



# WATER MATTERS

Safe, dependable, and affordable water, now and into the future

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## Contested Case Hearing on Red Hill Slated for February

In February 2021, the Hawaii Department of Health (DOH) will be convening a contested case hearing to consider whether to grant the US Navy a permit to operate the Red Hill Fuel Facility. In July 2018, the DOH adopted new Hawaii state regulations that now requires the Navy to obtain a permit to operate the Red Hill fuel tanks. Before this date, no permit was required to operate the tanks. In Fall 2019, the Board of Water Supply (BWS) filed a

letter with DOH requesting a contested case hearing citing concerns that the current Red Hill tanks do not conform to Hawaii state law for operating underground fuel storage tanks. The DOH has scheduled a contested case hearing for the week of February 1-5, 2021 for the Navy, BWS and Sierra Club of Hawaii to discuss whether the Red Hill tanks should be granted a permit from DOH. The discussions will be held before a hearings officer

assigned by DOH. The hearing will be held by virtual conference and no public testimonies will be accepted. Details for connecting to the virtual conference are pending. Those interested are urged to monitor the DOH Red Hill permit application website at <https://health.hawaii.gov/shwb/ust-rh-permit-application/> for more information about the hearing.



BWS employees took part in a voluntary HAM Radio Operator license training class in Jan. 2020. BWS currently has about 30 licensed operators.



During the SET emergency training, BWS operators practiced relaying messages from station-to-station, across the island.

## Simulated Emergency Tests BWS Amateur Radio Readiness

Throughout the year, thousands of licensed amateur radio operators across the United States participate in emergency communications (EMCOM) training in their local and state communities. Each October, the Amateur Radio Relay League (ARRL) encourages affiliated clubs and communities across the nation to conduct simulated emergency exercises and to ensure their readiness for a disaster situation. The Honolulu Board of Water Supply (BWS) is no exception. BWS began participating in annual Simulated Emergency Training (SET) exercises in 2019 after it hosted a voluntary class for employees to prepare for an amateur radio license exam through the Federal Communications Commission (FCC).

"I began exploring ham radio as a personal hobby almost two years ago," said Ernest Lau, BWS Manager and Chief Engineer,

and a General amateur radio license holder. "As I learned more about it, I realized just how important amateur radio could be for EMCOM, not only on a personal level for my family, but also for secondary or redundant communications for the agency and our community if, in the worst of disasters, all primary communications went down. Once we had a group of newly licensed operators, we knew we had to keep the momentum going by offering opportunities to practice and hone their skills."

For the 2020 SET at the BWS, licensed amateur radio operators participated in simulated exercises over a two-day period to practice basic operator skills in simplex and data transmission modes using handheld, mobile, or home-based radio equipment. More than half of the agency's 30 licensed operators volunteered to participate in the SET, which

simulated the aftermath of a simulated hurricane. For some first-time participants, the experience was an eye-opening one. "(It) helped me see the big picture of what could happen when a disaster strikes and showed me the importance of radio communications in sharing information during a chaotic situation," said Steven Norstrom, an Information Specialist II in the BWS Communications Office.

Norstrom earned his Technician license in February 2020 as part of the second BWS training class. The Technician license is the entry-level license for amateur radio operators in the United States.

In an emergency, communications will usually follow a "hub-and-spoke" approach, where information is relayed from operators in the field to designated base stations that then

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Amateur operator Blaine Fergerstrom relayed messages from the BWS Manana Yard to Beretania St. during Hurricane Douglas last July.

## HAM Radio continued from the front...

relay messages to hub stations for further action or situational awareness. This approach helps to keep the flow of information moving as efficiently as possible from the field to emergency operations centers.

The first day of the 2020 SET focused on simplex communications, with operators transmitting via their radios from the field to a base station and from a base station to a hub station. Participants simulated both the in-field and base station operator roles. Participants practiced their on-air skills – operator etiquette, procedural words, and ITU phonetics – as well as with a back-up method of recording and relaying messages—pen and paper. To add to the overall experience and to help simulate urgency, all operators were asked to complete a set of tasks in a short sprint of 15-20 minutes. These practical and hands-on skills are crucial in a disaster, especially if communication networks (mobile, landline, and internet) and other key infrastructure systems are temporarily offline or rendered inoperable.

“Being on the air feels a bit awkward at first, but that feeling goes away as you get more experience,” said Brian Haruna, an Electrical Engineer III with the BWS Capital Projects Division. “One of the more challenging aspects of the hobby is becoming comfortable with the terminology that is expected to be used. These standardized words and phrases make

it easier to understand incoming messages, which may be difficult to hear. The SET exercises and other opportunities to go on the air allow us to practice using these words so that we know what and how to relay messages without having to spend time trying to decipher them.”

Haruna was among 20 BWS employees in July 2019 to earn their first amateur radio licenses. Since then, Haruna has upgraded his General class license to an Amateur Extra one – which is the top license available in the U.S. and gives him operator privileges on all U.S. amateur radio bands. And, he is now able to support the local amateur radio community as one of five licensed ARRL Volunteer Examiners (VEs) working at the BWS.

“What BWS is doing is really above and beyond my expectations when I first signed up to take the licensing exam,” Haruna said. “We have access to various types of

**Emergency Alert**  
**Hurricane nearing Oahu.**  
**Extremely dangerous winds and flooding possible. Make final prep now. Evacuate if threatened. Shelters at Moanalua HS Niu Valley MS Castle HS Waiialua HS and Intermediate Pearl City HS King IS Kalaheo HS Pope ES Mililani HS Campbell HS Leihoku ES Nanakuli HS Convention Center. Tune to local news or [Honolulu.gov](http://Honolulu.gov) for info**

radio and communication equipment, from satellite phones to hand-held radios and base stations. Recently we even began transmitting email through the airwaves. This is just the beginning as we are working to expand our communication network capabilities and increase our number of licensed operators.” Haruna helped to coordinate the second day of the 2020 SET, which focused on using Winlink to transmit post-disaster messages via email over amateur radio frequencies. This gave the group of data transmission participants a safe environment to set up Winlink stations in advance either at home or for field use, and then to test and troubleshoot connectivity and to transmit and receive messages in a simulated post-disaster scenario.

For some licensed operators like Blaine Fergerstrom, an Information Specialist II at BWS, emergency preparedness is a life-long skill started during his years in Boy Scouts and through his years in the Navy. Fergerstrom credits the Boy Scouts for his interest in preparedness training, first aid, self-reliance

and adaptability, flag communications, morse code, lifesaving and other emergency skills, and the Navy for training in firefighting, first aid, damage control, and EMCOM.

“Knowing how to respond in case of disaster has always been important to me ever since I was a young boy,” said Fergerstrom. “And it continues today with my CERT (Community Emergency Response Team) certification, my first aid and CPR certification, and my Technician-class HAM license. Drills like the October SET give you practice at using the various communications tools available to you in the event that normal mass communications systems, like telephones or the internet, become inoperable. It’s just that essential.”

According to Manager Lau, it was humbling to see the BWS employees take such an interest in amateur radio and to become more invested personally in emergency communications.

“We have more than 30 licensed operators now, and whether it’s for day out hiking or camping, or for that fishing trip at sea, or for improving the family’s disaster preparedness kit, amateur radio is something that can keep us connected in an emergency,” Lau said. “That makes participating in simulated emergency exercises and supporting a resilient amateur radio infrastructure in Hawaii important parts of our commitment to emergency readiness.”