Kawailani ʻIno COMEX

After-Action Report   April 16, 2022.

The After-Action Report provides a summary of COMEX results, in order to align exercise objectives with preparedness doctrine to include the National Preparedness Goal and related frameworks. Hawaii ARES® uses trend analysis, and performance data to measure progress towards achieving objectives, as defined in our Multiyear Integrated Preparedness Training Plan.

This data and analysis allow us to identify our strengths as well as areas for improvement. It is a guide to the design of future exercises. Hawaii ARES takes a step-by-step approach toward meeting our long-term goals. The AAR aids us in creating an achievable improvement

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plan. It is used by the Hawaii ARES FSO to define and update our Multiyear Integrated Preparedness Training plan.

Exercise Overview

Exercise Name	Kawailani 'Ino Hawaii
Exercise Date	April 16th, 2022 @ 09:00 - 12:00 HST
Scope	This exercise was designed to test Hawaii ARES communications response to a severe weather event and communication outage across the state of Hawaii
Mission Area	State Emergency Support Function #2
Core Capabilities	Planning, Disaster Communications
Objectives	1.0 Communication Planning 2.0 Local Communications 3.0 Wide Area Communications 4.0 Documenting Communications 5.0 Data Communications
Threat or Hazard	Weather, Telecommunications/Power Outage
Scenario	A severe storm with heavy rain and high wind moves across the state from Kauai to Hawaii County over a simulated 4 day period. Damage and blockage to roads, structures, and power/communications infrastructure occur as the storm passes over each county.
Sponsor	Hawaii State ARES
Participating Organizations	County Emergency Management Agencies, Hawaii County Auxiliary Communication Service.

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Overall Analysis of Core Capabilities

Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 1 includes the exercise objectives, aligned core capabilities, and performance rating for each core capability as observed during the exercise and determined by the evaluation team.

Objective	Core Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
1.0 Communications Planning.	.1 Planning .2 Documentation		S S		
2.0 Local Communications	.1 Nets & Protocol .2 Communications	P	S		
3.0 Wide-Area Communications	.1 Band Agility .2 Relay Ability		S	M	
4.0 Documentation	.1 Log Completion .2 Form Usage	P	S		
5.0 Data Communication	.1 Software Setup .2 Hardware interface .3 User Proficiency	P	S S		

Ratings Definitions:
- (P): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- (S): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.
- (M): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- (U): The targets and critical tasks associated with the core capability were not performed in a manner that

achieved the objective(s).

Table 1. Summary of Core Capability Performance

[1.1 Communication Planning]
Leadership of each participating district and team will successfully plan locations for hub stations to run local nets, and relay stations as needed to assist with challenging locations. This is done in coordination with your local DEC/CEC. The goal is providing communication coverage to all communities in each district.

[1.2 Communication Planning: Documentation]
Hub and relay stations frequencies and contact points are documented on the ICS-204, assignment list and frequency plans including primary, alternate, contingency, and emergency modes are listed in the ICS-205 Incident Radio Communication Plan. Districts coordinate with the planning team and ARES leadership to assure a complete and consistent level of documentation. All ICS forms are to be signed off at the bottom by the station approving the update, and the date and time of update is to be listed.

[2.1 Local Communication: Nets & Protocol]
All ARES Districts are to hold local nets on a regular basis, as a primary method of assuring that local stations are familiar with net protocol. These nets also allow stations to learn about local communication plans, practice message handling, assure that their stations are functioning properly, and become familiar with each other prior to any COMEX.

[2.2 Local Communication:]
The goal of all local communication plans is to provide resilient and reliable communication pathways in all circumstances. Although various infrastructure, bands, and modes may be included in local communication plans, it is a top priority to assure that we will be able to communicate without any infrastructure. Therefore, all ARES leaders and members must work together to define and practice using modes of communication year round which do not require using supporting infrastructure. This includes use of simplex voice relays, peer to peer modes, and ad-hoc solutions that can be deployed in a rapid, flexible way such as mobile cross band repeaters, and digipeaters.

[3.1 Wide Area Communication: Band Agility]
A variety of communication pathways, modes, and band agility is encouraged in order to maintain resilient communication pathways. All stations in the field may not be able to achieve all modes defined. Yet hub and relay stations need to be more resilient, and would include better equipped stations and experienced operators. They need the ability to operate in both analog and digital modes, on VHF and multiple bands of HF. This way those stations would have at least a primary and backup mode of maintaining communication between stations in the field and served agencies. However, stations in the field are also encouraged to strive to implement multiple communication pathways whenever possible in order to maximize their own ability to be self-reliant.

[3.2 Wide Area Communication: Relay Ability]
All communities are encouraged to designate official relay stations as needed in their area to help stations with challenging terrain, and those who may not be as well-equipped as others. All ARES members are encouraged to practice and be ready to act as ad-hoc relays throughout the year. Our ability to provide relay services will continue to be an important operational capability in order to assure communications in all conditions.

[4.1 Communication Documentation: Logs]
Communications between all stations must be documented on an ICS-309 Communications Log. It is best practice for all stations to maintain a communications log with their station for each operating period, as well as forward a copy of this log to their local DEC by the end of the operational period.

During any COMEX these logs are used to aid the ARES leadership in exercise evaluation. In a real disaster, these logs are useful to the ICS planning unit. Information such as band condition reports, situational awareness, and logs showing the active stations inform the planning process as well as aid the incident operations and command in determining operational capabilities.

[4.2 Communication Documentation: Forms]
The use of appropriate forms, such as the ICS-213 general message form and others as required by our served agencies, is a core capability. Stations must be familiar and practiced with these forms in order to achieve reliability and accuracy in passing the essential elements of information and to prevent errors in message transmission. Although there may be certain urgent tactical situations where it is not always possible to use appropriate forms, in general the use of the form and formats requested by any agency having jurisdiction or NGO that we support must be considered as a core competency in message handling.

[5.0 Data Communications]
Data communication modes continue to be of increasing importance in all EMCOMM scenarios. These modes allow communications under conditions when voice modes are unable to be heard due to poor conditions. Many data modes operate faster and provide greater accuracy, especially when detailed complex information such as a list of equipment or medical supplies must be transmitted. More importantly, served agencies are incorporating methods to allow information passed via Amateur Radio data modes directly into their dispatch and tracking systems. An important and increasingly used capability is the ability to embed GPS coordinates into these digital modes that allow our served agencies to map locations of activities in real-time into their Geographical Information Systems. (GIS)

National Preparedness Goal:

"A secure and resilient nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk."

