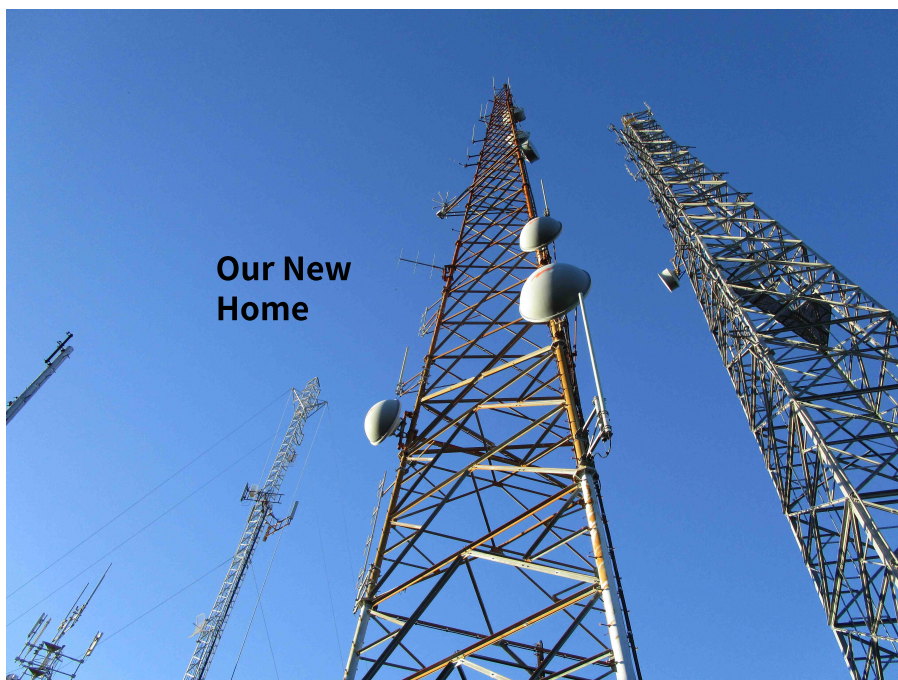


# Big Island Amateur Radio Club Newsletter

## May 2020

Saturday, May 9, 2 p.m. Zoom presentation for BIARC

(see details on page 4)



The County of Hawaii's Kulani Cone tower, above.

*NH6ET file photos*



The old Spectrum tower, which is being demolished.

## ***Moving day is fast approaching!***

If you haven't heard, our beloved '76 repeater has a new home. It's an easy move though. Its right



**NH6ET**

across the road to the next tower over. It'll kind of be like moving from one apartment to the next one over. You know, the nicer one; with a better view!

When we discovered that we were losing our home for the Kulani Repeater our first inclination was to stay on Kulani Cone. However, any of the possibilities for doing so were far from a sure thing. The adjacent tower on the same parcel was also to be demolished, so it was right out. The next tower over, on the next parcel down, is under

a moratorium where new antennas cannot be added; so, it wasn't very likely to be our new home. The only other tower on Kulani Cone is owned by a tower management conglomerate, who had absolutely no interest in doing business with an amateur radio club. It was looking pretty bleak.

We looked at many options, from placing a solar powered standalone cabinet anywhere we would be allowed to do so on the cone; to requesting that we assume ownership of the existing tower, if the landowner would let it remain. None of those plans panned out. Each of the options ran into insurmountable hurdles

and fell apart one by one. However, of the thirteen options we explored for staying on Kulani cone, one option did work out for us.

We had approached the Hawaii County Civil Defense Agency and requested space on their tower. You know, the one under a moratorium, where new antennas cannot be added. We had previously requested space on that tower, last year, which is when we learned of the moratorium. However, this time we had something very powerful: knowledge. I had learned through my professional activity that there was an abandoned antenna on the tower. An agency had moved to a different building, and had abandoned their antenna in place, feed line and all. It's

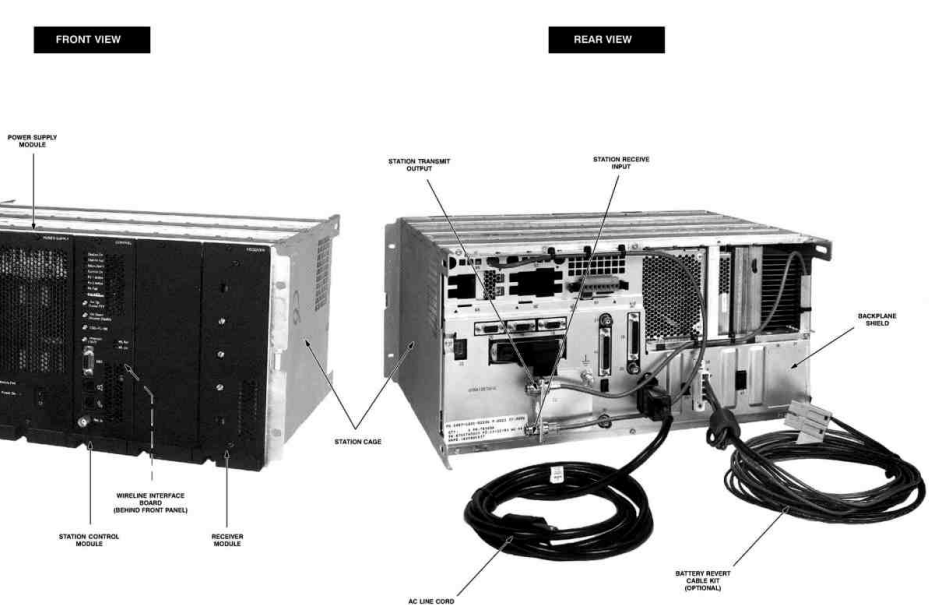
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not the right antenna for a 2-meter amateur band repeater, but it was there. We can't add an antenna, but perhaps we could replace an existing one.

We included the plan to take over the abandoned antenna in our proposal. And you know what, it worked. It was the missing puzzle

piece. It allowed our request to pass muster and then be escalated to the next level. Paul Ducasse (WH7BR) and I met with the Civil Defense administration and made our case. We were delighted to find that the Civil Defense administration understood the need BIARC fills in the community, and how we leverage our infrastructure, like the Kulani repeater, to carry out our mission. They pledged to do what they could to help us. We left with a list of requirements in our hands which we had to fulfill.

Two of the most critical items on our list of requirements were adequate insurance, and a Memorandum of Understanding signed by Mayor Kim allowing Civil Defense to partner with us to serve the community. A very high bar to meet to be sure. In fact, without a doubt, we are the only amateur radio organization on the island with the structure and resources to even be eligible to enter into such an agreement. Even



**Motorola Quantar repeater photo courtesy of Motorola Solutions.**  
*(This privately donated repeater will be deployed at the new site.)*

though we do, it felt like a long shot.

