and qualitative determinations of organisms, participate in collection of field samples for laboratory analysis, responsible for calibration, quality control, and routine maintenance of various laboratory instruments, prepare laboratory reagents, culture media, and stock solutions, respond to consumer complaints regarding water quality, review data and create reports</p> <ul style="list-style-type: none">• DSO Grade 1 certified | <p>Approve Grade 4</p> |
| <p>13 Gibson, Steven E.L. Grade 4
331 Honolulu-Windward-Pearl Harbor
Supervisor Ramona Kaito-Haasenritter
Water System Operator
3 yrs/8 mos</p> <p>City of Asheville
Supervisor Brendan Kelley
Water Maintenance Worker
7 mos</p> | <p>Monitor system through the SCADA, manipulate the system to move water from source stations to reservoirs across various ridges and distances to ensure sufficient water is provided, monitor water pumpage from source stations to ensure a balanced draw from the aquifers across the island, observe any changes within the water system to provide information about potential leaks, breaks, or pumping issues, field work with mechanics and electricians to assist on repairs and troubleshooting</p> <p>Complete maintenance work on water distribution system, repair and replace broken water mains, hydrants, valves, and other fixtures, install new taps and service lines, operate vactor vacuum truck for excavation</p> <ul style="list-style-type: none">• DSO Grade 2 and WTPO Grade 1 certified | <p>Approve Grade 4</p> |
| <p>14 Warren, Joshua Grade 4
331 Honolulu-Windward-Pearl Harbor
Supervisor Bert Kawamura
Water Plant Maintenance Mechanic
5 yrs/2 mos</p> | <p>Maintain and repair pump station equipment including pumping unit, motor control cabinets, and chlorination units</p> <ul style="list-style-type: none">• DSO Grade 1 certified | <p>Approve Grade 4</p> |

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- 15 **Wick, Eric E. Grade 2 Reciprocity** **Approve Grade 2 Reciprocity**
- | | |
|---|--|
| Arlington City Water
Supervisor Garren Friedemann
Contract Operator
1 yr/8 mos | Check-in and consultation of municipal water system including maintenance of gas chlorination system and components, periodic sample collection and line flushing and valve/hydrant maintenance |
| Mapleton Water District
Supervisor Garren Friedemann
Contract Operator
1 yr | Operation and maintenance of MIOX chlorine generation system, sample collection, analysis and reporting <ul style="list-style-type: none">• Oregon Distribution Level 2 D-204241 expires 12/31/2025• Oregon Distribution Level 2 is the second highest water treatment level out of 4 levels in Oregon requiring a high school diploma, 2 years of appropriate experience, & passing of an Oregon Distribution Level 2 exam• Oregon Distribution Level 2 exam is equivalent to Hawaii Distribution System Operator Grade 2 exam according to ABC Examination Equivalency Chart |

