

APPROVALS FOR SUBSTANTIAL MODIFICATION, NEW SOURCE, OR NEW PWS

Hawaii Administrative Rules, Title 11, Chapter 20, “Rules Relating to Potable Water Systems,” require approval by the Director of Health for

- ◆ anyone proposing to substantially modify an existing public water system (HAR 11-20-30);
- ◆ anyone proposing to use a new source of raw water to supply a public water system (HAR 11-20-29); or
- ◆ anyone proposing to construct or use a new public water system to deliver water to any user (HAR 11-20-29.5).

For a detailed overview, please contact Mike Miyahira at 808-586-4258 for a New System Packet. General guidelines and procedures are outlined below.

1. Review and Approval of Proposed Substantial Modification to an Existing Public Water System (PWS) or New, Proposed PWS Construction Plans

Proposed Substantial Modification to an Existing PWS

Submit:

- * Construction Plans
- * Other SDWB-Required Documents



Receive:

- * Construction Plans signed by DOH, Environmental Management Division Chief, which constitutes Approval to Construct

If the Applicant is proposing a substantial modification to an existing water system or is proposing to construct or use a new,

proposed PWS, the Applicant must submit construction plans and other SDWB-required documentation and receive approval to construct the substantial modification.

Following a satisfactory review of the construction plans, the Applicant shall submit the cover sheet tracing for signature by the Chief, Environmental Management Division, Department of Health. The signed tracing constitutes approval of the construction plans, unless the plans are for the construction of a new, proposed PWS (see 3 below).

2. Review and Approval of New Sources of Raw Water to Supply a PWS

New Raw Water Source Serving a PWS

Submit:

- * Engineering Report
- * Construction Plans (Non-County owned)



Receive:

- * Conditional Approval to use Source to serve the PWS
- * Construction Plans signed by DOH, Environmental Management Division Chief, which constitutes Approval to Construct (Non-County owned)

If the Applicant is proposing to use a new source of raw water to supply a PWS, a comprehensive engineering report of the proposed project shall be prepared and sealed by a registered engineer, and submitted to the SDWB. The report must include all information specified in the

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JULY 2016

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APPROVALS

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latest revision of the “Guidelines for Preparation of Engineering Reports for New Drinking Water Sources for Regulated Public Water Systems” which may be found on our website or requested from the SDWB.

Conditional approval to use the raw water source as a drinking water source for a PWS will be provided following satisfactory interagency review, unless the raw water source is part of a new, proposed PWS (see 3 below).

If you are using a surface water or ground water under the direct influence of surface water source or alternative treatment technologies (e.g. membrane filtration, reverse osmosis, UV disinfection) to treat the raw water, it is recommended that you contact the SDWB Engineering Section, prior to preparing the Engineering Report to discuss additional requirements.

3. Review and Approval of a New, Proposed Public Water System

If the Applicant is proposing to construct or use a new, proposed PWS (publicly- or privately-owned), the Applicant shall satisfactorily demonstrate pre-construction and start-up Technical, Managerial, and Financial (TMF) capacity, in addition to meeting the requirements for construction plans and new sources of raw water to supply a PWS.

Pre-construction TMF capacity is primarily demonstrated by submittal of a report addressing the requirements of the latest edition of the “Pre-Construction Capacity Evaluation for New Community and New Nontransient Noncommunity Water Systems” which may be requested from the

SDWB. Following satisfactory demonstration of pre-construction TMF capacity, interagency review of the raw water source as a drinking water source for a PWS and review of the construction plans for the water system, approval to construct the water system will be provided.

Start-up TMF capacity is primarily demonstrated by submittal of a report addressing the requirements of the latest edition of the “Startup Capacity Evaluation for New Community and New Nontransient Noncommunity Water Systems” which may be requested from the SDWB. Following satisfactory demonstration of startup TMF capacity, including the completion of a sanitary survey conducted by SDWB staff and submission of as-built plans of the water system, approval to operate the water system and a conditional approval to use the raw water source to supply a PWS will be provided.