The insurance matter was an easy one. BIARC carries an insurance policy providing the very type of coverage we needed, with a high enough value to satisfy the county's requirements. We receive this insurance because it is coordinated for clubs like ours by the ARRL. So, we need to extend a thanks to the ARRL for what they do for the amateur radio community. Services like this are why our affiliation with them is so critical (Please join the ARRL, if you haven't.) Tony Kitchen (WH6DVI) manages that policy for the club, and quickly set to having the Certificate of Insurance issued to the County. He got it over to me, and I delivered it to the county right away. I received positive feedback about our expediency. They knew we were serious.

The Memorandum of Understanding was a much more laborious matter. Not

for me, but for the Public Service Communications Committee members. Tony Kitchen chairs that committee, and Paul Ducasse and Les Hittner (K0BAD) serve on it. They churned through six major revisions of the document, resulting in an eloquent and effective offering. They presented Version Six of the Memorandum of Understanding to the BIARC board, who held an emergency vote authorizing me to sign it and present it to the County. I submitted it and a whole list of requested documents to the Civil Defense administration. And then, suddenly, a pandemic struck.

The earliest rumblings of the COVID-19 virus were already being heard from China when we met with the Civil Defense administration the first time. By the time I submitted the Memorandum of Understanding, the lockdown was looming,

**See next page**

and the quarantine orders were coming out. It looked like we could get shoved to back burner while Civil Defense attended to the urgent matters at hand. However, we didn't get pushed off. Access to the Civil Defense administration was certainly difficult. However, they made the time to meet with me. We had phone calls, and we traded emails. They gave us the very few spare minutes they had in their day.

The Civil Defense administration liked the Memorandum of Understanding. Though, they were a bit worried that the Hawaii County Corporate Legal Council might want a few changes. And they sure did. The county's attorney issued six concerns. I presented those concerns to the BIARC board at the March board meeting. The board gave me the leeway to engage in arm's length negotiation with the attorney, which I did. He and I kicked some changes to the Memorandum of Understanding back and forth until we found the right tweaks. And you know what, it turned out pretty darn good. It's almost like he went to college for almost a decade. But hey, that's OK; I stayed at a Holiday Inn Express (too obscure of a reference?)

I took the polished Memorandum of Understanding back to the BIARC Board, because the changes were more than incidental. Under our structure, the BIARC Board must vote on any substantive matters. Nobody gets to go rouge here. We again held an emergency vote, and the Board again authorized me to sign the Memorandum of Understanding and submit it to the County. Since the Civil Defense administration was already on board, and we had somehow made a lawyer happy; this meant it was on to the Mayor. Nobody knew what to expect.

Some time went by without word. I quietly nagged our friends at Civil Defense after other meetings: "psst, hey, anything on the club's MOU?" Nothing. Last week, I was sitting in a meeting, and felt a socially distant tap on my shoulder. It was a stack of papers. It was the Memorandum of Understanding. On top was a letter from Civil Defense Administrator Talmadge Magno. On the last page was Mayor Harry Kim's signature.

There you have it. That's a high-level view of how the sausage is made. I assure you that there were many other individual contributions, by many people, along this journey. I simply can't honor them all in the space of a single newsletter article. However, to each and every one of you; thank you. Including you, the individual members; thank you too. Without your support, solidarity, and continual efforts, the club would not have been built up to be in the position we are; to be worthy and able to partner with the county. We would not have been deemed essential enough to be given precious space within a county critical infrastructure facility.

Now we turn back to the Voice Repeaters Committee. They plan to build a replacement repeater system in parallel to the one which is currently in operation. In this way it will be a simple matter of turn the old one off, and then immediately turn on the new one. The club has received a private donation of a Motorola Quantar VHF repeater which will be used for this purpose. It is a public safety grade repeater, worthy of being in a public safety communications facility. The existing repeater will be serviced, and then re-deployed in a new capacity.

The hard part of our repeater move project will undoubtedly be the antenna work. A certified climb crew will be required to access the antenna on the county tower. The standoff hardware will have to be replaced before the antenna can be replaced, so that the standoff can safely support a tower climber. Corrosion is a thing on Kulani Cone. In the meantime, we plan to deploy an antenna tuner to permit us to use the abandoned antenna - yup, they make them for VHF too. It's not an ideal solution. We might lose a dB or two, compared to having a resonant antenna. But it will get the machine on the air until the pandemic subsides, and the needed antenna system hardware can be sourced.

Some months ago, I promised you that BIARC would keep you talking. I stand by that promise. Today, tomorrow, and during the next emergency. We will keep you on the air.

Thanks for being there.

**William Polhemus, NH6ET, BIARC president**



Harry Kim  
Mayor

Roy Takemoto  
Managing Director

Barbara Kossov  
Deputy Managing Director



## County of Hawaii

### CIVIL DEFENSE AGENCY

920 Ululani Street • Hilo, Hawai'i 96720-3958  
(808) 935-0031 • Fax (808) 935-6460

Talmadge J. Magno  
Civil Defense Administrator

April 9, 2020

Big Island Amateur Radio Club  
P. O. Box 1938  
Hilo, Hawai'i 96721

Dear Sir,

SUBJECT: Memorandum of Understanding - Between Big Island Amateur Radio Club  
and Hawai'i County Civil Defense Agency

Enclosed for your files is a fully executed copy of the subject document, memorandum of understanding.

If we can be of any service to you during the course of this project, please do not hesitate to call on us.

Sincerely,

Talmadge Magno  
Civil Defense Administrator

Enclosures

**See next page**

## Minnesota's W0VTT to give Zoom presentation on Logbook of the World

Mike Cizek, W0VTT, of Minnesota will be the guest presenter for our monthly BIARC "meeting" on Saturday, May 9, at 2 p.m. Hawaii time (7 p.m. Minnesota time).

On Zoom, Mike will discuss ARRL's Logbook of the World (LoTW) in a visual presentation with slides, etc.

Secretary Les Hittner, who has arranged the program for us after viewing it at a Zoom session with the Winona (Minnesota) Amateur Radio Club, will



send instructions for attending both the BIARC Board Zoom meeting (earlier that day, at noon) and the 2 p.m. club Zoom meeting to the BIARC Listserve on Friday, May 8.

Les found Mike's talk enjoyable and educational and thought it would be worthwhile for us. Mike uses Powerpoint and screen sharing, followed by a Q&A session.