ATTACHMENT 2
WTPO DECISIONS
2-16-2024

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|---|--|-------------------------------|
| <p>1 Gaspar, Matthew OIT
331 Honolulu Windward Pearl Harbor
Chlorination, GAC
Supervisor Bert Kawamura</p> | <p>Checking for chlorine residual at source stations, checking operation and maintenance of chlorinators and upkeep of stations, minor repairs and reporting potential problems</p> <ul style="list-style-type: none">• Works under supervision of certified WTPO Grade 1 | <p>Approve OIT</p> |
| <p>2 Ishii, Jarrick OIT
331 Honolulu Windward Pearl Harbor
Chlorination, GAC
Supervisor Bert Kawamura</p> | <p>Check chlorine residual to ensure levels are within an acceptable range, use digital colorimeter to test small samples and read residual based on color change, calculate and complete fills to holding tanks for sodium hypochlorite</p> <ul style="list-style-type: none">• Works under supervision of certified WTPO Grade 1 | <p>Approve OIT</p> |
| <p>3 Lungay, Micah OIT
331 Honolulu Windward Pearl Harbor
Chlorination, GAC
Supervisor Bert Kawamura</p> | <p>Checking for chlorine residual at entry point to distribution, refill holding tanks for chlorinators, assist mechanics with repairs to chlorinators and minor repairs around pumping stations</p> <ul style="list-style-type: none">• Works under supervision of certified WTPO Grade 1 | <p>Approve OIT</p> |
| <p>4 Ramos, Tenille OIT
331 Honolulu Windward Pearl Harbor
Chlorination, GAC
Supervisor Pekelo Martin</p> | <p>Monitor chlorine residual at the source pump stations, adjustments to the dosing pumps to keep residual at the requisite levels, repairs to dosing pumps, preventative maintenance, back flushing GACs, define and stratify the bed of carbon, forward flushing, stabilize the pH and remove any unwanted chemicals</p> <ul style="list-style-type: none">• Works under supervision of certified WTPO Grade 1 | <p>Approve OIT</p> |
| <p>5 Ihara-Takase, Colby M.K. Grade 1
400 Lihue-Kapaa
Microfiltration
Supervisor Ann Sokei
1 yr/6 mos</p> | <p>Monitor chlorine residual levels, pH readings, and turbidity, handle chemicals such as orthophosphate, ACH, chlorine, sodium hydroxide, maintain equipment and conduct repairs, routing sampling for chlorine residual, pH, turbidity manganese, iron, alum, phosphate, log run times and keep records of all equipment within plant, adjust dosing of chemicals per plant parameters</p> <ul style="list-style-type: none">• DSO Grade 1 certified | <p>Approve Grade 1</p> |
| <p>6 Kauhola, Matthew M. Grade 1
212 Wailuku
Chlorination, GAC
Supervisor Kevin Arakaki
Plant Maintenance Mechanic Helper
1 yr/4 mos</p> | <p>Install, test, overhaul, repair and maintain plant operations water system equipment such as GAC filters, soda ash stations, flow sensors and meters, AccuTab system, on-site generation, calibrate, test, repair GAC filter, soda ash application, and disinfection chlorination equipment</p> | <p>Approve Grade 1</p> |

ATTACHMENT 2
WTPO DECISIONS
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|---|--|---|
| <p>7 Viernes, Roque B. Grade 1
101 Hilo
Chlorination
Supervisor William O'Neil
Water Works Helper
2 yrs/7 mos</p> | <p>Operation of pump controls and purification systems of chlorine gas and calcium chlorite, maintain residual levels and system adjustments</p> | <p>Approve Grade 1</p> |
| <p>8 Ynigues, Morgan L.H. Grade 2
163 Kaupulehu
RO
Supervisor Charles Dawrs
Project Engineer
2 yrs</p> | <p>Assist in membrane replacement, review and troubleshoot system issues, assist in adjusting well setpoints and RO valve control settings, review RO plant operation and chemical dosing, assist in conducting labs and collecting samples, develop and implement data spreadsheets for chemical usage and flow</p> <ul style="list-style-type: none">• WTPO Grade 1 certified | <p>Approve Grade 2</p> |
| <p>9 Wick, Eric E. Grade 2 Reciprocity
Arlington City Water
Chlorination
Supervisor Garren Friedemann
Contract Operator
1 yr/8 mos</p> | <p>Check-in and consultation of municipal water system including maintenance of gas chlorination system and components, periodic sample collection</p> | <p>Approve Grade 2 Reciprocity</p> |
| <p>Mapleton Water District
Membrane Filtration
Supervisor Garren Friedemann
Contract Operator
1 yr</p> | <p>Operation and maintenance of a membrane filtration system including MIOX chlorine generation system, sample collection, analysis and reporting</p> <ul style="list-style-type: none">• Oregon Treatment Level 2 T-204241 expires 12/31/2025• Oregon Treatment Level 2 is the second highest water treatment level out of 4 levels in Oregon requiring a high school diploma, 2 years of appropriate experience, & passing of an Oregon Treatment Level 2 exam• Oregon Treatment Level 2 exam is equivalent to Hawaii Water Treatment Plant Operator Grade 2 exam according to ABC Examination Equivalency Chart | |

