



STATE OF HAWAII'Ī | KA MOKU'ĀINA 'O HAWAII'Ī  
DEPARTMENT OF LAND AND NATURAL RESOURCES | KA 'OIHANA KUMUWAIWAI 'ĀINA  
**COMMISSION ON WATER RESOURCE MANAGEMENT | KE KAHUWAI PONO**  
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HONOLULU, HAWAII 96809

STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

November 21, 2023  
Honolulu, Hawai'i

Requesting Authority for the Chairperson to Enter into a Memorandum of Agreement with the Department of Health to Receive Drinking Water State Revolving Fund Set-Aside Funding and Authority for the Chairperson to Enter into Contracts to (1) Conduct Training on Using the American Water Works Association Water Audit Software and (2) Water Meter Testing

SUMMARY OF REQUEST

Staff is requesting authorization for the Chairperson of the Commission on Water Resource Management (Commission) to enter into a Memorandum of Agreement with the Hawai'i Department of Health to receive Drinking Water State Revolving Funds (DWSRF) Set-Aside funding. Staff is also requesting authorization for the Chairperson to enter into contracts to conduct statewide workshops for public water system personnel and operators on: (1) training on the American Water Works Association (AWWA) free water audit software v6.0 and (2) training on water meter testing. These activities will enhance the water audit program established by Act 169, Session Laws of Hawaii, 2016.

BACKGROUND AND PURPOSE

Act 169, Session Laws of Hawai'i, 2016, authorizes and requires the Commission to develop and implement a water audit program and provide technical assistance and training to counties and other public water system owners to complete validated standardized water audits. All county-owned public water systems, public water systems serving a population of 1,000 or more, and public water systems in water management areas are required to submit annual validated AWWA water loss audits to the Commission using the AWWA Free Water Audit Software. There are nearly 100 public water systems required to submit annual water loss audits to the Commission. To implement the water audit program, the Commission partnered with the Department of Health in 2017 and received DWRSR funding to establish a training and technical assistance program required under Act 169. A contractor was hired to assist the Commission staff with the program.

A water loss audit is an accounting procedure to determine the amount of real and apparent water loss from a water distribution system. Water loss audits employ a mass-balance analysis of water produced and consumed in the system. The ultimate objective is to reduce system water losses and conserve water supplies through the implementation of data-driven, cost-effective water loss control strategies. A water loss audit may also detect losses through billing errors or defective metering.

The accuracy of the data for volumes of water produced and consumed in a water system is critical to meaningful and reliable water loss audit results.

The results of the technical assistance program described above identified some common opportunities for improving data validity scores and reducing real and apparent water losses. A key opportunity for improving confidence in water loss audit results and improving data validity is source meter testing. A second and related key opportunity for improving confidence in water loss audit results is large customer meter testing and repair. Staff experience shows that few public water systems in Hawai'i test their source meters and customer meters for calibration or accuracy. There is an essential need to train water system personnel and operators on water meter testing in Hawai'i. Of the 100 or so public water systems submitting annual water loss audits to the Commission, none of them have a regular customer meter testing program. Some county water systems and less than 5 privately owned water systems test or calibrate their source meters.

In 2020, AWWA released version 6 of the AWWA Free Water Audit Software (FWAS), which is being adopted throughout North America. This is an improved version of the FWAS v5.0 and the Commission water audit program will be migrating to the latest version. To efficiently migrate to the new version of the FWAS, training is required for water system personnel and operators to understand and effectively use the FWAS v6.0 for submitting their annual water loss audits. Two Commission staff have been trained as certified validators (equivalent to the AWWA California-Nevada Section validator certification) and conduct the annual water audit validation interviews with the water system auditors.