Chart 1: <u>Participant Activities</u>
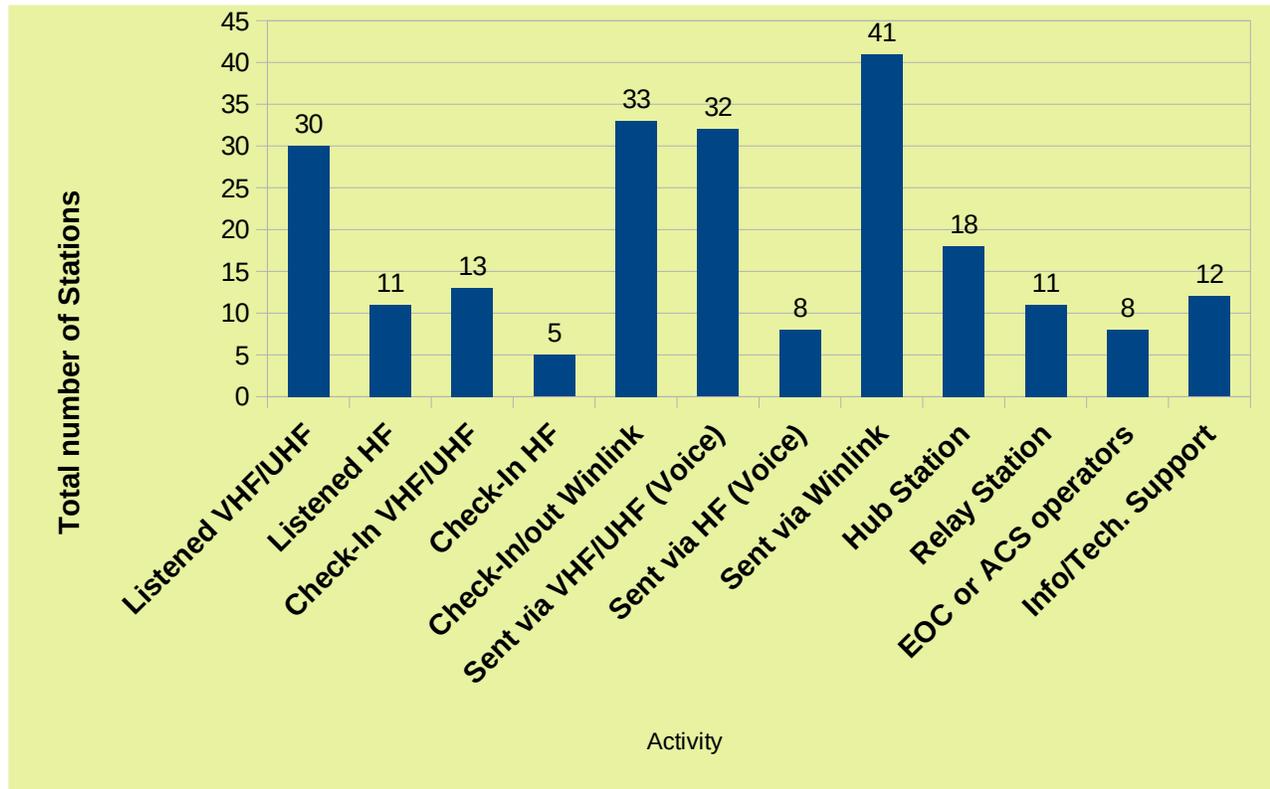
Chart 2: <u>Proportion of Participants With or Without Injects:</u>
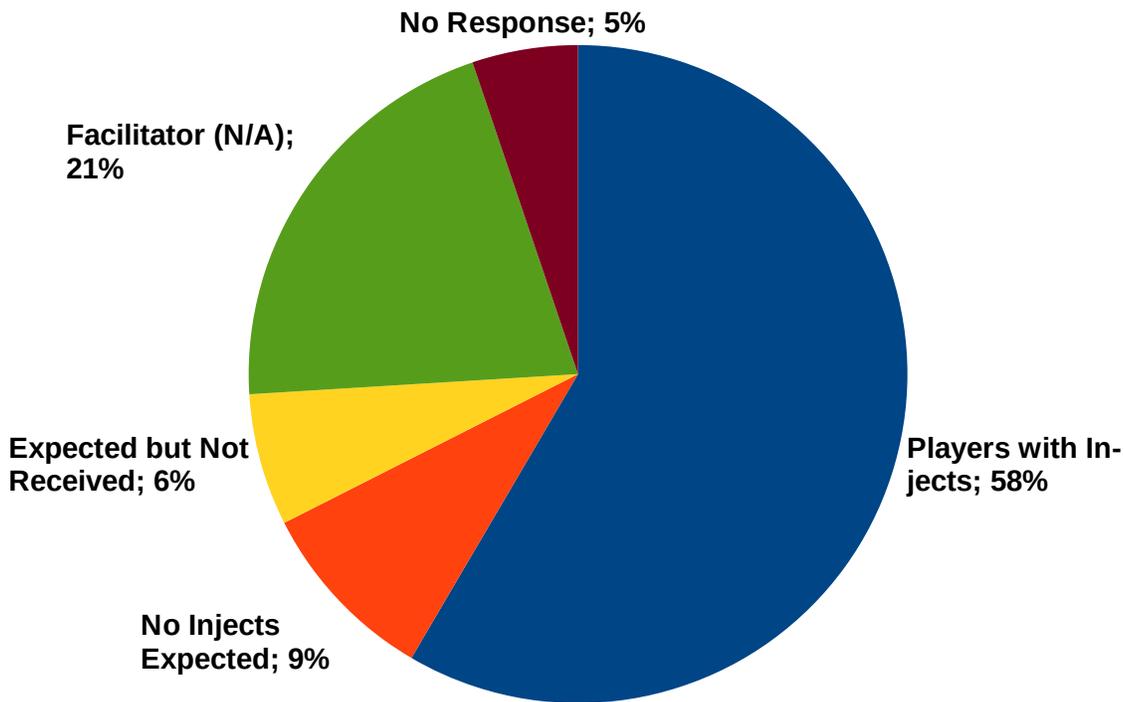
Chart 3: <u>Number of Injects Given to Players:</u>
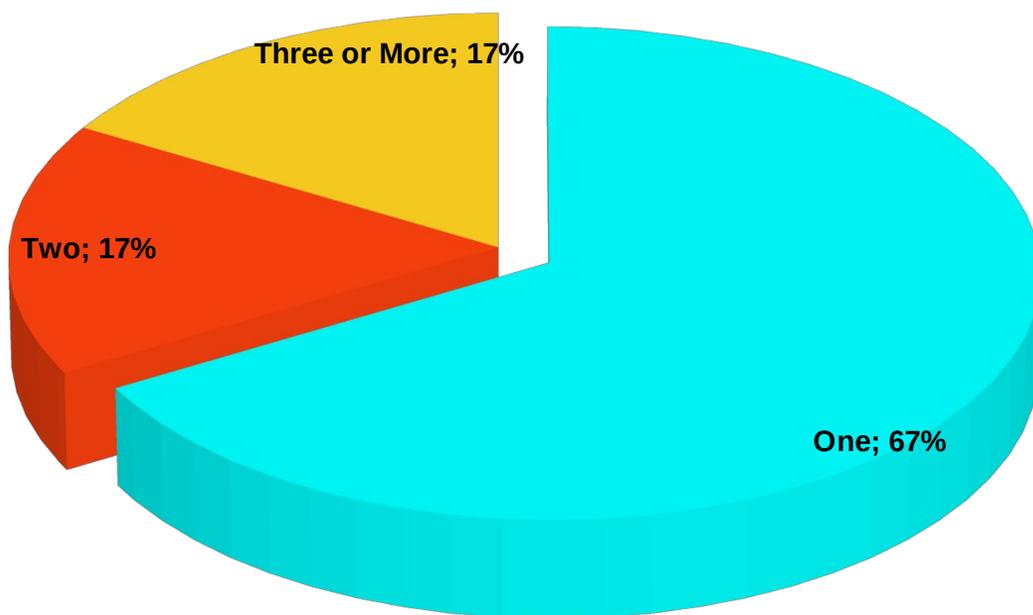
Chart 4: <u>Preference on the Number of Injects Given:</u>
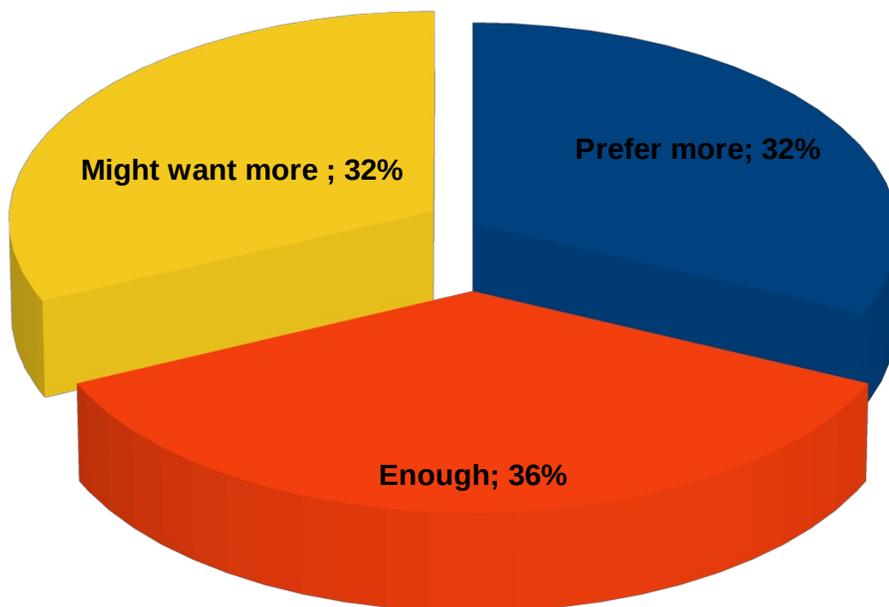
Injects are a collection of pre-scripted events intended to guide an exercise towards specific outcomes. Inject(s) are the basis for players to originate message traffic.