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WTPO DECISIONS
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- 10 **Manna, Raymond J. Grade 4 Reciprocity** **Approve Grade 4 Reciprocity**
- South Norwalk Electric and Water
Conventional Treatment
Supervisor Scott Williams
Lab Technician/Plant Operator
5 yrs/10 mos
- Performed lab analysis including chlorine, pH, color, turbidity, chloride, hardness and calcium, collect sample during treatment process, fill lime and soda ash hoppers, record plant flow meters, check all treatment equipment for proper operation, made adjustments to chemical feeders when needed, collected and analyzed all plant samples recording all data on log sheets
- Connecticut Water Treatment Plant Class IV DWPO.204509-C4 expires 9/30/2025
 - Connecticut Water Treatment Plant Class IV is the highest water treatment level out of 4 levels in Connecticut requiring a high school diploma, 4 years of appropriate experience, & passing of a Connecticut Water Treatment Plant Class IV exam
 - Connecticut Water Treatment Plant Class IV exam is equivalent to Hawaii Water Treatment Plant Operator Grade 4 exam according to ABC Examination Equivalency Chart

ATTACHMENT 3
CEU DECISIONS
2-16-2024

Hawaii Courses

- 1 **How Your Control Valve Can Really Help You to Manage Your System**
6/8/23
NRWA
1 Contact Hour
0.1 CEUs
An overview of some of the advancements in technology that can assist waterworks personnel to manage their control valves and how they can be simply adapted to bring valuable data and more information to help personnel manage their systems more effectively.

- 2 **Energy Efficiency as It Applies to Water and Wastewater Systems**
6/29/23
NRWA
1 Contact Hour
0.1 CEUs
This is a presentation about the entire spectrum of issues that affect your systems or plants efficiency. The objective of this class is understanding the relationship between the broad spectrum of energy efficiency issues and sustainable practices and solutions.

- 3 **Pacific Islands SDWA PWSS Inspector Training**
12/4-6/23
US EPA
12.0 Contact Hours
1.2 CEUs
Topics included:
 - Organizing the inspection
 - Regulations
 - Sources
 - Pumps and pumping facilities
 - Treatment processes
 - Storage facilities
 - Distribution system
 - Cross-connections
 - Process control, laboratory and data integrity
 - Utility management

- 4 **Unlocking Operational Excellence: Managing the Data Deluge for Water System Operators**
1/18/24
NRWA
1.0 Contact Hours
0.1 CEUs
Topics included:
 - Simplify Regulatory Reporting: Explore methods to streamline your reporting requirements by organizing and centralizing field data.
 - Optimize Daily Operations: Uncover the hidden potential in your data for improving day-to-day system management.
 - Staff Training Made Easy: See how organized data facilitates efficient training for new staff members.

- 5 **Preparing for the Lead and Copper Rule Improvements**
1/24/24
AWWA
1.5 Contact Hours
0.15 CEUs
This webinar will highlight some of the new changes in the rule revisions and focus on how utilities can begin addressing these changes before the rule goes into effect. This webinar will also highlight a utility and outline what they are doing to prepare for the upcoming rule.

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6 Tools, Training, & Technical Assistance to Increase Water System Resilience

1/30/24

US EPA

1.0 Contact Hours

0.1 CEUs

Topics included:

- Creating resilient water utilities
- EPA's Water Network Tool for Resilience

7 AI/ML Applications & Implementations in the Water Sector: Harnessing Technology

2/7/24

AWWA

1.5 Contact Hours

0.15 CEUs

AI and machine learning (ML) provides diverse tools for utilization within the water sector. These technologies offer substantial benefits, including enhanced predictive analytics, insights, and data management. Ultimately, they streamline both daily operations and long-term planning processes. Our panel will discuss and explore technologies and opportunities we can harness within the water industry.

8 Looking Ahead to Compliance with Round 2 of AWIA

2/21/24

AWWA

1.5 Contact Hours

0.15 CEUs

Topics included:

- Understand the requirements and deadlines for the AWIA RRA and ERP updates.
- Apply the lessons learned from other utilities to your own utility.
- Learn and use the tools available to update your RRA, ERP, and cybersecurity assessment and determine the next steps to becoming more resilient.
- Update your emergency response plan to become a useful document to maintain resilience.