#### MEMORANDUM OF AGREEMENT AND SOURCE OF FUNDS

Section 1420(k) of the Safe Drinking Water Act, Public Law 104-182, as amended, allows up to 15% of Hawaii's Environmental Protection Agency drinking water capitalization grant to be set-aside to support local assistance and other State programs. The two requested projects in this staff submittal are qualified projects under this authority. Commission staff worked with Department of Health staff to secure \$550,000 of federal funding for these projects through the Department of Health's Drinking Water State Revolving Fund program. To receive this funding, the Commission must enter into a memorandum of agreement (MOA) with the Hawaii Department of Health.

The MOA between the Commission and the Department of Health is to formalize the terms and conditions for the receipt and use of DWSRF. The MOA outlines the amount of funding to be received from Department of Health, the process for receiving funds, and the allowable uses of the funding. The MOA has been reviewed by the Department of Health is attached as Exhibit 1. If necessary, and prior to execution, the MOA may be subject to modifications and fine tuning that would not change the purpose or effect of the MOA.

#### PROPOSED PROJECTS

To improve the data validity and reduce uncertainty in the annual water loss audits submitted to the Commission, staff has worked with the Department of Health to secure funding for (1) training public water system personnel on the American Water Works Association free water audit software v6.0, and (2) training public water system personnel on testing water meters and developing a meter testing program. The DWSRF funding will be used to hire qualified contractors to complete these projects. These workshops will be offered free of charge to the affected public water system personnel and operators. The projects are briefly described below with more detail in Exhibit 1.

**Statewide Training Workshops on the American Water Works Association Free Water Audit Software v6.0**

This project consists of conduct training workshops on the American Water Works Association (AWWA) Free Water Audit Software (FWAS) v6.0. Workshop training curriculum shall be based on current AWWA methods and standards. This project is expected to cost \$50,000.

**Statewide Training Workshops on Water Meter Testing**

This project consists of conducting training workshops for drinking water distribution system operators and owners on water meter testing methods and establishing meter testing programs. Workshop course curriculum shall be based on current American Water Works Association methods and standards. This project shall have separate courses and workshops for source meters and consumption meters. This project is expected to cost \$500,000.

This training will assist the affected public water systems to develop internal capacity and skill sets to continue to improve the reliability and accuracy of their annual water loss audits submitted to the Commission. The training workshops would affect approximately 100 public water systems that deliver over 90% of the drinking water in the State and is expected to reach approximately 75 individuals.

AUTHORITY

Under its general powers and duties, the Commission has the authority to plan and coordinate programs for the conservation of water with various government agencies and to contract with private persons to assist with these programs.

§174C-5 (4), Hawaii Revised Statutes: *(the commission) May contract and cooperate with the various agencies of the federal government and with state and local administrative and governmental agencies or private persons;*

§174C-5 (13), Hawaii Revised Statutes: *(the commission) Shall plan and coordinate programs for the development, conservation, protection, control, and regulation of water resources based upon the best available information, and in cooperation with federal agencies, other state agencies, county or other local governmental organizations and other public and private agencies created for the utilization and conservation of water;*

The Commission is also authorized under Act 169, Session Laws of Hawai‘i, 2016, to establish a program to implement standardized water loss audits of public water systems in accordance with the method adopted by the American Water Works Association and to provide public water system operators technical assistance.

ENVIRONMENTAL REVIEW CHAPTER 343, HAWAII REVISED STATUTES

These proposed actions are continuing administrative activities listed in the *Comprehensive Exemption List for the State of Hawaii Commission on Water Resource Management Concurred with by the Environmental Council on January 5, 2021I*. These actions are covered under the following Exemption Class 8, Part 1 activities.

2. Contracts for small purchases, professional services, competitive sealed proposals, competitive sealed bidding, or purchase of goods and services which are exempt from HRS Chapter 103D
3. Requests for federal, state, county or private assistance grants to support ongoing operations or implement programs of the Commission.
5. Training, environmental interpretation, public safety efforts and other educational activities

As such, the proposed actions in this staff submittal are exempt from the application of HRS Chapter 343. Activities under Part 1 do not require an exemption notice.