Chart 5: <u>Number of Participants by Mode:</u>
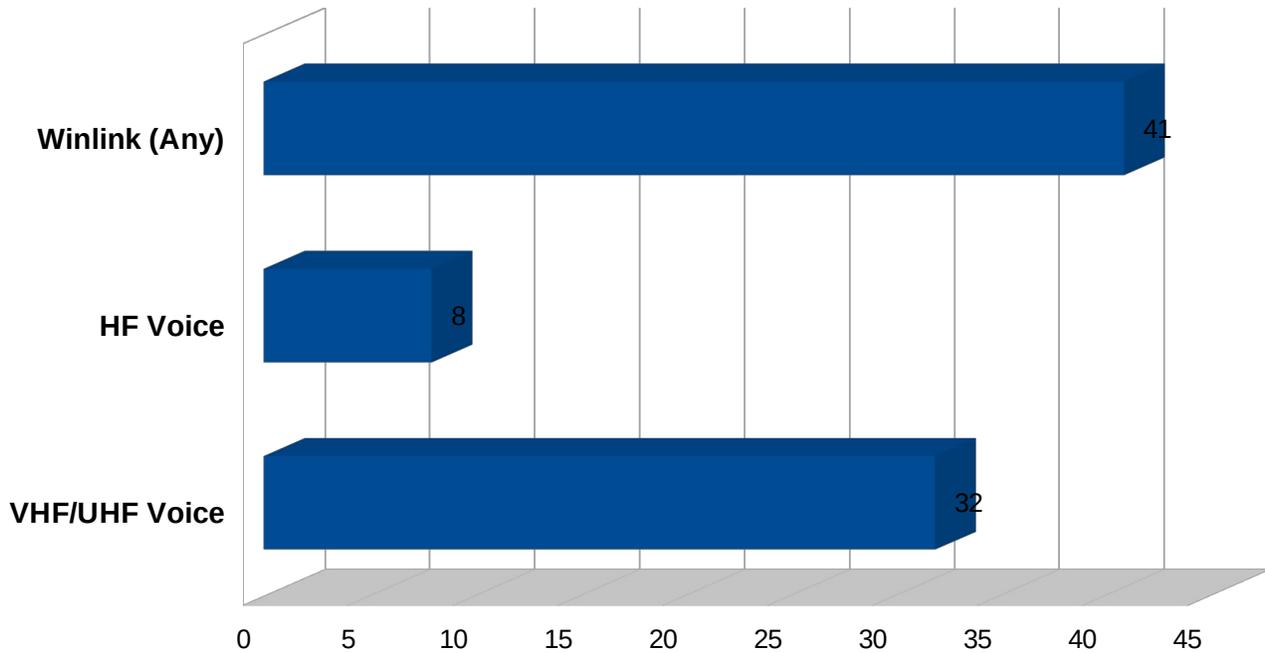
Chart 6: <u>Winlink Modes Used by Participants:</u>
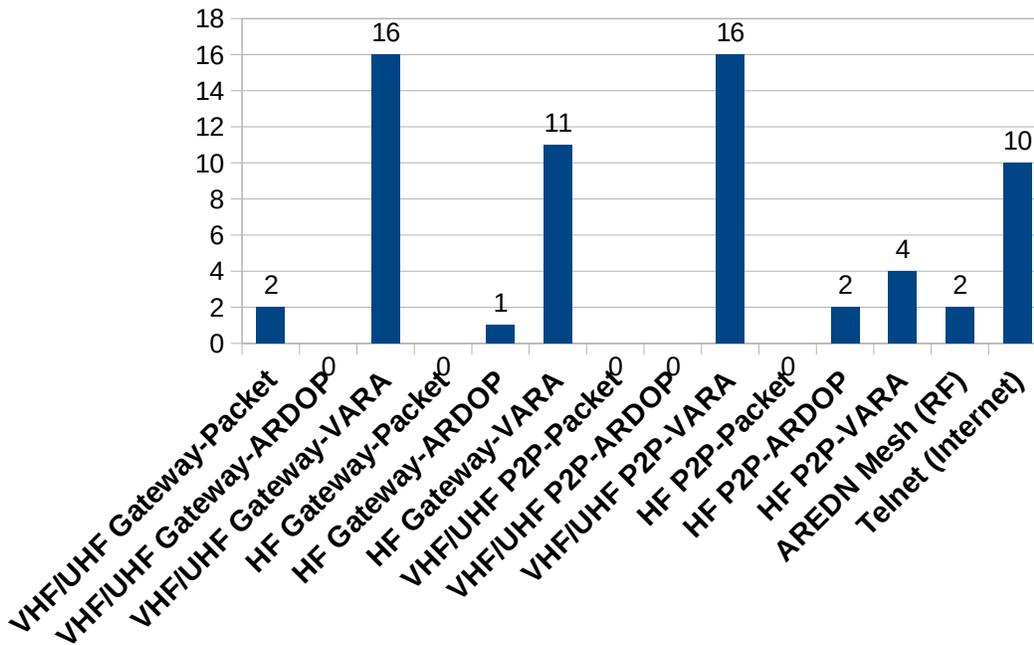
Chart 7: <u>Winlink Platform Used:</u>

■ **Windows Device** ■ **Linux Device** ■ **Phone**

4% 2%

94%
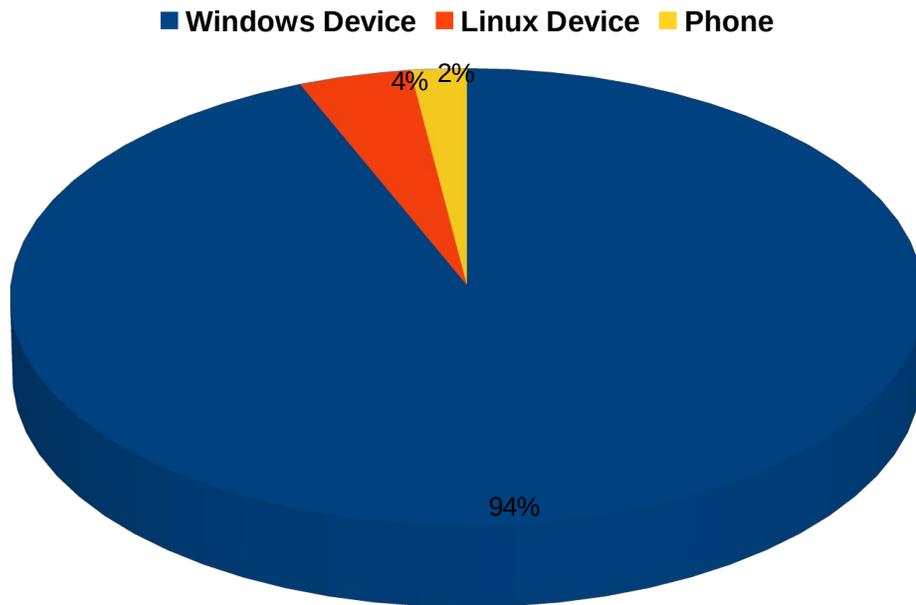
Chart 8: <u>Access and Use of COMEX Materials:</u>

Incident Action Plan (71%)	55
Player Quick Reference (77%)	59
SitMan/Ground Truth (81%)	62
Access to Documentation (88%)	68

0 10 20 30 40 50 60 70 80
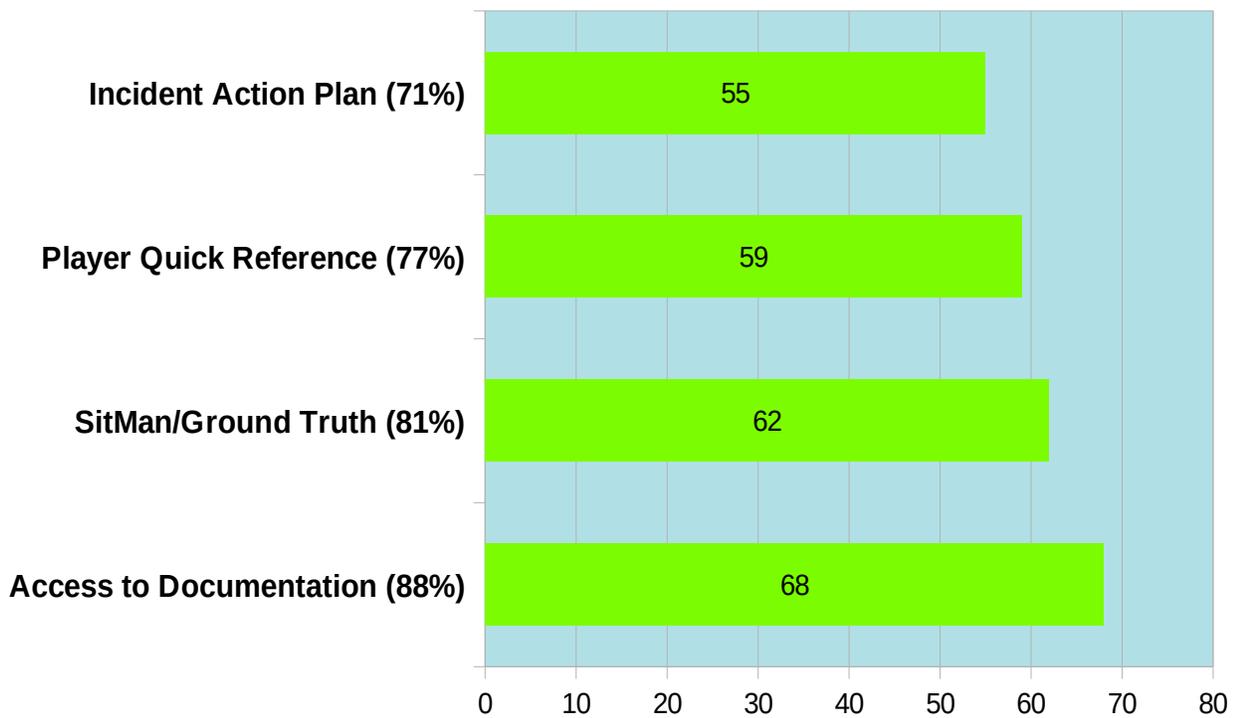
Chart 9: <u>Understanding of Local ICS-204</u>