9 Achieving Net Zero 2050

2/22/24

AWWA

1.0 Contact Hours

0.1 CEUs

Topics include:

- Find out how utilities have successfully implemented solutions to decarbonize their utility
- Discuss practical solutions that are in operation
- See how decarbonization can be an opportunity

10 2024 Pacific Water Pre-Conference (Water Operators)

2/20/2024

AWWA Hi/HWEA

7.0 Contact Hours

0.7 CEUs

Topics included:

- Preparing for Sanitary Surveys
 - Key common significant deficiencies
 - Updating your emergency response plan
 - Reviewing your cross-connection control plan
 - Completing a pre-inspection of the water system
- SCADA in the Utility Space
 - Basic components
 - History of SCADA use
 - Implementation considerations
 - Communications
 - Utility cybersecurity

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11 **2024 Pacific Water Conference**

2/21-22/24

AWWA Hi/HWEA

**60 Drinking Water Topics
with full credit @ 30
minutes each or 0.05 CEUs**

Drinking Water Topics (30 minutes full credit) include:

- Hopkins - Peristaltic and Diaphragm Chemical Metering Pump
- Ryan - Energy Demand Reduction of Pumping Systems
- Campbell - Web GIS
- Campbell - Using GIS to Meet LCRR Requirements
- Sterverlynck - Saving Money Pumping Groundwater
- Scholz - Mechanical Fittings and Repairs on High Density Polyethylene Pipe
- Hall - History of Water Service Line Materials
- Dugas - Six Steps to Save Energy with VFD Controlled Pumps
- Salveson - Evolving at the Speed of AI
- Brearley - Threat Mapping to Aide in Cyber Risk Prioritization
- McMahon - Climate Resilience and the Hawaiian Water Nexus
- Wallace - Structure Assessment for Rehabilitation and Material Options for Success
- Uehara - Post-Wildfire Impacts for Hawaii Drinking Water Utilities
- Fritsche - Planning for Water Shortages and CWRM Mandates in Maui County
- Sorensen - Air Valves
- Goecke - Decontamination in Days
- Cassity - SCADA Challenges for an Island State or Difficult Topography
- Brooke - Onsite Sodium Hypochlorite Generation
- Kaiser - Leak Detection Through Transient Monitoring at LV Valley Water District
- Kemp - Protect you Workforce with Smart Safety Technology
- Button - Managing your Water and WW Ops with Managed SCADA
- Gonzalez - Camp Pendleton
- Sorensen - What's Wrong with my Air Valve
- Liu - This Just In, A Data Driven Update on the Latest in PFAS Separation/Destruction
- Jacangelo - PFAS in Drinking Water
- Young - Rockwell Automation AI Modeling
- Yen - EPA Drinking Water Regulatory Update
- Gergis - Paradigm in Drinking Water Treatment
- Larsen - When is Carbon Fiber Reinforced Polymer for Pipeline Rehab the Best Option
- Dias - Size Doesn't Matter, Approaches to Launch and Sustain Asset Management Programs Regardless of Agency Size
- Swanson - Treatment Considerations and Strategies for multiple Contaminants
- Marrero - Enhancing Likelihood of Funding Through One Water Planning
- Webster - Commissioning of Two Regenerable Ion Exchange Systems in Maui
- Thornbrue - Evolution of utility Automation

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- Hanson - Predictive Maintenance
- Lupola - Cloud Based Secure Remote Access and Configuration Solutions
- HakesBeckwith - Zone 7 Completes Progressive Design Build for PFAS Treatment
- Malter - The Power of Water
- Stultz - Developing PFAS Management Roadmap for Potable Drinking Water
- Ryan - A Hurricane is Coming
- Fernandez - Protecting Oahu's Groundwater Supply
- Kimball - Planning Considerations for Machine Learning and AI
- Hutchings - From Reactive to Predictive
- Lowry - NPDES Permitting
- LaCour - Evolution of Chemical Metering Pumps
- Thread - Shakes Quakes and Soil Displacement
- Siu - How Innovative Tech Can Change the Way you See Water
- Harris - The Great Resignation
- Phillips - Ductile Iron Fittings C110 C153
- Barin - Sequestration Concentration and Destruction of PFAS
- Kanyuch - Midsize Utility Approach to Fed Grant Funding for CIP Resiliency
- Kanyuch - Drinking Water Utility's Planning and Implementation of SCADA Upgrades
- Johnson - Texas Asset Management Plan for Small Systems
- Lauderdale - PFAS Emerging No More
- Tsai - Maui Wildfires Emergency Response
- Sudberg - Closer Look at the M11 Harness
- Barnes - Actively Managing Leak Detection
- Barnes - Understanding System Pressure and Impact on Leaks
- Preuss - Trenchless Technology
- Jacobs - EPA Water and Wastewater Infrastructure and Technical Assistance Programs