### RECOMMENDATIONS

Staff recommends that the Commission:

1. Authorize the Chairperson to enter into a Memorandum of Agreement between the Commission and the Hawai'i Department of Health to receive grant funding to implement the projects described in this submittal and to amend or modify the memorandum of agreement provided that any amendment or modification does not require the use of State funds;
2. Authorize the Chairperson to enter into contracts to provide training to public water system personnel and operators and to expend up to \$550,000 in federal funds for the proposed projects described herein; and
3. Authorize the Chairperson to amend or modify the contract as may be necessary, provided that any amendment or modification does not require State funds.

The terms of the contracts are subject to the execution of the MOA, availability of funding and approval of the Chairperson and the Department's Deputy Attorney General. Procurement and contracting will be done in accordance with Chapter 103D, Hawaii Revised Statutes. The MOA shall be approved by the Department's Deputy Attorney General.

Ola i ka wai,



M. KALEO MANUEL  
Deputy Director

EXHIBIT 1: MOA between Commission and Department of Health

APPROVED FOR SUBMITTAL:



DAWN N. S. CHANG  
Chairperson

MEMORANDUM OF AGREEMENT  
Between  
THE STATE OF HAWAII DEPARTMENT OF HEALTH, SAFE DRINKING WATER BRANCH  
And  
THE STATE OF HAWAII COMMISSION ON WATER RESOURCE MANAGEMENT

THIS MEMORANDUM OF AGREEMENT (hereinafter "MOA") is effective this \_\_\_\_ day of \_\_\_\_\_, 202\_\_, between the STATE OF HAWAII DEPARTMENT OF HEALTH, SAFE DRINKING WATER BRANCH (hereinafter referred to as "HDOH-SDWB") whose business address is 2385 Waimano Home Road, Suite 110, Uluakupu Building 4, Pearl City, Hawaii 96782-1400, and the STATE OF HAWAII COMMISSION ON WATER RESOURCE MANAGEMENT (hereinafter referred to as "CWRM") whose business address is 1151 Punchbowl Street, Honolulu, Hawaii 96813.

BACKGROUND

Act 169, Session Laws of Hawaii 2016, authorizes and requires CWRM to establish a water audit program to provide technical assistance to public water systems to conduct standardized water audits in accordance with the method adopted by the American Water Works Association's Water Audits and Loss Control Programs, Manual of Water Supply Practices – M36, as amended. In 2017 HDOH-SDWB entered into an agreement with CWRM to provide Drinking Water Revolving Funds (DWSRF) 15% Set-Aside funding for a project to assist CWRM to establish a water audit program. This project was successfully completed in 2021 with recommendations in Phase 1 and Phase 2 project reports. CWRM is seeking DWSRF funding to implement priority program recommendations that would improve the delivery efficiency of public water systems in Hawaii.

RECITALS

WHEREAS, pursuant to Chapter 340-E, Hawaii Revised Statutes, the HDOH-SDWB is authorized to promulgate and enforce primary drinking water regulations, to perform any and all acts necessary to carry out the statutory purpose of protecting health, and to enter into agreements, contracts, or cooperative arrangements;

WHEREAS, CWRM is authorized to plan and coordinate programs to conserve and protect Hawaii's fresh water resources in cooperation with government agencies and private organizations under §174C-5(13), Hawaii Revised Statutes (HRS);

WHEREAS, CWRM has provided HDOH-SDWB proposals to (1) to conduct statewide training workshops on the testing of water meters used in public water systems to measure production and customers consumption; and (2) conduct statewide training workshops on the American Water Works Association (AWWA) Free Water Audit Software v6.0 (FWAS)

WHEREAS, HDOH-SDWB has sufficient funds in the DWSRF 15% Set-Aside to support local assistance and other state programs to fund this MOA;