**Mike Cizek, W0VTT**

**Memorandum of Understanding  
between  
Big Island Amateur Radio Club (BIARC)  
and  
Hawaii County Civil Defense Agency (HCCDA)**

This is a nonexclusive Memorandum of Understanding (MOU) by and between the Big Island Amateur Radio Club (BIARC), a 501(c)(7) tax-exempt entity, whose address is PO Box 1938, Hilo, Hawaii, 96721 and Hawaii County Civil Defense Agency (HCCDA) residing at 920 Ululani St., Hilo, Hawaii 96720, and collectively known as the "Parties" for the purpose of this agreement. This MOU does not confer exclusive rights to BIARC.

### **I. Introduction**

The mission of the Big Island Amateur Radio Club (BIARC) is to recruit, educate and help committed Ham Radio operators carry on the traditions of amateur radio by using our network of technical resources and expertise to provide equipment, skilled operators and emergency services when called upon in time of need and to assist and protect the citizens in the communities in which we live and serve. BIARC is dedicated to community service and providing education to the general public about the history, operation, functions, and benefits of the Amateur Radio Service. BIARC members adhere to the Radio Amateur's Code and are considerate, loyal, progressive, friendly, balanced, and patriotic.

BIARC and HCCDA wish to build an effective working relationship that makes the best possible use of their individual resources during natural or man-made disasters, when training for such disasters, and to provide effective emergency communications when traditional means of communication are inoperative. The parties intend for this MOU to be the basis and structure for our cooperative relationship, and any contracts which may be agreed to in the future.

BIARC and HCCDA shall endeavor to build group and individual relationships, and work together to develop and establish priorities, policies, and procedures to educate and train amateur radio operators to serve during times of emergency. As a part of the County's total emergency preparedness and response program, we seek to ensure prompt and effective action when natural or man-caused disaster threatens or occurs anywhere in the County of Hawaii, under the direction of HCCDA.

BIARC maintains an Amateur Radio Service communications infrastructure and a cadre of trained amateur radio operators, which it makes available as needed when natural or man-caused disasters threaten or occur anywhere in the County of Hawaii. HCCDA may employ resources of other organizations (as agreed upon by such organizations) including other Amateur Radio Clubs and the American Radio Relay League Inc.

It is the desire and the wish of both Parties to this MOU to enter into an agreement to work together in a manner that would promote a genuine atmosphere of collaboration and alliance. This MOU is intended to establish an administrative and leadership agreement to maintain, safeguard, and sustain sound and optimal management through mutual cooperation.

**See next page**

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### **[BigIslandRADIO] Ham Radio Face Masks**

April 30, 2020 at 6:59 AM

From "Eric KH6CQ via groups.io"

To "bigislandradio@groups.io"

Reply-To BigIslandRADIO@groups.io

Where are the personalized call sign cloth face masks?

Certainly some entrepreneur must be making them. Several companies sell large quantities of baseball caps emblazoned with call signs, and wearing those are totally optional, not required by health officials or local governments. hi hi

So, who's cashing in on the COVID-19 PPE market for ham ops?

I'm looking forward to buying one, maybe even two! :-)

73 and aloha, Eric KH6CQ

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**KH6CQ**  
*has a timely  
suggestion for new  
ham shack  
cottage industry*

## II. Method of Cooperation

The HCCDA agrees to provide information and assistance described, but not limited to, the descriptions that follow, if funding is available:

- (1) Provide the BIARC members with training and guidance to ensure that its unique approach to the County's total emergency preparedness and response program allows prompt and effective action when natural or man-caused disasters threaten or occur anywhere in the County of Hawaii.
- (2) Assist the BIARC in securing needed locations and resources for the placement of amateur radio infrastructure throughout the County as necessary;
- (3) Provide access to Hawaii County resources when necessary and appropriate.
- (4) Supply BIARC with pertinent information and points of contact for appropriate personnel at various locations on at least an annual basis.

The Big Island Amateur Radio Club, Inc. will engage in activities that include, but are not limited to the following:

- (1) Build out and maintain Amateur Radio communications capabilities that are robust and diverse to achieve the following goals:
  - (a) Create and maintain hardened and linked amateur radio repeaters and an infrastructure that provides county-wide coverage; and provide properly licensed HCCDA employees and volunteers the use of this infrastructure using the protocols and procedures we develop together.
  - (b) Provide a diversity of communication modes and repeater linking capabilities, including voice and digital data transfer, utilizing RF on multiple bands. This would potentially involve the use of VHF, UHF, Microwave, and other areas of the electromagnetic spectrum which we have been granted a license to use by the Federal Communications Commission.
  - (c) Develop reliable and tested simplex VHF/UHF radio circuits;
  - (d) Develop reliable and tested HF radio circuits for statewide and worldwide communications needs.
- (2) Provide a cadre of trained and licensed amateur radio operators for operations and maintenance of amateur radio equipment at no cost to HCCDA in accordance with 47 CFR § 97.113(a)(2) BIARC will supply the HCCDA with lists of emergency communicators that including contact points on at least an annual basis.
- (3) Encourage our members to participate in training and preparedness exercises sponsored by County, State, and other organizations to maximize our ability to work together and provide communication support during any disaster.

**See next page**

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## License tests via Zoom

### ***Aloha all,***

During April, a team of Oahu EARC Volunteer Examiners (VEs) has been administering Amateur licenses exams using the ZOOM meeting software.

It started slowly, one candidate at a time.  
Feedback from each session

has improved the process to the point that a six-candidate session was held yesterday.

A little less than twenty sessions have been held for 32 candidates – four from Okinawa, eight on Oahu, two on Maui and two on the Big Island, plus a number on the mainland. The team that started with just three

**See next page**

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### **III. Terms of Understanding**

This agreement is effective as of the date it is signed by both parties, and shall remain in effect unless terminated by written notification from either party to the other; or, until replaced by an updated version mutually agreed to by both parties.

### **IV. Amendment or Cancellation of this Memorandum**

This MOU may be amended or modified at any time in writing by mutual consent of both Parties. In addition, the MOU may be canceled by either party with 90 days advance written notice.

### **V. General Provisions**

The Parties acknowledge and understand that they must be able to fulfill their responsibilities under this MOU in accordance with the provisions of the law and regulations that govern their activities. Nothing in the MOU is intended to negate or otherwise render ineffective any such provisions of operating procedures. The Parties assume full responsibility for their performance under the terms of this MOU.

If at any time after entering this agreement, either party determines that it is unable to perform their duties or responsibilities under this MOU consistent with such party's statutory and regulatory mandates, the affected party shall immediately provide written notice to the other to establish a date and meet to resolve the matter.