Drinking Water Topics (no credit) include:

- Gannon - Small Water System Talk Story

Other Clean Water, Resource, Reuse, Climate Topics (no credit) include:

- Manuel - I Ka Wa Ma Mua
- Alexander - Pressure Sewer Solutions
- Cullington - Pivoting into a Sustainable Class A Biosolids Management Program
- Williams - Anaerobic Digestion with Nutrient Control
- Meade - Adaptive Mixing and Better Biological Nutrient Removal
- Quimby - Aerobic Granular Sludge for Plants Large and Small
- Barkey - Tackle the Wipes Apocalypse
- Kelley - Turnkey Lift Stations

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- Kade - Energy Efficient Enhanced Aerobic Fermentation for Biological Phosphorus Removal
- Gulliver - The Guide to PFAS
- Larsen - Investigate Design Build Approach WW Tech
- Lam - Cesspool Conversions Planning
- Kmiec - Tucson's Water's Reclaimed Water System
- Kmiec - Water Security in a Changing Climate
- Wang - Decarbonization and Resource Recovery Through Nitrous Oxide Production from Anaerobic Digestate
- Abelson - The Bowtie Demonstration Project
- Chino - funding for Stormwater Utilities
- Bundy - CCH Capital Project Climate Change Design Guidelines Toolkit
- Sullivan - Community Engineering Corp
- Morris - LOOP MBR
- Kerney - Microscreening for Advanced Primary Filtration
- Swain - Solving Infiltration and Corrosion Problems in Sanitary Sewers
- Ivey - Addressing Water Affordability with and Innovative Rate Structure
- Quist - The Sewer Whisperer
- Hakim - Monitoring Land Subsidence on North Coast of Central Java by Time-Series InSAR
- Koester - Lessons Learned Operating a WWTP Post Disaster
- Zhu - Innovative Trickling System for Wet Weather Flow Storage and Enhanced Nitrification
- VanAmmers - The Functional Equivalent
- Sprague - Building Resilience with Alameda County
- Benisch - Data Management and Visualization
- Benisch - Food Waste Co-Digestion
- Swanson - treating Today's Stormwater with Yesterday's Data
- Herr - Design and O&M for Green Infrastructure Stormwater Retrofit
- Herr - Selecting Cost Effective Stormwater BMPs
- Joyce - 150% Energy Positive WWTP in 2024
- Herrick - Do I Need Grit Removal
- Codianne - Johnkasou Flat Plate Membrane Bioreactors for Decentralized WW Treatment
- Croll- Cost Impacts of PFAS to Biosolid Management
- Zimmer - Pipe Dreams
- Roach - Green Infrastructure Approaches
- Comfort - Wastewater Monitoring in the Coastal Marine Environment
- Deslauriers - Coastal Stormwater Drainage Planning
- Gaur - Developing the Appropriate Reserve Policy to Mitigate Against Future Risk
- Caliskaner - Performance of Advanced Primary Treatment Technologies
- Timko - Independent Online Aeration Ops Monitoring
- Keen - Protecting Wastewater Infrastructure in an Erosive Coastal Environment

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- Gold - Blower 101
- Gold - Total Control
- Gold - Blended Blower Systems
- Stober - Navigating One Water Planning
- Kestel - Utilizing Model Predictive Control to Maximize Aeration System Efficiency
- Yan - Salinity and Irrigation Water Reuse in Coastal Communities
- Belby - Implementation of the Punaluu Stream Restoration and Flood Mitigation
- Jessica - Benefits of Decentralized WWT
- Li- Organic Waste Sustainability Plan for SIWWTP
- Chrysochoou - Resource Recovery in Anaerobic Digestion and Fermentation through Innovative Bioaugmentation for Biosolids Pre-Treatment
- Goss - Innovations in Biosolids Process Technology
- Jones - Structured Decision Support
- Venu - Follow the Drop
- Han - Study of Shoreline Regulations and Managed Retreat for Hawaii
- Gupta - Nanocellulose Fibers from Ag Waste
- Sundaram - One Water Approach and Tools
- DeHeer - Plant Powered Water Reuse and Waterless Toilets
- Okano - New Hi Environmental Finance Center
- Shukia - Emerging Contaminants in Urban Sewage Treatment Plants
- Heller - Make Every Drop Count with Water Sensible
- Babcock - Planning for Large Scale Intensified Secondary Treatment at SI
- Sichz - Results from over 250 Decentralized Membrane Aerated Biofilm Reactors