New PWS

Submit:

- * Engineering Report thru Interagency Review
- * Pre-construction TMF Capacity Report
- * Construction Plans



Receive:

- * Construction Plans signed by DOH, Environmental Management Division Chief
- * Approval to Construct



Submit:

- * Startup TMF Capacity Report, including As-Built Plans



SDWB Conducts:

- * Sanitary Survey



Receive:

- * Approval to Operate the PWS
- * Conditional Approval to use Source to serve the PWS

QUARTERLY CALENDAR

- ◆ **7/1 CCR Distribution Deadline**
Community Systems
- ◆ **7/8 CT Report Due**
Surface Water Systems
- ◆ **7/8 MRDL Report Due**
Disinfection Systems who complete their own tests
- ◆ **7/8 TCR Report Due**
Systems who complete their own tests
- ◆ **7/8 Enhanced Coagulation Report Due**
Conventional Treatment Systems
- ◆ **7/8 Chemical Quarterly Monitoring Report Due**
Systems with quarterly monitoring requirements
- ◆ **7/25-26 WTPO Exam**
Maui, Kona, Oahu, & Hilo
- ◆ **7/25 DSO Applications Due**
October Examinees
- ◆ **8/10 CT Report Due**
Surface Water Systems
- ◆ **8/10 TCR Report Due**
Systems who complete their own tests
- ◆ **8/23 Board of Certification Meeting**
SDWB Honolulu, 10:00 am
- ◆ **8/25 DSO Exam Registrations Due**
October Examinees
- ◆ **9/9 CT Report Due**
Surface Water Systems
- ◆ **9/9 TCR Report Due**
Systems who complete their own tests
- ◆ **9/30 Lead & Copper Monitoring Period Ends**
Selected Systems

JULY 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 CCR Distribution Deadline	2
3	4 HOLIDAY	5	6	7	8 CT Report Due MRDL Report Due TCR Report Due Enhanced Coagulation Report Due Chemical Quarterly Monitoring Report Due	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25 Maui & Kona WTPO Exam DSO Applications Due	26 Oahu & Hilo WTPO Exam	27	28	29	30

AUGUST 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	1	2	3	4	5	6
7	8	9	10 CT Report Due TCR Report Due	11	12	13
14	15	16	17	18	19 HOLIDAY	20
21	22	23 Board of Certification Meeting	24	25 DSO Exam Registrations Due	26	27
28	29	30	31			

SEPTEMBER 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5 HOLIDAY	6	7	8	9 CT Report Due TCR Report Due	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30 Lead & Copper Monitoring Period Ends	

HRWA
CEU Training Program
 for
Water System Operators



Contact hrwaoffice@hawaiiirwa.org or 808-315-8925 for registration information.

Course	CEUs	Date	Location	Fee PWS Employee
Electrical Motors Overview & Safety	0.6	6/21/16	Big Island	\$270
Electrical Motors Overview & Safety	0.6	6/23/16	Kauai	\$270
Electrical Motors Overview & Safety	0.6	6/28/16	Oahu	\$270
Electrical Motors Overview & Safety	0.6	6/29/16	Maui	\$270
Overview of Positive Displacement Pumps	0.6	7/12/16	Big Island	\$270
Overview of Positive Displacement Pumps	0.6	7/14/16	Kauai	\$270
Overview of Positive Displacement Pumps	0.6	7/19/16	Oahu	\$270
Overview of Positive Displacement Pumps	0.6	7/20/16	Maui	\$270
Maintenance of Centrifugal Pump Packing, Seals, & Bearings	0.6	8/2/16	Big Island	\$270
Maintenance of Centrifugal Pump Packing, Seals, & Bearings	0.6	8/4/16	Kauai	\$270
Maintenance of Centrifugal Pump Packing, Seals, & Bearings	0.6	8/9/16	Oahu	\$270
Maintenance of Centrifugal Pump Packing, Seals, & Bearings	0.6	8/10/16	Maui	\$270

EPA WATER SECURITY DIVISION PRODUCTS & SERVICES LIST
 CLICK [HERE](#) OR GO TO THE SDWB WEBSITE TRAINING PAGE

ABPA
Hawaii Chapter

Backflow Testers
 Certification & Re-Certification
Thursday, July 14, 2016
Written & Hands-On Examinations
 Register at www.abpa.org.

Online Training

HRWA is now offering online operator training powered by **SunCoast Learning Systems**

Click [HERE](#) for a direct link to online training or go to www.suncoastlearning.com and click on the State of Hawaii

BEAUTIFUL MILOLII

As part of its campaign to control the spread of Dengue Fever on the Big Island of Hawaii, the Department of Health sent a team to visit the remote fishing village of Milolii, located 33 miles south of Kona, to survey rainwater catchment facilities and ask residents about their system, its maintenance, and their willingness to take action to prevent their water catchment tanks from becoming mosquito breeding grounds. Dressed in protective attire, SDWB engineers Mike Miyahira and Mel Hamano, accompanied by entomologist Dr. Pingjun Yang from Vector Control (Oahu) and Jasmine Staup from the Kona Public Health Nursing Office, ventured down off the main highway to Milolii.