Each Party agrees to distribute copies of this MOU through its field structure and make copies available to other organizations, both public and private, which may have an active interest and participation in disaster relief operations.

### **VI. Limitations of Liability**

No rights or limitation of rights shall arise or be assumed between the Parties as a result of the terms of this MOU. BIARC members shall bear any and all liability should they transmit, or cause to be transmitted, messages purported to be sourced from HCCDA, or purported to be being transmitted on behalf of HCCDA, which they know to contain false or untrue information.

### **VII. Notice**

Any notice or communication required or permitted under this Memorandum shall be sufficiently given if delivered in person or by certified mail, return receipt requested, to the address set forth in the opening paragraph or to such address as one may have furnished to the other in writing.

### **VIII. Entire Understanding**

This MOU constitutes the entire understanding of the Parties pertaining to all matters contemplated hereunder at this time. The Parties signing this MOU desire and intend that any implementing contract, license, or other agreement entered into between the Parties subsequent hereto shall supersede and preempt any conflicting provision of this MOU whether written or oral.

### **IX. MOU Summary**

**FURTHERMORE**, the Parties to this MOU have mutually acknowledged and agreed to the following:

- The Parties to this MOU shall work together in a cooperative manner and

**See next page**

## **License tests via Zoom** (from previous page)

Volunteer Examiners (VEs) has grown to ten. VEs in CA and GA, on Maui and Okinawa have helped Hawaii candidates get licensed. We all hope to have classroom test sessions back

soon. In the meantime, Hawaii (and Pacific area) candidates have the opportunity to test with the EARC VE group. Pass the word that candidates can register for a ZOOM based test session at, <http://hameducation.org/register>.

**ARRL Pacific Section**  
**Section Manager: Joseph Speroni, AH0A**  
**ah0a@arrl.org**

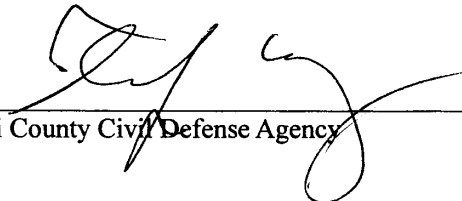
coordinate their efforts in order to bring about the achievement and fulfillment of the goals and objectives of this partnership.

- It is not the intent of this MOU to restrict the Parties to this agreement from their involvement or participation with any other public or private individuals, agencies or organizations.
- The Parties to this MOU shall mutually contribute and take part in any and all phases of the planning and development of this partnership, to the fullest extent possible.
- It is not the intent or purpose of this MOU to create any rights, benefits and/or trust responsibilities by or between the Parties.
- The MOU shall in no way hold or obligate either party to supply or transfer funds to maintain and/or sustain the partnership.
- Should there be any need or cause for the reimbursement or the contribution of any funds to or in support of the partnership, it shall be outlined in a separate and mutually agreed upon written agreement by the appropriate representatives of the Parties. Any separate agreement shall be accordance with current governing laws and regulations and in no way does this MOU provide such right or authority.
- Upon the signing of this MOU by both Parties, this agreement shall be in full force and effect.

#### **X. Authorization and Execution**

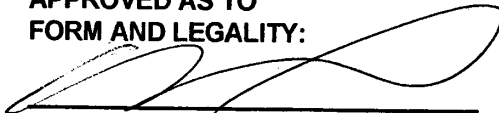
The signing of this MOU does not constitute a formal undertaking, and as such it simply intends that the signatories shall strive to reach, to the best of their abilities, the goals, and objectives stated in this MOU.

This agreement shall be signed by Hawaii County Civil Defense Agency and Big Island Amateur Radio Club, Inc. and shall be effective as of the date it is signed by both Parties.

  
 Hawaii County Civil Defense Agency 3.23.20  
 (Date)

  
 Big Island Amateur Radio Club, Inc. 03/19/2020  
 (Date)

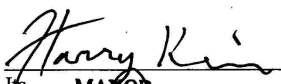
**APPROVED AS TO  
FORM AND LEGALITY:**

  
 DEPUTY CORPORATION COUNSEL  
 COUNTY OF HAWAII

Date: 4-3-2020

Dated: Hilo, Hawai'i: April 8, 2020

COUNTY OF HAWAII

By:   
 Its MAYOR



# BIARC Board Meeting

April 11, 2020

## A. Meeting called to order at 1203

Role Call: Present (6) Quorum (4)

Board Members:

William Polhemus – President  
James Huntley – Vice President  
Leslie Hittner, Secretary  
Tony Kitchen, Treasurer  
Mel Uchida  
Bob Schneider enters during Committee Reports

Paul Ducasse – Station Custodian arrived at 12:20

Visitors: Leigh, WH6LC, Glen, AH6IO, John, KH6DLK, Roy Kunishige, WH6FYK

Minutes of last Board meetings: Regular meeting on 03/14/2020

Mel **moved** and William **seconded** that the minutes be approved as published and distributed by email. Motion **passed**.

**Treasurer's Report:** The treasurer's report was submitted in writing as two reports; an Operating Statement and a Disbursements Report

The 03/31/2020 bank balance was \$3689.82 with \$20.00 of member dues yet to be deposited. Both of these reports can be found in the April issue of the BIARC Newsletter.

Tony noted that the club currently has 76 members.

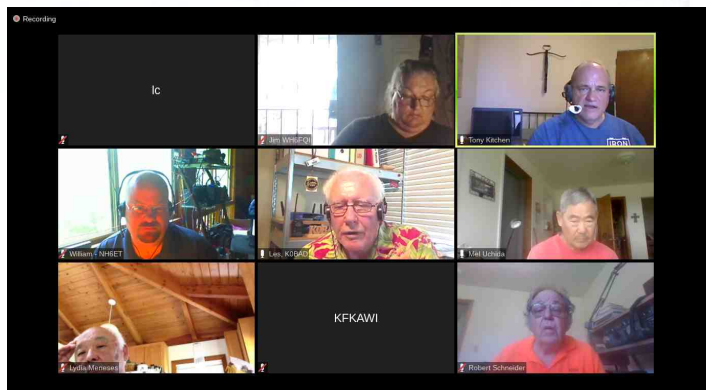
William **moved** and Mel **seconded** to accept the Operating Statement and Disbursements Report subject to audit. Motion **passed** by a unanimous vote.