WHEREAS, HDOH-SDWB "Drinking Water Treatment Revolving Loan Fund Intended Use Plan For The State Of Hawaii Fiscal Year (SFY) 2024 and the Federal Fiscal Year (FFY) 2023 Appropriation" identifies two projects: (1) Statewide water meter training program; and (2) training workshops on the American

Water Works Association Free Water Audit Software (v6.0) as projects or subawards utilizing the DWSRF 15% Set-Aside to support local assistance and other state programs; and

WHEREAS, HDOH-SDWB and CWRM agree that the implementation of recommendations in Phase 1 and Phase 2 reports of the water audit program authorized under Act 169, Session Laws of Hawai'i 2016, would help fulfill the intents and purposes of both the Safe Drinking Water Act of 1974 (Pub. L. 92-523, as amended), Chapter 340E, Hawai'i Revised Statutes and Chapter 174C, Hawai'i Revised Statutes (State Water Code).

NOW, THEREFORE, in consideration of the mutual promises contained herein, the parties mutually agree as follows:

1. **Project Description.** CWRM shall hire a contractor to complete (1) statewide water meter training workshops; and (2) training workshops on the American Water Works Association Free Water Audit Software, (hereinafter collectively referred to as the "PROJECT"), whose scope of services, compensation and payment schedule, and time of performance are attached hereto as Exhibit A and made a part hereof.
2. **Time of Performance.** CWRM shall ensure that the PROJECT shall be completed by December 31, 2026. Extensions to the "Time of Performance" may be granted in writing upon mutual agreement by HDOH-SDWB and CWRM.
3. **Compensation and Payment Schedule.** In full consideration for services contracted under this MOA, HDOH-SDWB agrees, subject to allotments to be made by the Director of Finance, State of Hawai'i, pursuant to Chapter 37, Hawai'i Revised Statutes, to pay to CWRM a total sum of money not to exceed FIVE-HUNDRED-FIFTY-THOUSAND AND NO/100 DOLLARS (\$550,000.00) of DWSRF funds, which shall be paid in accordance with and subject to the following:
  - a. Payments shall be made upon the submission by CWRM of invoices for the services to be provided in accordance with Exhibit A.
  - b. Payment will be made on a remittance basis. The invoices shall be certified by CWRM and contain only expenditures actually incurred for the performance of services under this MOA. Payments will be made to CWRM via journal voucher into a state account of appropriation specified by CWRM.
  - c. All payments shall be made in accordance with and subject to Chapter 40, Hawai'i Revised Statutes, which specifies the accounting procedures and controls applicable to payments out of the Treasury of the State of Hawai'i.
4. **Termination.** If either party determines that the terms of this MOA are not being met in a mutually satisfactory manner, either party may terminate this MOA upon 60-calendar days written notice to the other party. Both parties shall use their best efforts to resolve agreement disputes cooperatively, including, if both parties agree, the use of alternative dispute resolution, prior to any notice of termination.

IN WITNESS WHEREOF, the parties hereto have executed this MOA effective as of the day, month, and year first above written.

APPROVED AS TO FORM:

By:

\_\_\_\_\_  
Deputy Attorney General

STATE OF HAWAI'I  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

By:

\_\_\_\_\_  
DAWN N.S. CHANG  
Chairperson

Approved by the Commission on Water Resource  
Management at its meeting held on November  
21, 2023.

APPROVED AS TO FORM:

By:

\_\_\_\_\_  
Deputy Attorney General

STATE OF HAWAI'I  
DEPARTMENT OF HEALTH

By:

\_\_\_\_\_  
KENNETH S. FINK, M.D.  
Director of Health

DRAFT

Project Proposal Requesting Hawaii Department of Health  
Drinking Water State Revolving Funds SFY2024  
Local Assistance and Other State Programs Set-Aside (15% Set-Aside Funding)

Project Name

Statewide Water Meter Testing Training Program for Public Water Systems – Source Meter and Customer Meter Testing and Technical Assistance Workshops

Applicant

State of Hawaii Department of Land and Natural Resources, Commission on Water Resource Management (Commission)