Did Not Review; 26%

Not Fully Understood; 14%

Reviewed & Understood; 61%
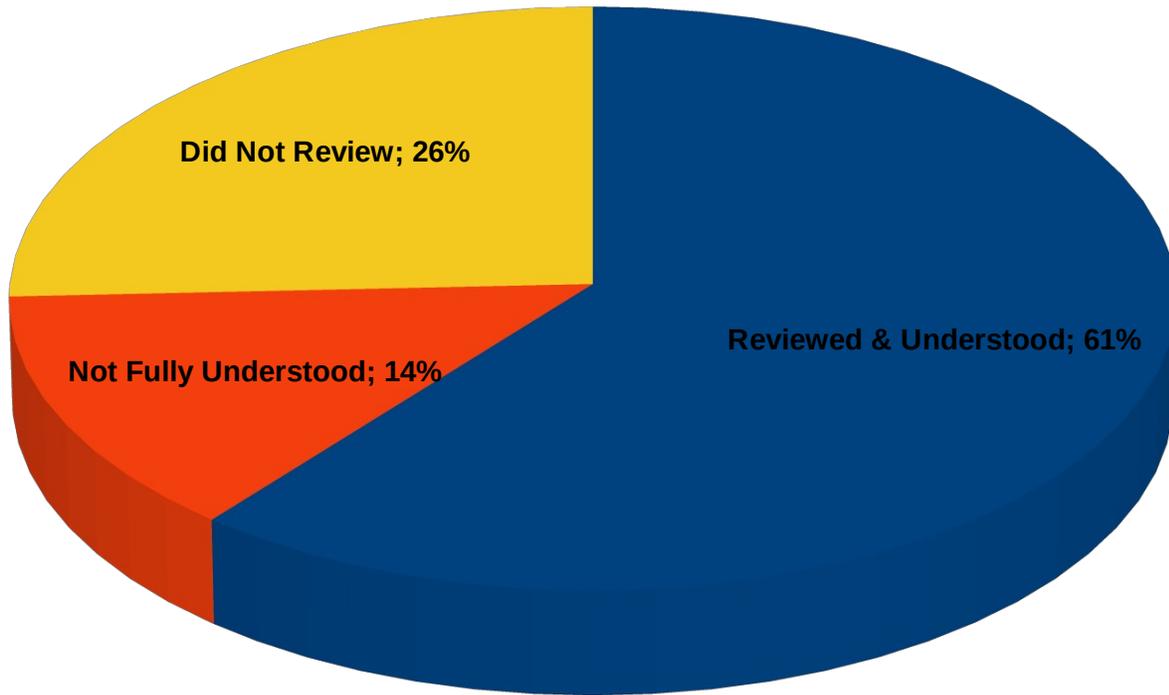
Chart 10: <u>Understanding of Local ICS-205</u>

Did Not Review; 23%

Not Fully Understood; 17%

Reviewed & Understood; 61%
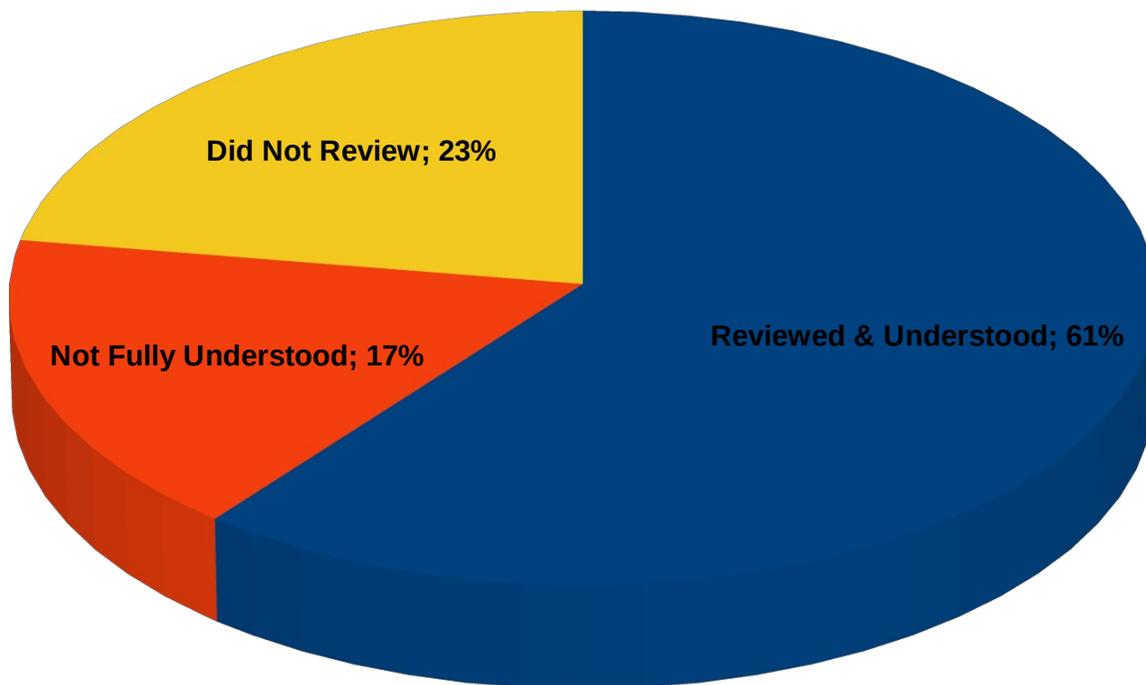
■ Reviewed & Understood ■ Not Fully Understood ■ Did Not Review

Chart 11: <u>ICS-309 Communication Log:</u>
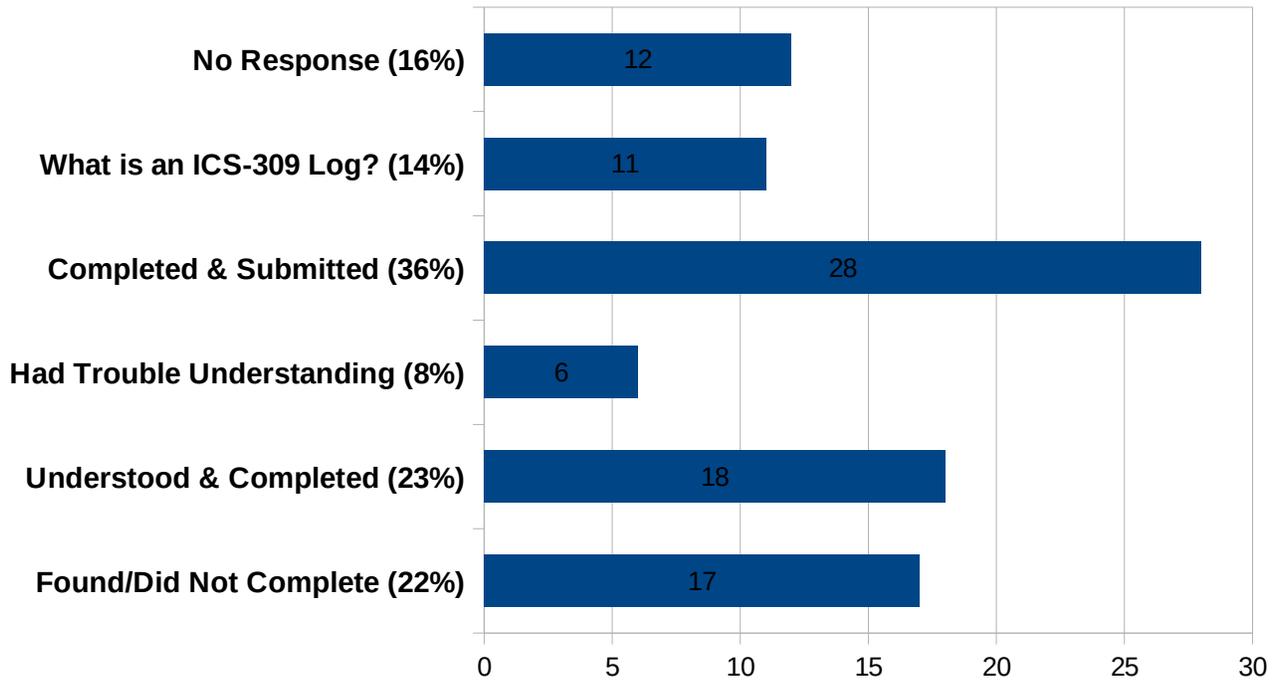
Chart 12: <u>ICS Experience, Training, & Understanding:</u>
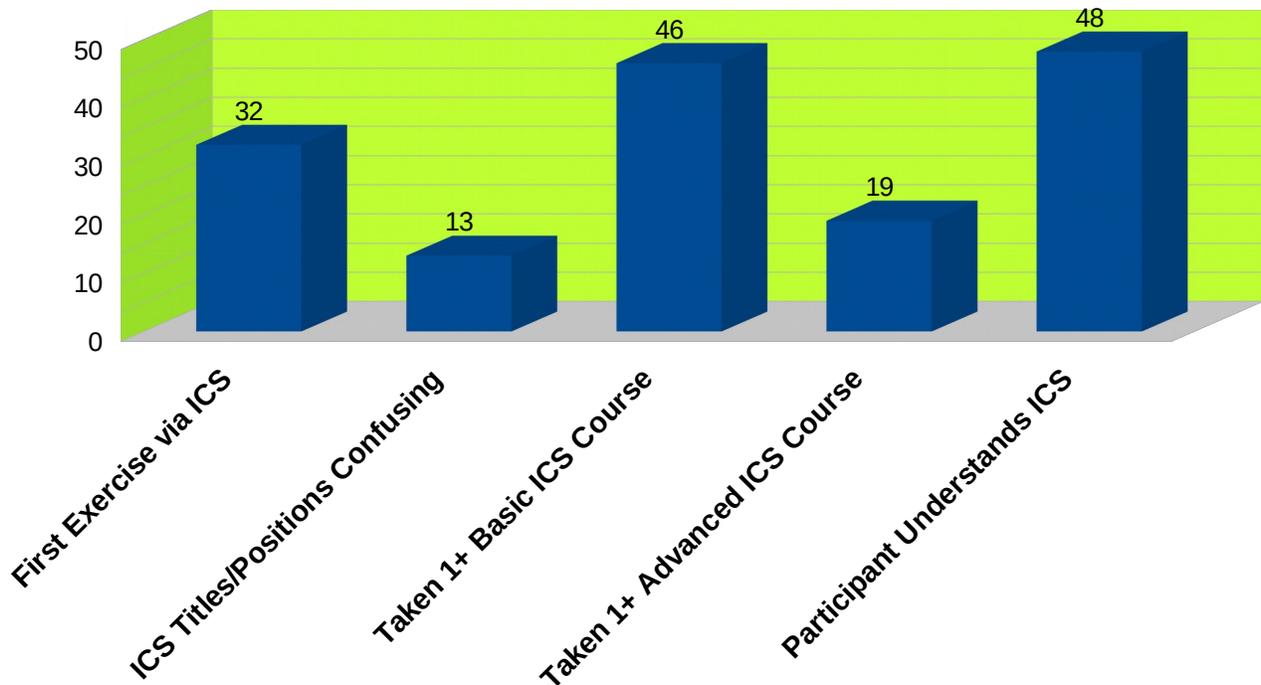
Note: Some participants checked more than one answer to these questions.