Milolii is a beautiful little oceanside community of about 50 homes. It is very hot and dry with no water system except for individual rainwater catchment and no electricity except for portable generators or photovoltaics. Cesspools and an occasional septic system/leach field are used for wastewater disposal. Each home had a standard corrugated steel catchment tank of approximately 9,000 to 10,000 gallon capacity covered with a black tarp. What little rain that fell was captured off the roof and conveyed via PVC piping into the tank. However, the primary source of water to fill these tanks appeared to be hauled water, either by a small tanker or by the residents themselves using whatever means they could to fill and then transport potable water from the free County-provided spigots as far as 30 miles away. Many of the systems drew water from their tank via a small 3-5 gpm electric pump that combined with a small 5 gallon hydropneumatic produced between 25-50 psi in the home. Some of these systems also had an in-line cartridge filter, but they were rarely cleaned or changed out.

A survey had been distributed prior to our visit with only 10 completed. We were able to complement that by helping persons we visited complete the survey.

Survey Results

- ◆ About half (9 out of 19) of the survey respondents said they used their catchment water for drinking. Others used the water to support many other household activities but not for drinking.
- ◆ None of the residents used a first flush diverter to keep their water clean.
- ◆ Almost all were familiar with the use of chlorine bleach to “clean” the water,



Mel Hamano & Jasmine Staup start the inspection.

but none took chlorine residuals to find out if they still had an effective dose remaining in their tanks. Chlorine was typically added when new water was added to the existing volume in the form of 1-2 cups of chlorine bleach. An occasional resident added one-half cup per month. A single cup of 6% bleach added to 10,000 gallons of clean water produces a residual of almost 0.4 mg/L. However, it is likely, given the fact that the catchment tanks were outside, had some algae growth in them, and were exposed to heat most of the day, that there was no chlorine residual in any of the tanks after a few hours following chlorination.

MILOLII SURVEY

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- ◆ No one swept their roof (partially because the roofs were too high to be influenced by plant debris which generally did not exceed the roofline.
- ◆ Almost everyone (18/21) was willing to drain their tanks to prevent mosquito growth, but some expressed concern over the cost to refill the tank.
- ◆ Almost everyone (20/21) was willing to improve their tank covers, but again some were concerned with the cost of cover replacement.
- ◆ Very few (3/21) were willing to use mosquito fish in their tanks.
- ◆ A few (8/21) were willing to use cooking oil to kill the mosquito larvae.
- ◆ A few (5/21) were willing to use larvicides however were concerned over the impact on water quality.
- ◆ A majority (16/19) were willing to increase the chlorine dosage in their tanks in an attempt to kill mosquito larvae

Inspection Results

- ◆ All tanks displayed evidence of corrosion at the bottom, but remained in usable shape.
- ◆ Almost all tanks were covered with a tarp secured to bolts in the side of the tank by rope all the way around.
- ◆ The tarp was usually worn in one or more places which allowed mosquito access.
- ◆ Residents that were proactively draining their tanks to clean them out and refill them were also abandoning maintenance during this period and therefore tarp condition and water quality (lots of algae) suffered greatly.
- ◆ Just based on visual inspection, none of the surveyed tanks' contents appeared to meet State or Federal drinking water standards for microbial quality. Several tanks had no cover at all and were growing various aquatic insect larvae. A good number of the tanks experienced cloudy, slightly green or very green (algae) conditions.
- ◆ The pleated cartridge filters were likely not providing any benefit as most were not changed out regularly (if ever) and many were cloudy or green with algae.
- ◆ The cesspools/septic tank systems that could be found on the residents' property did not appear to contribute to mosquito breeding sites.

Entomological Results

- ◆ Mosquito larvae (*Aedes* & *Culex*) were found in five of the twelve tanks.
- ◆ *Aedes Aegypti* mosquitoes were found in traps (adults) or buckets (larvae) in four homes. Three of these homes had no mosquito breeding detected in the tanks.