Project Objective and Need

In 2016, Act 169, Session Laws of Hawai'i was signed into law and established the Hawai'i water audit program which requires affected public water systems (PWS) to submit Level 1 validated American Water Works Association (AWWA) Water Loss Audits to the Commission on Water Resource Management (Commission) on an annual basis. Act 169 also required the Commission to provide training on how to complete the AWWA water loss audits. This program currently affects 98 PWS statewide. The intent of the Act is to improve the understanding of water delivery efficiency and water loss of PWS across the State of Hawai'i, which would lead to the establishment of water loss control programs within these systems.

The Commission has received five years of annual validated water audits from the county-owned systems and three years of annual validated water audits from the large-capacity/water management area systems. The Commission continues to conduct Level 1 validation of the annually submitted water audits. The three to five years of water audit results demonstrate a critical need for affected PWS to take actions to improve their data validity scores and the reliability of the volumes of water supplied and authorized consumption within the respective PWS. This discovery is also consistent with findings from the initial training and technical assistance under Act 169. None of the affected PWS has a systematic source meter testing program or a systematic customer meter testing program. Accuracy of these volumes is the most important factor in producing meaningful water audit results and performance indicators. Given the uncertainty of the water supplied and consumption data, the Commission believes that many water audit results are not reliable. There is a statewide need for training and technical assistance for (1) water meter testing and (2) developing meter testing programs.

Project Description and Approach

To address the needs described above, the Commission proposes a comprehensive program to train distribution system operators and owners on how to test their source and customer meters. Similarly, there is a need to provide training and technical assistance on how to establish meter testing programs. The proposed program will include two separate tracks: (1) source meter track and (2) customer meter track. Workshops will be held on Kaua'i, O'ahu,



Maui, Molokai, and Hawai'i Island. The table below describes the proposed project. Note that some tasks may change due to availability of sites for hands-on workshop, PWS schedule and availability, and the extend of PWS participation.

Track 1: Source Meter Testing Methods Training and Technical Assistance		
Tasks	Locations	Deliverables
Source meter testing classroom workshop (8-hours)	Kaua'i, O'ahu, Maui, Molokai, and Hawai'i Island	Workshop completion (5), training manual
Source meter testing on-site workshop (8-hours)	Kaua'i, O'ahu, Maui, Molokai, and Hawai'i Island	Workshop completion (5), training manual
Source meter testing program elements, requirements, and establishing a source meter testing program workshop (8-hours)	Kaua'i, O'ahu, Maui, Molokai, and Hawai'i Island	Workshop completion (5), training manual and example source meter testing program.
Develop summary report with recommendations		Final report
Travel expenses Commission staff (reimbursable)	Kaua'i, O'ahu, Maui, Molokai, and Hawai'i Island	
Track 2: Customer Meter Testing Methods Training and Technical Assistance		
Tasks	Locations	Deliverables
Customer meter testing classroom workshop (8-hours)	Kaua'i, O'ahu, Maui, Molokai, and Hawai'i Island	Workshop completion (5), training manual
Customer meter testing on-site workshop (8-hours)	Kaua'i, O'ahu, Maui, Molokai, and Hawai'i Island	Workshop completion (5), training manual
Customer meter testing program elements, requirements, and establishing a source meter testing program workshop (8-hours)	Kaua'i, O'ahu, Maui, Molokai, and Hawai'i Island	Workshop completion (5), training manual and example customer meter testing program.
Develop summary report with recommendations		Final report
Travel expenses Commission staff (reimbursable)	Kaua'i, O'ahu, Maui, Molokai, and Hawai'i Island	

The targeted trainees are the PWS personnel who would implement or oversee the implementation of meter testing. This would include approximately 50-75 individuals from 98 PWS involved with the statewide water audit program.