12 **Lead Service Line Inventory Guidance**

2/27/24

US EPA

1.0 Contact Hours

0.1 CEUs

Topics included:

- EPA Lead Service Line Inventory Guidance
- Colorado Lead Service Line Inventory Guidance

13 **From the Trenches: System Experiences Developing Service Line Inventories**

3/13/24

AWWA

1.5 Contact Hours

0.15 CEUs

This webinar explores key lessons learned from utilities when developing their inventories to help other systems as they work to complete their inventories.

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- 14 **Safeguarding Tomorrow: Unraveling the Risks of Artificial Intelligence**
4/3/24
AWWA
1.5 Contact Hours
0.15 CEUs
In an era where the boundaries between the digital and physical worlds blur, understanding and mitigating the risks associated with artificial intelligence is paramount to protecting our critical infrastructure. Join us for this enlightening webinar where thought leaders and experts will provide insights to navigate the complexities of AI risks and empower you to embrace the transformative power of AI responsibly.
- 15 **Microplastics 2024: Practical State-of-the-Science in Drinking Water**
4/10/24
AWWA
1.5 Contact Hours
0.15 CEUs
This webinar will provide attendees with a practical briefing on the most up-to-date information on microplastics in drinking water, including occurrence/monitoring, treatment, and health effects.
- 16 **Optimizing Water Resources: Tools for Water Optimization and Energy Efficiency**
4/17/24
AWWA
1.5 Contact Hours
0.15 CEUs
This webinar will guide you through self-assessment and optimization tools so you can create an action plan and improve your operations. Panelists will discuss latest research and utility success stories, highlighting tools and techniques to save time, money, and energy.
- 17 **Part 1: Inorganics 101, Material Accumulation and Mitigation**
5/8/24
AWWA
1.5 Contact Hours
0.15 CEUs
Topics include:
 - Understanding the Role Inorganic Contaminants Play in Distribution System Water Quality
 - The Accumulation and Release of Contaminants in the Distribution System: Arsenic to Zinc
 - Distribution System Material Transport and Maintenance Practices
 - Utility Experiences with Metals Destabilization in the Distribution System
- 18 **Part 2: Sensory Diagnostics, pH Impacts and Inorganic Chloramines**
5/15/24
AWWA
1.5 Contact Hours
0.15 CEUs
Topics include:
 - It's about Shapes and Colors: Guide to Particles and Colors in Tap Water
 - Avoiding the Unintended Consequences of pH Change to Distribution System Stability
 - How to Ace Chloramine Measurement and Process Control
 - Why Water Quality Monitoring Matters Even in the Distribution System?
- 19 **Intelligent Water Systems: Navigating the Waters of Tomorrow**
6/5/24
AWWA
1.5 Contact Hours
0.15 CEUs
Emerging technologies compel water utilities to improve everyday practices. Advancements in instrumentation for water production, transmission, distribution, wastewater collection, and consumer endpoints allow for the optimization of water networks. While these innovations offer enhanced efficiency and reliability for water networks, the multitude of options available necessitates expert advice on the most valuable technologies and their optimal implementation strategies for utilities.

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Repeating Courses

20 Backflow Testing Education

The Water Connection

40.0 Contact Hours

4.0 CEUs

This course is related to theory, applicable laws, rules, assembly design, testing/maintenance to help qualify the applicant to proceed to the required certification examination. The literature used is USCFHCCR 10th edition, Uniform Plumbing Code and California Code of Regulations.

Correspondence/Online Courses

21 Introduction to Water Basics

Maryland Center for
Environmental Training

7.0 Contact Hours

0.7 CEUs

This course is designed to provide the operator with basic information related to small water systems and their distribution operations using Tech Briefs developed by the National Environmental Services Center.