Conclusions

- ✓ Proper installation and regular maintenance of a cover has been and continues to be the Safe Drinking Water Branch's recommendation for mosquito control in rainwater catchment tanks. The solid cover will serve to prevent mosquito access to the water or if the mosquitoes get into the tank, will trap them between the water and the cover.
- ✓ Other options that have been considered have unacceptable adverse effects on either water quality or on the distribution system.

DSO PASS RATE DROPS

The overall pass rate for the Distribution System Operator (DSO) exam dropped to 33% for this past April's exam. The table to the right provides a breakdown by grade. Grade 1 examinees were able to continue at a high pass rate. However, Grade 4 examinees struggled with the more difficult exam. Congratulations to those who passed the exam!

Grade	Passed	Examinees	Passing Rate
1	11	20	55%
2	6	20	30%
3	4	11	36%
4	1	15	7%
Total	22	66	33%

According to the Master Summary Report, Grade 1 examinees had most difficulty with the Performing Maintenance objective. Grades 2 and 3 struggled with Performing Security, Safety & Administration questions. And Grade 4 examinees need improvement in Laboratory Analysis.

For those who would like to retake the exam in October, please submit your exam registration form and \$30 fee by July 25, 2016.

MAHALO BOB

Robert "Bob" Spetich attended his last board meeting on May 24, completing his service of two consecutive terms as a member and chairman of the Board of Certification of Public Water System Operators from July 1, 2008 to June 30, 2016.

With over thirty years of experience in water and wastewater system management, design, planning, operation, and start-up, Bob provided valuable insight and fully understood the importance of a

drinking water operator certification program and maintaining certification. His willingness to volunteer as a member of the board was commendable.



Bob Spetich

Thank you, Bob, for your years of service!

Operator Library Reference Books for ABC Exams Available

Contact Jodi Yamami
jodi.yamami@doh.hawaii.gov

AUGUST 23, 2016

10:00 A.M.

MEETING

Board of Certification
of Public Water System Operators
919 Ala Moana Blvd., Room 308, Honolulu

BOARD MEMBERS

Galen Shigeta - Eric Okazaki - Glenn Ah Yat



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DEPARTMENT OF HEALTH
SAFE DRINKING WATER
BRANCH**

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DAVID Y. IGE
Governor of Hawaii

VIRGINIA PRESSLER, M.D.
Director of Health

KEITH E. KAWAOKA, D. Env.
Deputy Director for Environmental Health

The mission of the Safe Drinking Water Branch of the Department of Health is to safeguard public health by protecting Hawaii's drinking water sources (surface water and groundwater) from contamination and assure that owners and operators of public water systems provide safe drinking water to the community. This mission is accomplished through the administration of the Safe Drinking Water Program, Underground Injection Control Program (UIC), Groundwater Protection Program (GWPP), and the Drinking Water State Revolving Fund (DWSRF).

We're on the Web!

<http://health.hawaii.gov/sdwb/>

We provide access to our activities without regard to race, color, national origin (including language), age, sex, religion, or disability. Write or call our Affirmative Action Officer at Box 3378, Honolulu, HI 96801-3378 or at 808 586-4616 (voice) within 180 days of a problem.

ALAN DILLON JOINS THE SDWB

Relocating across the country, Alan Dillon joined the SDWB in May. In his position, Alan will review grant applications and contracts with contractors and ensure compliance with Federal and State requirements relating to Safe Drinking Water Act (SDWA) grants and State procurement law.

With Psychology and Chemical Engineering degrees from the City University of New York, Alan worked with the New Jersey Bureau of Safe Drinking Water for 30 years where he was involved with permitting, compliance, laboratory operation, operator certification and training, small system technical assistance, capacity development, asset management, and Drinking Water State Revolving Fund (DWSRF) financing. He was course coordinator for the annual Rutgers SDWA update course, providing topics specific to the Act as well as general topics of interest to water industry professionals. Alan is Past President of the Association of Boards of Certification (ABC) and worked with the Environmental Council of the States (ECOS) to evaluate the Delhi, India water treatment facilities. He is looking forward to working with the Hawaii drinking water community to support sustainable public water systems.



Alan Dillon

Alan has three children including a son who is a Penn State University engineering graduate, a daughter who is a University of North Carolina biology/chemistry graduate, and another son who is a Nittany Lion "cub" (aka undergraduate). Alan's wife, Jill, is a Rutgers University graduate who specializes in groundwater cleanups and the implementation of ground water protection, investigation and remediation programs.