To complete this project, the Commission on Water Resource Management would hire an expert and experienced water loss control consultant/contractor to conduct the training workshops. Track 1 workshops would be completed before Track 2 workshops commence and the individual trainees should enroll in both Tracks. Commission staff would manage the contract and any agreement between the Commission and Hawai'i Department of Health to receive DWSRF funds.

Project Budget and Proposed Funding Source

Project budget estimate is \$500,000 from DWSRF 15% Set-Aside

Project Timetable

Contracting and other administrative approvals and requirements may take up to 4-months. Once a contract is executed, this project can be completed in 12-months. Here is an estimated timeline for this proposed project.

Date	Action/Task	Notes
December 2023	<ul style="list-style-type: none"> <li>MOU between DOH/CWRM for DWSRF set-aside award</li> <li>CWRM approval to enter into contract/Governor's approval</li> <li>CWRM begin procurement process to select contractor</li> </ul>	FFY2024 DWSRF funds available on November/December 2023
April 2024	Execute contract with contractor and notice to proceed	Procurement and contracting expected to take approximately 4-months
May 2024	<ul style="list-style-type: none"> <li>Project schedule established</li> <li>Send workshop invitations</li> </ul>	
June 2024	Begin workshops	
February 2025	Final workshops	Depending on scheduling, this project may be completed sooner
April 2025	Final report	

Project Results or Benefits

The Commission's goal is to train personnel from all PWS affected by Act 169 (see attached list). The completion of this project will develop local technical and managerial capacity. We anticipate this would also increase the number water efficiency projects that may qualify under DWSRF programs.

Capacity Building

- PWS managers and personnel would understand source meter testing and large customer meter testing methods

- PWS managers and personnel would gain knowledge to develop a source meter testing program and a customer meter testing program

#### Water Efficiency Projects / Climate Change Resiliency Projects

- Affected PWS owners will be able to identify meter-related projects to improve their data validity grades, including testing and replacement of production meters and customer meters
- Meter testing would provide more accurate water supplied and authorized consumption volumes, which will help PWS to design a comprehensive water loss control program for their system, which may include pressure reduction, main line replacement, and other capital projects to increase water delivery efficiency

#### Other Agencies or Organizations Involved

The Hawai'i Rural Water Association and Rural Community Assistance Corporation would also be invited to the training workshops and could help to continue technical assistance with meter testing and calibration to the PWS after this project is completed.

#### DWSRF Eligibility

This project meets the eligibility criteria for DWSRF Local Assistance and Other State Programs Set-Aside (15%). This project will improve technical capacity development in the State of Hawai'i by training PWS personnel in meter testing methods and the development of their respective meter testing programs. The overall goals of the Commission's water audit program are improved water delivery efficiency and increased resilience to the impacts of drought and climate change. This project will allow the affected PWS to design projects to achieve both of these goals, which will ultimately save money, reduce electrical consumption, and wisely utilize and preserve our state's limited freshwater resources.

#### Applicant Contact

Neal Fujii  
Hawai'i Commission on Water Resource Management  
neal.d.fujii@hawaii.gov  
808-587-0264

Project Proposal Requesting Hawaii Department of Health  
Drinking Water State Revolving Funds SFY2024  
Local Assistance and Other State Programs Set-Aside (15% Set-Aside Funding)

Project Name

Statewide Training Workshops on the American Water Works Association Free Water Audit Software v6.0

Applicant

State of Hawaii Department of Land and Natural Resources, Commission on Water Resource Management (Commission)

Project Objective and Need

In 2016, Act 169, Session Laws of Hawai'i was signed into law and established the Hawai'i water audit program which requires affected public water systems (PWS) to submit Level 1 validated American Water Works Association (AWWA) Water Loss Audits to the Commission on Water Resource Management (Commission) on an annual basis. Act 169 also required the Commission to provide training on how to complete the AWWA water audits, using AWWA Free Water Audit Software (FWAS) v5.0. In 2020 AWWA released an updated FWAS v6.0, which provides a new interactive data validity grading matrix and a dashboard for data validity and Key Performance Indicators (KPI) benchmarking. The Commission plans to transition to AWWA FWAS v6.0, but training of the PWS personnel is critical to the successful transition. There is an essential need to train personnel from the 98 affected PWS across the state of Hawai'i on using the AWWA FWAS v6.0 prior to the Commission transition to this version.