## B. Committee Reports:

(1) **Digital Systems** (No written report): Jim Huntley, Chair of The Digital Systems Committee, discussed the following:

- a) Jim noted that the committee is at somewhat of a standstill until new repeater locations can be better defined. The committee members want an APRS digipeater and igate at a location that covers a major portion of east Hawai'i. The igate in particular largely depends on the high-speed multimedia backhaul network that is being designed. Because it is an APRS system, it must be on the US Standard APRS frequency of 144.39 MHz.
- b) Gary, WH6EPS and Jim have been testing a Raspberry pi set up as a PiGate with an emergency email server. The system appears to be stable and reliable. This is being marketed by MFJ at a slightly higher cost than what the original developer was asking.

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c) Jim then discussed the RA25 Build Project (Digital Workshop – Agenda Item D8):

The Digital Workshop is on hold until the COBID-19 social distancing order has been relaxed. Once we can again have group meetings, we will work on scheduling this day-long workshop. For the time being, it needs to be put on the “back burner.”

(2) **Education and Outreach** (No Written report): Leslie Hittner, Chair of the Education and Outreach Committee, discussed the following:

- (a) The committee did not meet.
- (b) Committee members studied the 501c3 application process. There is a separate agenda item that discusses this.
- (c) The next licensing class is scheduled for October.

(3) **Operating Activities** (No written report): Board members discussed the following:

- (a) ARRL has not elected to modify the Field Day rules at this time. That may change.
- (b) People may have to operate as individuals (Class E) stations.
- (c) Roy Kunishige, Chair of the Operating Activities Committee, arrived after the Repeater Committee report and discussed the following:
  - (i) Joe Rosenbaum, WH6FZH has joined the Operating Activities Committee.
  - (ii) Places originally being considered for Field Day are not even available, having been closed off because of the social distancing rules currently in place.

(4) **Program** (No written report): James Huntley, Chair of the Program Committee, discussed the following:

- (a) Programs are essentially on hold. Might consider doing a Zoom program next month.
  - (b) Power Point Zoom version of propagation is possible with programs delayed, as necessary. Propagation in May, Stub Filters in June.
  - (c) Les' commercial Zoom account will accommodate meetings of 100 people.
- (Bob Schneider enters the meeting.)

(5) **Public Service Communications** (No written report): Tony, Chair of the Public Service Communications Committee, discussed the following:

- (a) The proposed MOU with Hawaii County Department of Water Supply (DWS) is ready for their approval. That topic will be covered in detail under Old Business.
- (b) At the ARES meeting Joe Spironi discussed the remote license testing being set up by the ARRL VE. He asked if there would be any interest in doing remote testing as a part of the BIARC VEC effort? If so, we would need a couple of VE Volunteers who are willing to observe the process in order to replicate it here.

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**Contest University (CTU) 2020 will be online and free.** Tim Duffy, K3LR, has announced that CTU USA 2020 will be held online via Zoom on Thursday, May 14, starting at 1245 UTC. CTU 2020 is free. The CTU course outline has been posted online. Connection details to the CTU Zoom bridge will be posted on the Contest University site 1 week prior to CTU. Sessions will be recorded for viewing any time after May 14. Slide decks will be posted on the CTU website as well. At the end of CTU 2020, Dave Siddall, K3ZJ, will present the 2020 CQ Contest Hall of Fame awards.

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Les suggested that Education and Outreach Committee members would have to look into that process.

Tony **moved** and William **seconded** that the remote VE testing question be referred to the Education and Outreach Committee. The motion **passed** without objection.

- (c) Tony also discussed the Hawaii Emergency Amateur Radio Data Network, which is up and running on O'ahu and has formed a supporting non-profit (501c3) organization (Hawaii Emergency Amateur Radio Data Network – see: <https://hbe.ehawaii.gov/documents/business.html?fileNumber=265014D2>).

So far, the network is using VPN tunnels to connect nodes and while an extensive RF Mesh is envisioned in the future, nodes are currently too far apart here on the islands to provide for solid RF Mesh communications. Tony has security concerns right now with respect to connecting to his home network.

(Paul Ducasse enters the meeting.)

- (6) Voice Repeaters** (No written report): William Polhemus, Chair of the Voice Repeaters Committee, stated that the committee had not met, but does need to meet on Zoom to take care of some open business.
- (a) Civil Defense has received the club's modified MOU, which has now been approved by the Corporate Attorney's office and has been forwarded on to the County Executives for final approval (Cheers!) That is the biggest hurdle and expectations are that the County Council will approve the MOU. This means that we can begin the planning and relocation and build-out of the 146.76 Kulani repeater in what is going to be its new home – the County of Hawai'i tower Site.
  - (b) The new Mauna Loa repeater (442.575/447.575 MHz) is up and running in William's office until social distancing requirements have been removed and the committee members are able to come together to transfer the cabinet to the site. In the meantime, it is on the air and on the Brandmeister Network.
  - (c) The new site on Kulani may be able to support a second transmitter. It may be possible to place an APRS Node/iGate at the site. Les noted that his current iGate could serve that role from the digipeated packets from Kulani until internet services become available at the site.
  - (d) Permission to allow signal reception off the state's antenna at the top of the tower is being sought for the repeater, which would allow the 146.76 repeater to operate without a duplexer. This would allow multiple transmitters on the VHF transmit antenna, as long as there was sufficient frequency separation and bandpass-filtered isolation. The APRS node would operate on 144.390 MHz (both transmit and receive), which is sufficiently far from 146.76 MHz to allow band-pass isolation without the use of a duplexer.
  - (e) William is also researching network backhaul options – probably via a microwave point-to-point (or multipoint) or mesh configuration. Permission to install microwave antenna(s) would have to be secured. Another possibility is that existing county microwave systems already in place may have enough excess capacity to provide internet services to BIARC equipment. That, too, would need

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### **Emergency ventilator designed and constructed by hams going to FDA**

Radio amateurs have succeeded in providing a complete, working ventilator system to University of Florida researchers who are in the

process of applying to the Food and Drug Administration for an Emergency Use Authorization (EUA). A successful submission would blaze the way for volunteers and manufacturers around the world to

**See next page**

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to be discussed with the county. These and other options for getting internet access on Kulani were discussed.

#### C. New Business:

- (1) **Use of the Club Station Callsign – clarification:** (Background: A non-club member asked if he could have a contest contact with himself by using the club callsign.) The Board members discussed the general idea of Club Callsign use and arrived at a consensus that the Station Custodian, Paul, agreed with.

William **moved** and Tony **seconded** that club callsign use is to be monitored by the Station Trustee and that activities using the club station are those conducted by club members and sanctioned by the Operating Activities Committee. After some discussion, the motion **passed** by a unanimous vote.