Chart 13: <u>Hawaii ARES April 16th COMEX Overall:</u>

A 3D bar chart with the following values:

Category	Value
Was Too Easy	3
Matched my Capabilities	25
Was Too Difficult	0
Influenced Station Upgrade	27
Learned about Traffic via Voice	16
Learn/Try Addl. Bands/Modes	12
Installed Winlink Software	9
First Try @ Radio EMail	6
Tried New Winlink Mode	10
Was a Worthwhile Experience	58
Did Not Meet Expectations	3
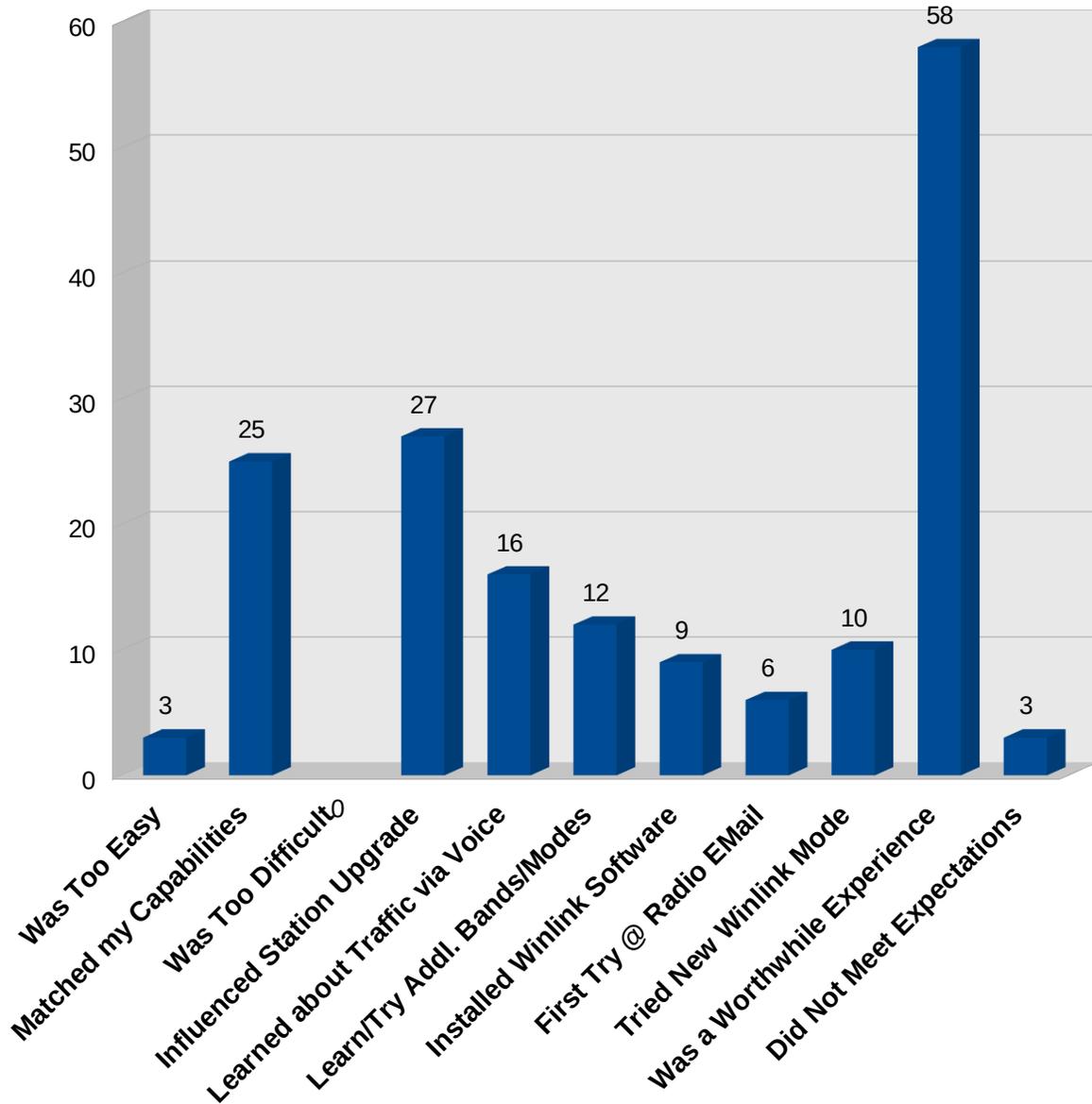
Survey Question: <u>Other comments regarding COMEX documentation and planning</u>

1. It was fun and helped two Hams new to sending voice messages. Also new a Hsm new to Winlink how to send VARA FM P2P day prior to the drill. He did great on the Flood Drill.

2. On Maui we had double the amount of hams who checked into the net over the number who actually signed up. Will have to continue to keep them involved and not be frightened away by the forms and format that really does work. Some "first timers" is actually encouraging. Now to mentor them, we need all experience hams to become involved.

3. I didn't know what to expect and would have really appreciated some sort of preparation beforehand. I check in with the Hawaii All Star Mainland link every Sunday and was not prepared for this drill. It would have been nice to get a heads up as to what we should review.

4. I had to search for the information day before and figure things out on the Earp website . Got the inject day before to find out the time I should check in so it was a little rush and change of plans. If I had gotten the win link information earlier I may have participated.

5. As the COMEX materials are updated, please tell us what information specifically was updated so we don't have to try and find the changes by comparing new and old documents.

6. Thorough documentation, planning, and explanation when I had questions prior to event. Some documentation with frequency assignments changed the day prior to event, but it was not a serious problem.

7. Complete and comprehensive. The ICS 309 logging process is difficult to understand and detracts from the message handling. It needs to improved/refined.

8. It was a lot to read but not difficult to comply with.

9. the ICS204 pTp winlink understood but ICS205 mode/call did not match. A map of simplex Primary/ Alternate/Contigency frequencies assigned per sector to prevent cross talk would have been nice. It was difficult to keep track of frequencies in use per sector reviewing all the ICS205 of each area.