Project Description and Approach

To address the needs described above, the Commission proposes an 8-hour training workshop, which will be held on Kaua'i, O'ahu, Maui, Molokai, and Hawai'i Island (2). The table below describes the proposed project.

Training on AWWA FWAS v6.0		
Tasks	Locations	Deliverables
Water audit software training workshop on AWWA FWAS v6.0 using the AWWA methodology for water loss audits (8-hour workshop)	Kaua'i, O'ahu, Maui, Molokai, and Hawai'i Island (2)	Workshop (6) completion, training manual
Develop summary report with recommendations		Final report
Neighbor island travel expenses for Commission staff (reimbursable)	Kaua'i, Maui, Molokai, and Hawai'i Island (2)	

The targeted trainees are the PWS managers and personnel who would implement or oversee the water audit program within their respective organizations. This would include approximately 75 individuals from 98 PWS involved with the statewide water audit program.

To complete this project, the Commission on Water Resource Management would hire an expert and experienced water loss control consultant/contractor to conduct the training workshops. Commission staff would manage the contract and any agreement between the Commission and Hawai'i Department of Health to receive DWSRF funds.

Project Budget and Proposed Funding Source

Project budget estimate is \$50,000 from DWSRF 15% Set-Aside

Project Timetable

Once a contract is executed, this project can be completed in 6-months. The following is an estimated timeframe for this project.

Date	Action/Task	Notes
December 2023	<ul style="list-style-type: none"><li>MOU between DOH/CWRM for DWSRF set-aside award</li><li>CWRM approval to enter into contract</li></ul>	FFY2024 DWSRF funds available on November/December 2023
January 2024	Execute contract with contractor and notice to proceed	Contracting expected to take approximately 1-month
February 2024	<ul style="list-style-type: none"><li>Project schedule established</li><li>Send workshop invitations</li></ul>	
March 2024	Begin workshops	
May 2024	Final workshops	Depending on scheduling, this project may be completed sooner
July 2024	Final report	

Project Results or Benefits

The Commission's goal is to train personnel from all PWS affected by Act 169 (see attached list of PWS). The completion of this project will develop local technical and managerial capacity. We anticipate this would also increase the number water efficiency projects that may qualify under DWSRF programs.

Capacity Building

- PWS managers and personnel will improve their capability to complete water audits using AWWA FWAS v6.0
- PWS managers and personnel can utilize water audit results to assess and evaluate data validity, water losses, and KPI benchmarking

Water Efficiency / Climate Change Resiliency Projects

- Water audits would help PWS to identify projects to improve their data validity grades, including testing and replacement of production meters and customer meters, and investigation into raw data and reports of production and consumption
- Water audits would help PWS to identify projects to reduce real and apparent water losses, including Level 2 and Level 3 water audit validation, meter test and replacement program, leak detection, pressure management, billing database analysis, and main line replacement

Other Agencies or Organizations Involved

The Hawai'i Rural Water Association and Rural Community Assistance Corporation would also be invited to the training workshops. These organizations could help to continue technical assistance with water audits to the PWS after this project is completed.

DWSRF Eligibility

This project meets the eligibility criteria for DWSRF Local Assistance and Other State Programs Set-Aside (15%). This project will improve technical capacity development in the State of Hawai'i by training PWS personnel in water audit methods and the use of the AWWA FWAS v6.0. The overall goals of the Commission's water audit program are improved water delivery efficiency and increased resilience to the impacts of drought and climate change. This project will allow the affected PWS to design projects to achieve both of these goals, which will ultimately save money, reduce electrical consumption, and wisely utilize and preserve our state's limited freshwater resources.

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