Bob Schneider noted that the club call (KH6EJ) is a memorial call and that it was callsign of long-time BIARC member, Bill Semour. As such, it has special significance to BIARC club members. Bob also is currently responsible for the Club's call entry on QRZ.com and suggested that as Station Custodian, Paul might want to take over that responsibility. Paul accepted and Bob will register the change with QRZ.com.

- (2) **Equipment Valuation and Insurance Coverage:** Voice Repeater Committee consensus was that only equipment that is currently deployed (or scheduled to be deployed) in the field should be insured with the BIARC policy. The assumption is that items in storage are covered by the storage-holders' insurance policies. William then sent an email that detailed the evaluations of deployed equipment. Tony noted that in some instances, people have rental policies that may not cover club equipment being stored there. If so, that must be a consideration when asking people or organizations to store club equipment.

#### D. Old Business:

- (1) **Club T-Shirts:** There has been no progress. This item will remain on the table for now and can be addressed when social distancing requirements have been modified.
- (2) **By Laws Amendment for on-line dues payments:** Les presented a written report that dealt with the actual amendment as well as the process for approving such an amendment. He suggested that this process could wait until the November Annual Meeting.

Les **moved** and William **seconded** that the BIARC By Laws be amended by adding the following paragraph to the end of Section 2 (Dues); "**On-Line Dues Payments: Dues paid by means of a BIARC-approved on-line technology shall be 10% more than dues paid with cash or by check.**" and that this proposal to amend the By Laws be placed on the agenda of the November 2020 Annual Meeting. The motion **passed** with one opposed (Tony).

Tony stated that last year 4-5 new members joined during this period (April-November) and that he would like to be able to offer on-line payment sooner

William **moved** and Les **seconded** to authorize the Treasurer to accept on-line dues payments; but that until the By Laws can be modified, he should request that those members choosing to do make a voluntary donation to BIARC to cover the

**See next page**

### Emergency ventilator designed and constructed by hams going to FDA

(from previous page)

create low-cost, highly functional Intensive Care Unit (ICU) or anesthesia-care ventilators that offer many

of the features of modern ventilators at a fraction of the typical cost.

Dr. Gordon Gibby, KX4Z, who is associated with the project, said efforts to further improve the device are ongoing.



processing fee costs. During the discussion, Tony noted that if some new members chose not to make such a donation, it would not break the club's treasury. The motion **passed** by unanimous vote.

- (3) **MOU with the County of Hawai'i Department of Water Supply:** William complimented the Public Service Communications Committee on their excellent work (much of which was done on-line) on this MOU. He then suggested that the acronym DoWS be changed to DWS, which is the acronym that the County itself uses for this department.

William also noted that in the discussion of services offered (**Section 1; Introduction; Third paragraph and Section 2, Heading 2 and Section 4: Amendment and Cancellation**), the MOU should not agree to firm commitments but rather to possible offers (replacing "will" with "if" and "maybe," for instance.) William also noted that specific details, such as Part 15, etc. need not be specified.

A copy of the MOU with general areas that William is concerned about highlighted is attached to these Minutes.

Tony agreed with the essence of William's suggested changes and the committee will make those changes and send the modified MOU out by email to the board for additional comments.

- (4) **Wide Area: Members or Donors:** Les said that there had been some open discussion about accepting memberships from hams on other islands or on the mainland. He noted that the Constitution and By Laws states that people who – for whatever reason – are not able to attend meetings and activities, are encouraged to make donations to the club if they wish to support BIARC. That discussion, at last month's Board meeting lead to the question of what might motivate people to make such donations and the thought of changing from a 501c7 to a 501c3 because of the tax advantages of such donations to such an organization.

The IRS now has a rather simple on-line form for making that change, but there are additional considerations; the conventional long form, 1023, requires the IRS to check the organization's structure and activities and to make a determination that it qualifies for 501c3 status. The simplified on-line form, 1023-EZ, assumes that the organization DOES meet all of the qualifications, but if that proves not to be the case, IRS penalties can be extreme. It is therefore suggested that organizations get legal assistance when completing the 1023-EZ to ensure that they do indeed qualify.

Regardless of which form and organization uses, there is a \$400 non-refundable one-time fee involved.

501c3 designation prohibits political activities, so if legislation involving Amateur Radio Service is being contemplated, we as individuals could "Write our Congresspeople," but the club could not.

Achieving a 501c3 status would make it far easier for BIARC to obtain major grant funding from other organizations. William noted that the in-kind donation process can be greatly simplified if the receiving organization is a 501c3.

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**Amateur radio operators affiliated with the American Red Cross will conduct a nationwide communication drill on May 30.** The drill will simulate the types of message traffic that are typical of a national disaster response, such as a hurricane or wildfire. Hams will utilize digital modes to move a variety of Red Cross data, with special focus given to methods that do not require infrastructure, such as a repeater or the internet. The drill features a local option where ARES organizations can work with local Red Cross chapters to drill local and regional functionality. For more information, contact ARRL Rhode Island Section Emergency Coordinator Paul Silverzweig, W1PJS.



Les agreed to seek out a tax lawyer willing to work for BIARC for a low fee or pro bono and will return with a firm proposal and a request for the money.

William would like to directly address the issue of associate and voting members. The discussion will continue with a possible amendment to the definition of Associate Member in the Constitution and By Laws that involves a statement about where the license of a possible member is located.

William assigned that task to the Secretary. Tony observed that \$400 is the dues amount of 20 members. He also suggested that we might consider selling unused excess equipment. William asked that budget shortfalls, income, fundraising be added to the next agenda.

(5) **Concern about on-site meetings/activities:** William **moved** and Les **seconded** to suspend on-site meetings, programs, events, and activities until further assessment by the BIARC Board. Les than stated that such a decision would not then depend on the motivations of politicians, which might be concerned with things other than our own safety. The motion **passed** by a unanimous vote.

(6) **Equipment Donations:** William noted that he has two donations that will be made to the club; one from him personally and one from the government. Les noted that this agenda item was in response to acknowledging past donations that had been essentially covered under Agenda Item, New Business (C)(2).

(7) **Provide Equipment to CERT Teams:** Tony likes the suggestion that BIARC place equipment at sites in order to provide support to CERT Teams. Other concerns: (1) The club could provide support and assistance to CERT Teams who are placing their own equipment at field sites, (2) How would CERT Teams go about scheduling a weekly net on the Kulani Repeater. After CERT Teams check in to such a net, other amateurs could be allowed to check in. William expressed a concern about how we might keep track of such activities by other groups so that we do not have scheduling conflicts? Tony said that he maintains such a schedule on the biarc.net website. Is that a committee function or a trustee function? Paul agreed that it was an Operating Activities Committee and Station Trustee responsibility.