10. Great planning!

11. Great exercise! I failed spectacularly but now I understand a lot more about packet radio and am ready to work on my 2m game. It would be nice to have a video or demonstration of how to properly read a message before the exercise. Also at the end of the zoom meeting I heard there is an ARES email group but they didn't mention how to join.

12. The context of actions for this event was never stated on any nets, therefore, many of us signed up too late, maybe next time, someone will think ahead to explain the event over the air on how the event is to work in order to get more hams involved. I was told by many hams that they heard of it but no one bothered to explain how it was going to work, many never knew how to sign up either. I only found out about my options from Stacy KH6OWL two days for and only did simplex operations from military bases and highest peaks of

the island. Not everyone likes Winlink, nor has the time for it. Plus it's not realistic in the real world and it's certainly not Amateur radio.

13. I only had one check-in and forwarded his inject vie Winlink VARA HF

14. Your pre-event advice, aimed at saving time, was to use the number, not the title, of the particular item being relayed by voice to the hub. But the winlink form into which the sitrep info was being transferred had no numbers, just titles of categories. Also: the number of lines per category which were allowed for inputting info were not necessarily the same on my sitrep form as they were in the hub's winlink form into which my inject info was being relayed.

15. First experience for me. Learned a lot and want to participate again in the future.

16. Thorough

17. I use Winlink so rarely that everytime is a new learning experience.

18. Excessive planning documents to read.

19. No access to Winlink really limited my participation. I only received my Technician ticket 11 days ago, and used the exercise as a chance to learn from more experienced operators. From what I could tell, most of the action on VHF/UFH bands was via Winlink. The Leeward EOC POC was trying to manage Winlink traffic and respond and track voice at the same time. Seems like having a second operator as an assistant to do voice only traffic would help manage the flow of events and allow the EOC to focus on the real action happening on Winlink. This might also encourage more participation from operators who only do voice on VHF/UFH and provide a better idea of the potential simplex links that can be expected during a real emergency. This is especially important on the Leeward coast where simplex between Ewa Beach and Waianae is challenged. Just a thought.

20. I registered for the event only 48hrs before so may have missed some instruction. I was confused about how the various simplex frequencies are used to relay traffic and expected that an NCS would open a net at the beginning of the event and give instructions. Maybe I missed the introduction being on the wrong frequency or out of range of the NCS station. In my area I was able to monitor traffic on 146.550 and 146.580 but it was not clear to me why nobody was using 146.565 which is the S Oahu ARES frequency. Over the 3 hour event I think I only heard 2 or 3 messages being passed to EOC.

21. Should there be regional ARES nets with formal check-in/check-out procedure and regular NCS contact with checked-in stations to be sure that messages are not missed or a station is in trouble?

22. Thanks for organizing this event, it was a good exercise to see how we will respond to an emergency scenario. Next year I hope to have more time to assist.

23. a little more documentation or training seems to be in order. the player quick ref could include a numbered list of steps expected of each player, very briefly. OR a practice session before the COMEX that has very similar steps involved but give a week for the participants to complete.

24. Much was confusing. It was hard to understand which hubs I should be using for what, given my location.

25. Would be good to have some zoom training sessions prior to an exercise, also available afterwards on Youtube for those who missed the live session.

26. Good exercise! I will need to improve my setup so that I can participate more in the next one.

27. Great exercise, the level of effort in planning and coordination was evident!

28. While I received confirmations of my winlink reports, I did not see "confirmation numbers" on them. Also, wasn't clear if the communication log was to be transmitted somewhere.

29. As a brand-new licensee (less than a month), I had difficulty understanding the jargon (commonly used, amateur radio-specific, terms) -- this is understandable. It appears, to me, that the introduction of digital technologies has made the field more challenging for the novice like me.

30. It was my first OAHU ARES COMEX, it was a great learning experience, and I look forward to being a productive member of my Hawai'i Ham Radio Ohana!

31. I'm very green at this but trying. Even the questions in this survey are difficult to answer. I received quite a few documents prior to April 16th. But I don't remember if they were labeled by number.

32. I think we need to add a simplified, well organized summary describing the specific expectations for each participant. I will provide details elsewhere. In short, while the documentation was extensive, it was difficult to search for and find explicit details on each expectation while under any time pressure.

Survey Question: Other Comments: (Please share your thoughts)

1. The Hawaii ARES policy is to promote simple Winlink communication without Internet. This should be the agreed goal and be promoted even if it is not followed in every event. This needs discussion with the ARES leadership group,

2. Being net control and hub for voice and Winlinking SITREPs and troubleshooting misunderstandings or lack of clarity... requires two brains and four hands, which is one more and two more respectively than I presently possess. Other than that it went well.

3. Great drill in using VARA FM P2P. Only challenge was trying to digipeat to the Oahu EOC. After many attempts was able to send the first batch at 1203 pm and the second batch 12:28 pm after the drill ended at 12 noon.

4. On Maui, a couple of us are planning to start a monthly ARES net. With the possibilty of holding Winlink training sessions. Any responses from interested survey takers received should be shared with the County reps. I feel more comfortable after taking this training exercise. And look forward to the next one. I am registered for the ICS 300&400 class scheduled on Maui in May.

5. I wished to participate more but was called away to work and was only able to listen to small portions of the exercise on VHF. I will be interested in future exercises and planning.

6. GREAT JOB

7. I would suggest an S.O.P on what or how to talk to the command center. I kept going to fast and was asked to go slower. When checking in I didn't not know what to say or how to greet them.

8. Did not clearly understand my role and what was required. Expected more interaction with Incident command staff and net control (Sitreps, radio checks, etc.)

9. The COMEX was well organized and the exercise material was useful. Well done, planners.

10. HF and 2m propagation problems on Oahu were realistic, reminding us we need to keep refining hub and spoke concepts for each island's unique terrain and radio operator resources. HF relay from Maui helped Windward and South Oahu talk to each other. It is a reality of HF propagation to plan to ask for HF relay help from other islands.

11. I greatly appreciate the work that went into the planning and execution of the COMEX. It was a very worthwhile exercise and I look forward to the next. Thank you.

12. Well planned and prepared. It was the first ever fully ICS consistent exercise in Hawaii and a good reality check for how challenging it really is.   There a lot of holes in my own preparedness to deal with if my own resources are to be brought to bear in an actual major outage and I would consider myself to be experienced.   I truly appreciate the hard work by the planner/leaders of this exercise. Impressive!

13. 1)organize a better RF flow path to EOC other then one Winlink pTp freq on vhf.

14. 2)Add additional resources such as more simplex frequencies for heavy voice traffic.

15. 3)Add use of AREDN mesh to expose the technology to other hams.

16. 4)Add a UHF base at HMB EOC to the outside garden heliax trplexer in /out

17. 5)set up a crossband mobile somewhere to gain access to 2nd VHF winlink freq

18. 6) I question in a real word event if ham is elsewhere unfamiliar what sector he/she is in how would they find the VHF simplex freq to be on?.. Consider using 146.52 as a dedicated universal call channel not to pass traffic, just as a hand off to any fixed station in range that already has a primary and alternate simplex to move off to within a sector.

19. I'm grateful the exercise was open to all levels of ham operators, it was good practice and a compliment to Cert training.

20. This could of been a worthwhile event if someone would of held a net to explain options such as simplex operations that would of made this event

fun, exciting and worthwhile for every ham operator. This was advertised as a Winlink only event, not once in all the weeks before the event was Simplex ever mentioned. If Stacey KH6OWL didn't tell me about the Simplex option, I would not have signed up. One more very important thing, someone on 146.460 mhz for KH6OCD should ask their mother to teach them manners and professionalism. There is never a good reason for any license ham to get nasty over the air with another ham for any reason in the world. I would love nothing more than to find out who that was and teach them some old fashion Marine Corps manners that they'll never forget so that they will alway treat other hams with respect that they've earned. There is no reason for them to be an @$$ to participates of such an event in which governmental agencies might be listening and participating in. Professionalism counts, not JOTA- "Jerks On The Air". I kept my cool and stayed professional to make them look bad, people will remember that more. Tony, next time, be more selective in who is the NCS for this event. There is a very good reason that I'm a ARRL A-1 Op member and they are not. For 38 minutes on January 13,2018, I ran a emergency net for a NK Inbound Nuclear Attack where professionalism really counted and they didn't. You might wanna remind them that. Overall, I felt this could of been a bigger and better event if someone had just explained this event with finer details on one of our six nets per week and at least mentioned the point of signing up in advance, even if they don't do Winlink and digital modes. This could of been a great event for D Star, 10 meters for all hams, band was wide open and EchoIRLP. Also, some of us were told that 220 mhz was going to be used but no frequency was given. Next, plan for every ham and just for the ones that think they are special. Disaster events effect everyone equally and this could of been an equal opportunity event also. Many of us love working Simplex modes and only Maui hams got the memo it seems on 147.080 mhz. Oahu is suppose to be the head of the body, not just the @$$. Volunteers could of been asked to do all the different modes instead of severely limiting the event for the special ed hams if you get my drift. This was suppose to be a simulated real world event and no one bothered to think outside the box to make as such. Winlink is a nice mode but it's not the only mode. Many of us still do D-Rats, Packet, Allstar, EchoIRLP and FLdigi, next time, give all hams options. That is what makes Amateur radio the lifesaver that it is, not what it could be. Not one ham was located at any local hospitals and only one ham was on military installations and only one ham was at the NWS Office at UH Manoa. Not one ham was at any fire stations nor police stations, a moment for Amateur radio to shine, a missed golden opportunity for a simulated real world COMEX Event.