22 Disinfection through Chlorination

Maryland Center for
Environmental Training

7.0 Contact Hours

0.7 CEUs

This course is designed to help participants recognize how and when to use various forms of chlorine chemicals. Topics will include principles of feeding gas chlorine, pumping hypochlorite and chlorine dioxide solutions using metering pumps e.g., diaphragm and peristaltic and preventative maintenance recommendations for both chlorine gas and liquid feed systems.

23 Coagulations, Flocculation, Sedimentation and Filtration

Maryland Center for
Environmental Training

7.0 Contact Hours

0.7 CEUs

This course focuses on tracking the flow of water through the four fundamental chemical/physical processes in water treatment. Participants will examine chemical reactions, the physical event of each process, and the plant equipment involved. Instruction and practice in solving typical operational and mathematical problems associated with these treatment functions will also be covered.

24 Developing Operations Plans

RCAC

2.0 Contact Hours

0.2 CEUs

Topics include:

- Elements that comprise an O&M plan
- Tools needed for developing an O&M plan
- Policies and procedures for keeping your O&M plan updated
- Resources and templates for developing O&M plans

25 Hydrant Installation

RCAC

2.0 Contact Hours

0.2 CEUs

This workshop will outline the steps necessary to install wet barrel and dry barrel fire hydrants. This includes the initial planning, the installation itself and steps that may need to be taken upon completion of the installation.

26 Chromium in Drinking Water: Return of the Chromium-6 MCL

RCAC

2.0 Contact Hours

0.2 CEUs

Chromium in drinking water has been regulated since 1977, but hexavalent chromium, more commonly known as chromium-6, has had a turbulent regulatory history. This workshop will help systems prepare for the new MCL and make informed decisions on treatment techniques.

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- 27 **Water Supply & Sources**
RCAC
2.0 Contact Hours
0.2 CEUs
- This learning event will provide operators, managers and board members of small water systems with a basic knowledge of how to determine the supply requirements (in terms of both volume and quality) of their water supply and to provide a basic understanding of the two types of water sources (groundwater and surface water) commonly used by small water systems. This will include the concepts of Max Day Demand, Peak Hour Demand, Diurnal Demand and source reliability. There will be a focus on the supply adequacy requirements of the California Water Works Standards.
- 28 **Seasonal Start-up Operations**
RCAC
2.0 Contact Hours
0.2 CEUs
- Topics include:
- How to complete an inspection of water system components
 - Disinfection and flushing
 - Best practices on coliform and chlorine residual monitoring
 - About the importance of using certified distribution operators
 - Rules on notifying your local regulating agency-DDW District Office or County Environmental Health Office
 - Instructions on seasonal water system start-up procedure and certification
- 29 **California's New Cross-Connection Control Handbook**
RCAC
2.0 Contact Hours
0.2 CEUs
- Topics include:
- How to identify potential and actual cross connections
 - Different backflow prevention devices and how to properly use them
 - The new State Handbook for Cross Connection Control
 - Basics on training and licensing for surveys and testing
- 30 **Get the Lead Out: Lead & Copper Rule Revisions**
RCAC
2.0 Contact Hours
0.2 CEUs
- This webinar will guide drinking water operators through the new Lead and Copper site selection process, criteria and sampling plans so that water supplies maintain compliance for lead and copper under the Safe Drinking Water Act.
- 31 **Groundwater Well Operation & Maintenance**
RCAC
2.0 Contact Hours
0.2 CEUs
- Topics include:
- Well inspection
 - Well operation and maintenance practices
 - Well pump basics
 - Groundwater quality concerns and trouble indicators
 - Measuring drawdown and tracking over time
 - Well sounders

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32 **Revised Total Coliform Rule**

RCAC

2.0 Contact Hours

0.2 CEUs

This workshop will focus on reviewing triggers for level 1 and level 2 assessments, who is expected to perform them, and how to conduct an assessment with examples and small group exercises.

33 **Distribution System Review**

American Water College

16.0 Contact Hours

1.6 CEUs

Topics include:

- System Design and Layout
- Distribution Piping
- Water Storage
- Fire Hydrants and Valves
- Water Meters
- Pumps and Motors
- Cross-Connection Control
- Disinfection
- Corrosion Control
- Water Quality
- Water Main Installation and Backfilling
- Safety
- Regulations
- Hydraulics