It was decided by consensus that recurring activities, like weekly nets, be approved and scheduled by contacting Paul Ducasse (WH7BR), Station Trustee, who will ensure that Tony adds the recurring activity to the biarc.net website Kulani schedule.

(8) **Digital Workshop:** This item was discussed in the Digital Systems Committee report (Agenda (B)(1)). James also noted that this activity is on hold until in-person meetings are again authorized by the BIARC Executive Board. Then a special time for this day-long activity will have to be scheduled.

(9) **BIARC Lending Library:** Les said that the Education and Outreach Committee has nothing to report because "Even if we had it ready to go, it would not be ready to go."

#### E. Other Business:

(1) **CERT Net:** James said that this item was covered in Agenda Item (D)(7).

(2) **Biarc.net:** Les asked for a handclap for Tony Kitchen for the excellent job he is doing on the club's website. New hams on the Big Island often stated that they thought the club was inactive after going to the BIARC website. That is no longer happening.

(3) **Meeting Time:** Les also noted that we are ahead of the agenda schedule for meeting's end. This Zoom meeting was very efficient.

**Adjourn:** There being no further business, William adjourned the meeting at 1324.

Respectfully Submitted,

*Leslie D. Hittner*

Leslie Hittner, Secretary

Enc: Proposed DWS/BIARC MOU

**See next page**

## ARRL Band Planning Committee

Aloha,

The ARRL has been hard at work looking at the sharing requirements of our different HF Amateur Radio communities - CW, SSB, narrow band digital like FT8, wideband digital like FLDIGI and Winlink, digital phone, SSTV and many others. It is not an easy job; consensus when digital technologies are evolving so fast, is difficult. Hawaii has a unique issue with phone and wide band digital on our 7075-7100 segment, and a desire to acquire a similar segment on 80 meters for interisland communications.

Many others have requirements the ARRL Band Planning Committee had to address when they released their Feb 11th, 2020 plan seeking member feedback. <http://www.arrl.org/news/arrl-creates-new-hf-band-planning-discussion-group>

The ARRL Section Managers have been meeting weekly on ZOOM to discuss topics of common interest. Band planning came up and the group was fortunate to have one of the members of the band planning committee, Mike Ritz (W7VO) and coincidentally the ARRL North Western Division Director, step forward to give a presentation on the subject. He reviewed the pending petitions that will affect HF for US Amateurs, the issues facing many stake holders, and recommendations of the committee. His talk is well organized with charts and background of the trade-offs involved. It is about 50 minutes long and well worth the time.

([https://www.youtube.com/watch?v=Kw\\_fNHHUskA](https://www.youtube.com/watch?v=Kw_fNHHUskA))

ARRL Pacific Section  
Section Manager: Joseph  
Speroni, AH0A  
ah0a@arrl.org



**Memorandum of Understanding  
between  
Big Island Amateur Radio Club (BIARC)  
and  
Hawaii County Department of Water Supply (HCDoWS)**

This Memorandum of Understanding (MOU) is by and between the Big Island Amateur Radio Club (BIARC), a 501(c)(7) tax-exempt entity, whose address is PO Box 1938, Hilo, Hawaii, 96721 and Hawaii County Department of Water Supply (HCDoWS) residing at 345 Kekuanaoa Street, Suite 20, Hilo, HI 96720, and collectively known as the "Parties" for the purpose of this agreement.

**I. Introduction**

The mission of the Big Island Amateur Radio Club (BIARC) is to recruit, educate and help committed Ham Radio operators carry on the traditions of amateur radio by using our network of technical resources and expertise to provide equipment, skilled operators and emergency services when called upon in time of need and to assist and protect the citizens in the communities in which we live and serve. BIARC is dedicated to community service and providing education to the general public about the history, operation, functions, and benefits of the Amateur Radio Service. BIARC members adhere to the Radio Amateur's Code and are considerate, loyal, progressive, friendly, balanced, and patriotic.

BIARC and HCDoWS wish to build an effective working relationship that makes the best possible use of their individual resources, and provides benefits to both parties. The Parties intend for this MOU to be the basis and structure for our cooperative relationship, and any contracts which may be agreed to in the future.

BIARC and HCDoWS shall endeavor to develop and establish priorities, policies, and procedures that support the needs of HCDoWS as well as support the Amateur Radio Service as defined in Title 47, USC Part 97. This arrangement would benefit the HCDoWS by providing remote power and commercial Part 15 wireless data infrastructure, installed and maintained by qualified technicians, and using professional-grade equipment to provide data links that can be used by HCDoWS for site monitoring and other purposes. This arrangement would benefit the Amateur Radio Service by also providing a backup wireless data infrastructure for Amateur Radio Service communications systems installed at the site.

BIARC maintains an Amateur Radio Service communications infrastructure and a cadre of trained technicians, with expertise in radio frequency engineering and utilizing multiple bands and communication modes. This is a non-exclusive agreement, HCDoWS may seek the resources of other organizations (as agreed upon by such organizations) including other Amateur Radio Clubs or groups.

It is the desire and the wish of both Parties to this MOU to enter into an agreement to work together in a manner that would promote a genuine atmosphere of collaboration and alliance. This MOU is intended to establish an administrative and leadership agreement to maintain, safeguard, and sustain sound and optimal management through mutual cooperation.

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## ***Zombie satellite found***

British Columbia radio amateur Scott Tilley, VE7TIL, has found another "zombie satellite," as he calls them. This time, he tracked and identified radio signals from the experimental UHF military communication satellite LES-5. He found the satellite in what he

called a geostationary "graveyard" orbit after noting a modulated carrier on 236.7487 MHz.

"Most zombie satellites are satellites that are no longer under human control, or have failed to some degree," Tilley told National Public Radio last month. It's not clear whether LES-5 is still capable

of receiving commands.

LES-5 was built by MIT's Lincoln Laboratory and launched in 1967 as part of the military's Tactical Satellite Communication Program. It was supposed to shut down in 1972, but it continues to operate as long as its solar panels are facing the sun.



## II. Method of Cooperation

The HCDoWS agree to provide information and assistance described, but not limited to, the descriptions that follow:

- (1) Designate a representative who will work with BIARC designated representative to discuss and select appropriate HCDoWS locations and define what surveillance, power, communication, or other wireless data capabilities are desired by the HCDoWS.
- (2) Supply BIARC with pertinent information and points of contact for appropriate personnel at various locations as needed.
- (3) Create a process for timely review and approval of detailed installation plans that the Parties have agreed to implement.
- (4) Assist BIARC in securing access to agreed upon HCDoWS controlled locations for the installation and maintenance of all Amateur Radio Service communications and power infrastructure as necessary and agreed to by both parties.
- (5) Inform BIARC representative of any maintenance, security, or operational concerns that may impact our infrastructure or working relationship.
- (6) At the sole discretion of HCDoWS, supply BIARC with HCDoWS resources that they feel are necessary and appropriate to accomplish the defined goals.