21. For stations that had Vara HF capabilities, it would have been good if they had the opportunity to attempt P2P injects to neighbor islands. This could test NVIS capabilities to pass Winlink traffic between islands in sending and receiving

22. Worthwhile and very valuable exercise..Thank you!

23. I will continue to look for a native Mac winlink app. Not interested in kluged Windows version.

24. Exercise was well scripted and organized.

25. I believe our small net in Laupahoehoe Ninole area could handle a less-scripted exercise scenario, and most importantly, a real-world scenario. Thanks for the effective guidance.

26. Looking forward to the next learning experience.

27. I look forward to seeing more development our ARES exercises

28. The ICS system is confusing for those who don't participate much, and COMEX assumed quite a bit of familiarity with it. I've taken most of the relevant courses, but it didn't help me understand the COMEX documentation as well as I should have, even with researching my old course notes. I understand why we must use ICS, but it is very jargony and full of acronyms, etc. It would be better if you glossed things more in the COMEX documentation. Even to answer this questionnaire I have to look up what courses I've taken and what documentation I read because I don't have the numbers memorized.

29. About the exercise itself, there didn't seem to be any formal "checking in" to nets, and it seemed as though many operators were jumping around a lot and you couldn't necessarily count on an operator you heard on a particular frequency being there later for a relay. Because there wasn't much traffic in the beginning, it was hard to know which frequencies/operators could be heard, since frequencies were mostly silent for the first half hour. I tried to monitor my VHF hub on one radio and the EOC on another. One part of the documentation suggested you should go straight to the EOC (if you could) to pass traffic, but it seemed to me that, for VHF voice traffic at least, this was discouraged. Also, there seemed to be competition between voice and digital traffic on specific frequencies, and there needs to be more efficiency there. Perhaps have different frequencies for voice and digital, or specific time slots for one or the other. In a real world situation, I expect this problem would be magnified, because there would be more traffic.

30. I'd also like to see more feedback on the injects. Was the traffic we passed along "good"? Did we include all and only the essential information? How could we improve? Were our reports OK?

31. The actual weather conditions mirrored the exercise scenario with winds gusting to 40 mph and heavy rain. This made my portable operation challenging. I couldn't use my 4-el 2m yagi because of the wind and had to resort to a Diamond vertical on a 15 ft. fiberglass pole. I was only able to send one Winlink message via the VHF gateway, then had to switch to HF to send messages via the KH6RX gateway on Oahu.

32. I greatly appreciate the help from Matt Glei and Raleigh Verdun.

33. I was prepared to transmit incident reports but was unable to connect to assigned HUB, net control sounded overwhelmed to run interference. Perhaps should have tested the frequencies beforehand by coordinator, though coordinator also seemed overwhelmed by all that needed to be in place before, during and after the exercise. But other spokes were successful and messages were sent/received/relayed so in the end worked out!

34. I have provided feedback on the exercise through my DEC and at the hotwash. This was a great exercise with the level of effort by the primary organizers evident. My impression is that we are on solid footing and have identified realistic and possible areas for improvement.

35. Thanks to all who planned this exercise.

36. I'm one of the inexperienced people: even though I've had my license for a
    while already, Saturday was my first time ever speaking on the radio (just
    to check in). I did not pass any messages, but it really helped to just
    listen and learn radio etiquette and language. Please have exercises more
    often, if possible, and include more voice injects or spontaneous
    messages, since inexperienced operators who are hesitant to actively
    participate would learn by listening and - hopefully - become more
    comfortable for a future exercise. I didn't hear a lot of voice traffic
    (Maui County) and it would have been great to hear to more hams in action
    who - unlike me - know what they're doing. Winlink sounds great, but I
    would guess that a number of us newer hams aren't at that stage yet and
    still need to become confident with voice messaging. Thank you for a
    great first experience; I've finally started crawling and hope that I'll
    be walking in the future!

37. While I did not actively participate in the exercise, I appreciate the
    opportunity to listen in -- Mahalo!

38. Volunteer training via zoom or other means, for operators. I didn't quite
    understand some things which if we had prior practice, would make it run
    better? More instruction at ground level. Thanks

39. Thank you

Hawaii County ARES Flood COMEX Participation

Note: Some stations checked into multiple nets.

Category	Number of Stations
Winlink Check-ins	24
Hub Nets Check-ins	55
No. of ACS Forms Passed	30
ACS Check-ins UHF Net	3
ACS Check-ins HF Net	5
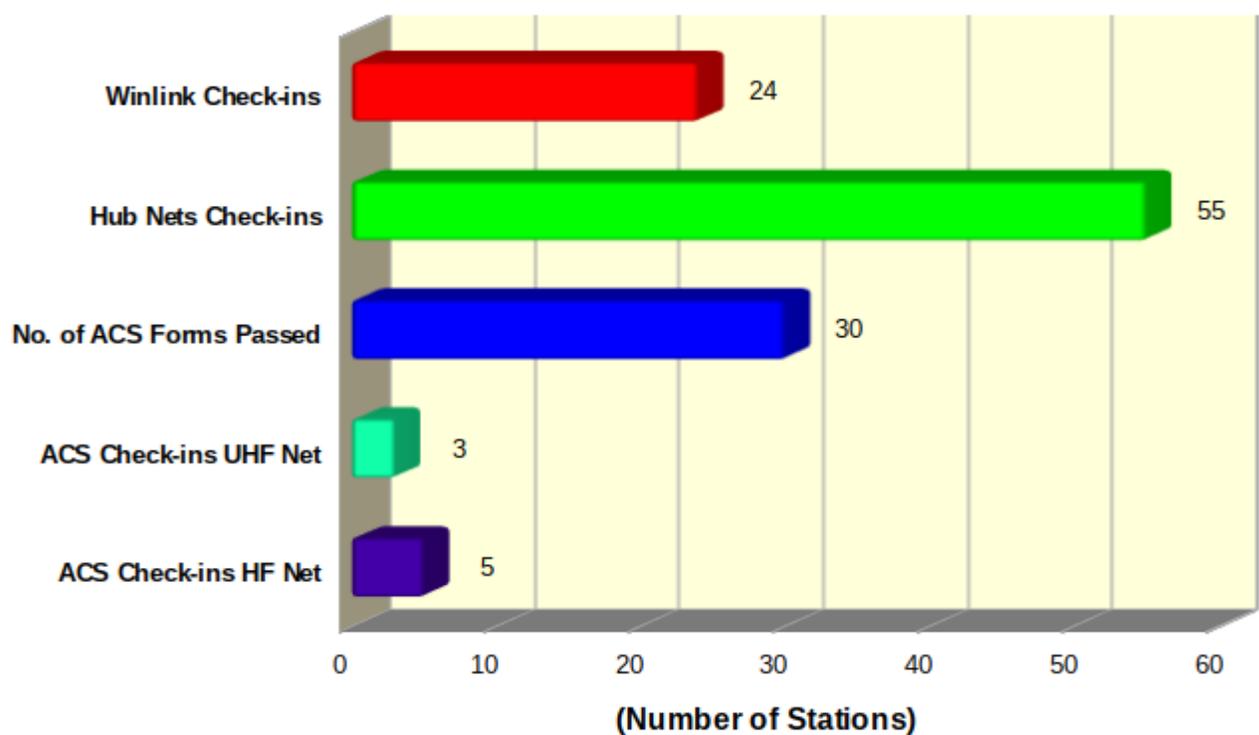
(Number of Stations)