The Big Island Amateur Radio Club, Inc. will engage in activities that include, but are not limited to the following:

- (1) Designate a BIARC point of contact to work with the HCDoWS designated representative in selecting and planning all proposed Amateur Radio Service infrastructure, and any maintenance and operational concerns that arise.
- (2) Plan, design, engineer, install, maintain, and control a wireless data infrastructure that will serve the needs of BIARC and HCDoWS and approved by HCDoWS.
- (3) BIARC will obtain the funding needed for the purchase of necessary equipment, which may include funding from grants or other third party sources.
- (4) BIARC will secure the wireless data infrastructure, providing HCDoWS with the login or access control means needed to manage the data it wishes to have transported on the wireless data system installed and maintained by BIARC.
- (5) BIARC will adhere to all rules, requirements, and regulations of the Federal Communications Commission, County, and State of Hawaii, and maintain appropriate equipment and liability insurance policies.
- (6) BIARC personnel will follow all procedures and protocols defined by HCDoWS required for site access.

## VI. Limitations of Liability

No rights or limitation of rights shall arise or be assumed between the Parties as a result of the terms of this MOU.

## VII. Notice

Any notice or communication required or permitted under this Memorandum shall be sufficiently given if delivered in person or by certified mail, return receipt requested, to the address set forth in the opening paragraph or to such address as one may have furnished to the other in writing.

## VIII. Entire Understanding

This MOU constitutes the entire understanding of the Parties pertaining to all matters contemplated hereunder at this time. The Parties signing this MOU desire and intend that any implementing contract, license, or other agreement entered into between the Parties subsequent hereto shall supersede and preempt any conflicting provision of this MOU whether written or oral.

## IX. MOU Summary

FURTHERMORE, the Parties to this MOU have mutually acknowledged and agreed to the following:

- The Parties to this MOU shall work together in a cooperative manner and coordinate their efforts in order to bring about the achievement and fulfillment of the goals and objectives of this partnership.
- It is not the intent of this MOU to restrict the Parties to this agreement from their involvement or participation with any other public or private individuals, agencies or organizations.
- The Parties to this MOU shall mutually contribute and take part in any and all phases of the planning and development of this partnership, to the fullest extent possible.
- It is not the intent or purpose of this MOU to create any rights, benefits and/or trust responsibilities by or between the Parties.
- The MOU shall in no way hold or obligate either party to supply or transfer funds to maintain and/or sustain the partnership.
- Should there be any need or cause for the reimbursement or the contribution of any funds to or in support of the partnership, it shall be outlined in a separate and mutually agreed upon written agreement by the appropriate representatives of the Parties. Any separate agreement shall be in accordance with current governing laws and regulations and in no way does this MOU provide such right or authority.
- Upon the signing of this MOU by both Parties, this agreement shall be in full force and effect.

(7) BIARC will utilize the installed infrastructure for the benefit of the Amateur Radio Service and to enhance the preparedness of public health and safety personnel and other emergency preparedness groups. This infrastructure will not be used for commercial or for-profit use.

(8) BIARC will hold confidential sensitive information provided by the HCDoWS which may include, but is not limited to site locations, access codes, or other sensitive information the HCDoWS may choose to provide in furtherance of the objectives of this agreement. Sensitive information would be generally shared with the BIARC Repeater Committee and Executive Board, but may be restricted to the BIARC representative or individual technicians approved to work at a particular site, at the discretion of HCDoWS.

(9) BIARC will provide HCDoWS personnel training on the use of the installed wireless data infrastructure as needed, answer questions, and provide information regarding the functions and use of the Amateur Radio Service in support of disaster response and communications during an emergency.

## III. Terms of Understanding

This agreement is effective as of the date it is signed by both parties, and shall remain in effect unless terminated by written notification from either party to the other; or, until replaced by an updated version mutually agreed to by both parties.

## IV. Amendment or Cancellation of this Memorandum

This MOU may be amended or modified at any time in writing by mutual consent of both Parties. In addition, the MOU may be canceled by either party with 180 days advance written notice. If written notice of cancellation is received, BIARC will provide HCDoWS with the original invoices for all equipment installed in support of the part 15 wireless data infrastructure, along with a written offer for HCDoWS to purchase any or all described equipment within 30 days. HCDoWS may then choose to purchase any or all equipment described, within 60 days of this offer, and at their discretion, at the cost paid by BIARC. HCDoWS agrees to continue to coordinate with BIARC to allow us to schedule access to the sites and removal of all remaining BIARC owned equipment.

## V. General Provisions

The Parties acknowledge and understand that they must be able to fulfill their responsibilities under this MOU in accordance with the provisions of the law and regulations that govern their activities. Nothing in the MOU is intended to negate or otherwise render ineffective any such provisions of operating procedures. The Parties assume full responsibility for their performance under the terms of this MOU.

If at any time after entering this agreement, either party determines that it is unable to perform their duties or responsibilities under this MOU consistent with such party's statutory and regulatory mandates, the affected party shall immediately provide written notice to the other to establish a date and meet to resolve the matter.

Each Party agrees to distribute copies of this MOU through its field structure and make copies available to other organizations, both public and private, which may have an active interest and participation in disaster relief operations.

## X. Authorization and Execution

The signing of this MOU does not constitute a formal undertaking, and as such it simply intends that the signatories shall strive to reach, to the best of their abilities, the goals, and objectives stated in this MOU.

This agreement shall be signed by Hawaii County Department of Water Supply and Big Island Amateur Radio Club, Inc. and shall be effective as of the date it is signed by both Parties.

Hawaii County Department of Water Supply

(Date)

Big Island Amateur Radio Club, Inc.

(Date)

## What's your Comm's Plan

April 14, 2020 at 8:14 PM

From "ARRL Members Only Web site"

Hi,

This YouTube video made its way to Hawaii hams via Winlink. Scott Conover (AC2FV) who lives in Long Island NY, where disaster seems to visit all too frequently, took time out to produce a YouTube video of his "Disaster Comm's Plan".

It is worth viewing. Check it out against yours. Well done, to the point and only 12 minutes long.

[https://www.youtube.com/watch?v=Tmi1\\_N9oLYk](https://www.youtube.com/watch?v=Tmi1_N9oLYk)

Stay Safe!

ARRL Pacific Section  
Section Manager: Joseph Speroni, AH0A  
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