Participation: Sign up vs. Actual

Category	Value
Indicated "Yes"	30
Indicated "No"	1
Indicated "Mabe"	14
No Answer	6
Actual Participation	38
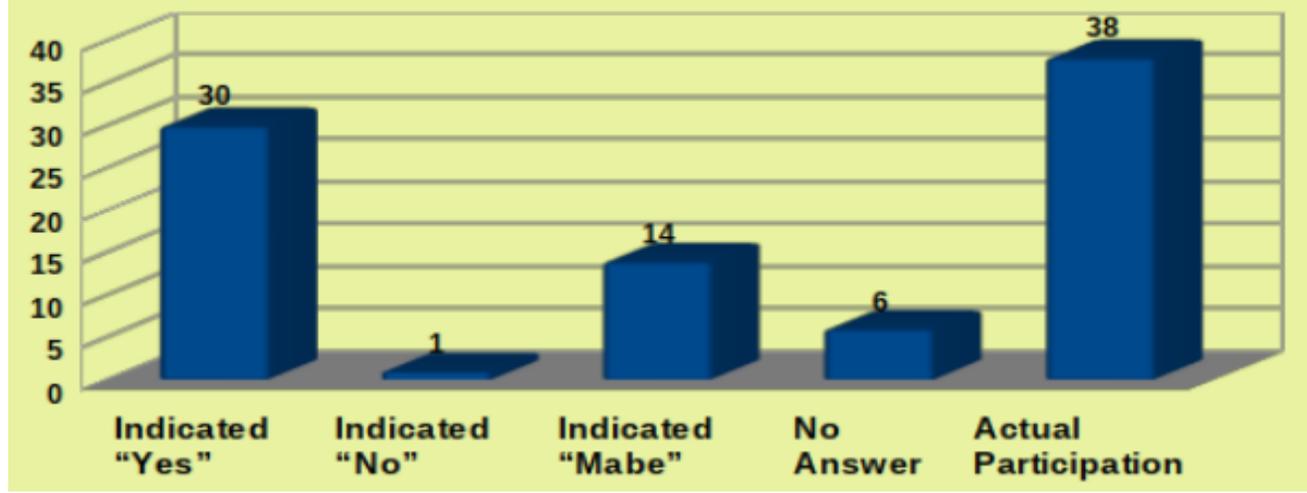
Hawaii County Participation by Region:			
Hub & Relay Stations	**Number of Participants****	**Logged Exchanges**	**Supervisor**
North District	2	3	Jim Sugg, AH6AE
North Hamakua Hub	9	24	Denning, WH6GDC
Laupahoehoe Hub	5	14	Kyra, WH6FSD
Northwestern Hub	4	7	Norm, NH7UA
East HI Training Net	12	26	Jeremy, AH6V
Paauilo Hub	---	---	Rick, AH6RK
Ninole Hub	5	21	Gary, KH6GM
East District			
Puna Hub-WH6FQI	5	10	Jim Huntley, WH6FQI
Puna Relay	3	3	LB. WH6GGO
Puna-Upper	2	10	J.Rosenbaum, WH6FZH
Hilo Hub	1	4	Les Hittner, K0BAD
Pepeekeo	3	14	Darrell Asuka, KH6RDO
South District	2	---	Paul, WH7BR
West District	2	---	Dewey, NH6M
Totals	**55**	**136**	

Table 1: Hawaii County Hub/Relay Participation.

Maui & Kauai County COMEX Participation:

COMEX Results: Maui County

	Registered	Participated	Voice Messages	Winlink Messages	Total Messsages
Value	9	14	1	20	21

COMEX Results: Kauai County

	Registered	Participated	Voice Messages	Winlink Messages	Total Messsages
Value	15	23	21	48	69
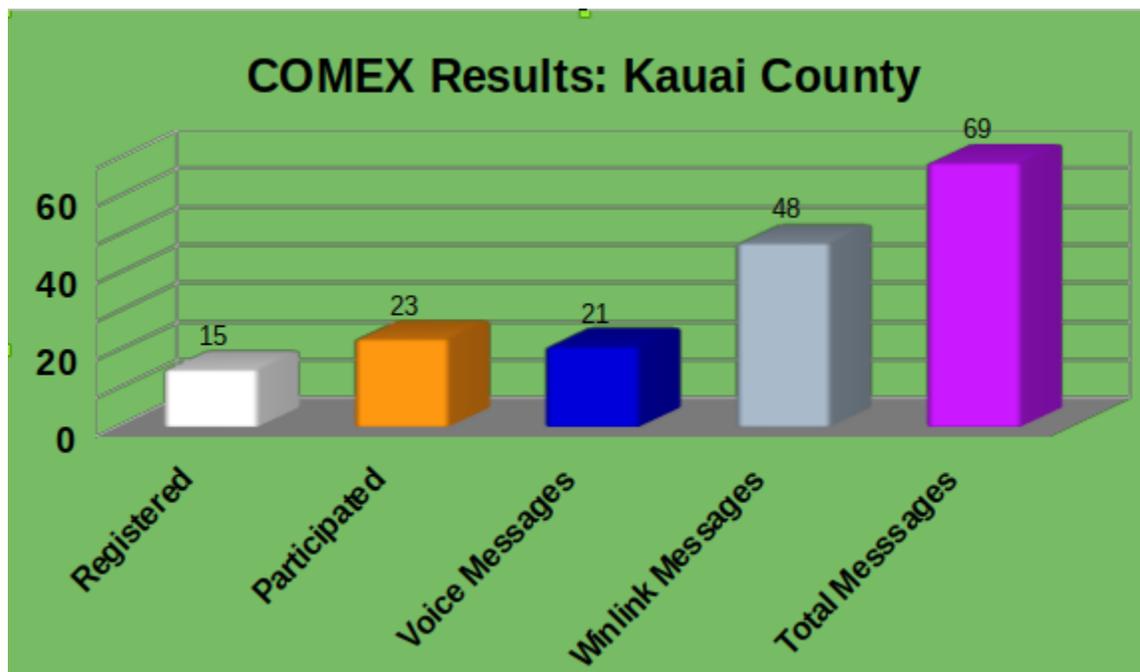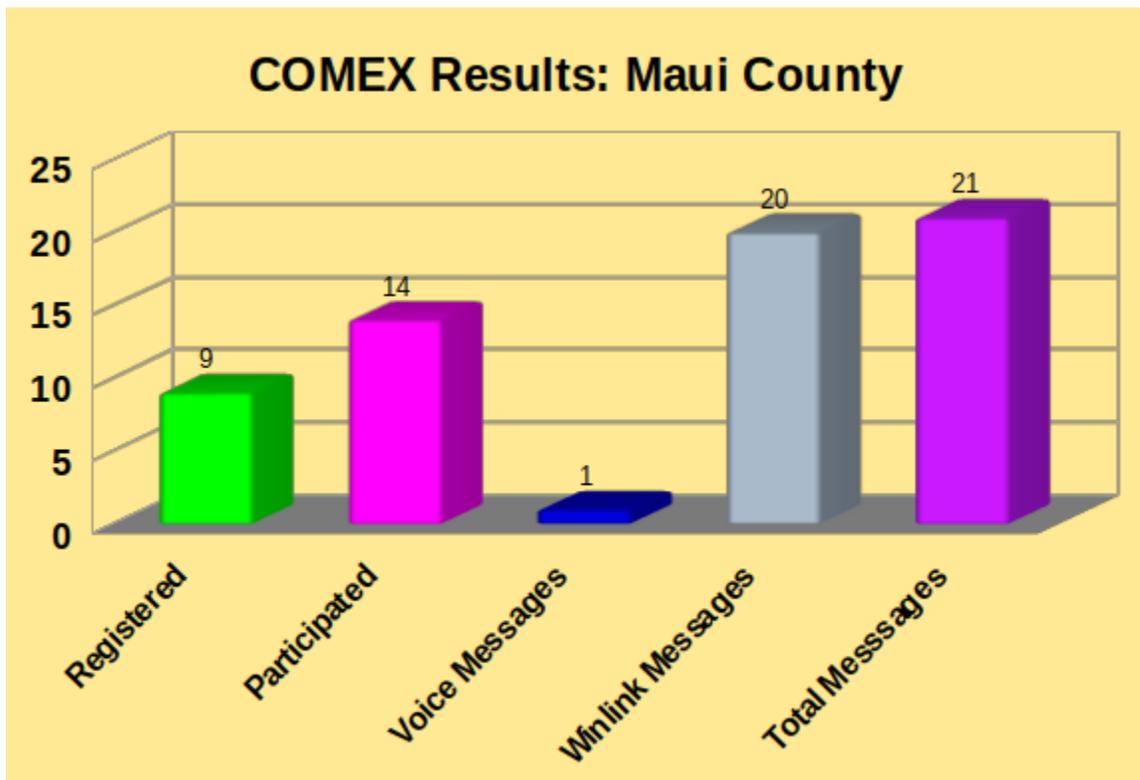
City & County of Honolulu COMEX Participation:

Oahu: Participation, by District

	Sign-ups	Assigned=n/a	Participants	Bailed / No contact / Other
Oahu	70	12	32	17
Leeward	10	1	7	2
North	13	1	5	5
Windward	17	4	9	4
South	30	6	11	6

Oahu: Injects Assigned vs. Passed

	Oahu	Leeward	North	Windward	South
Injects	75	13	11	22	29
Messages passed	54	8	8	18	20
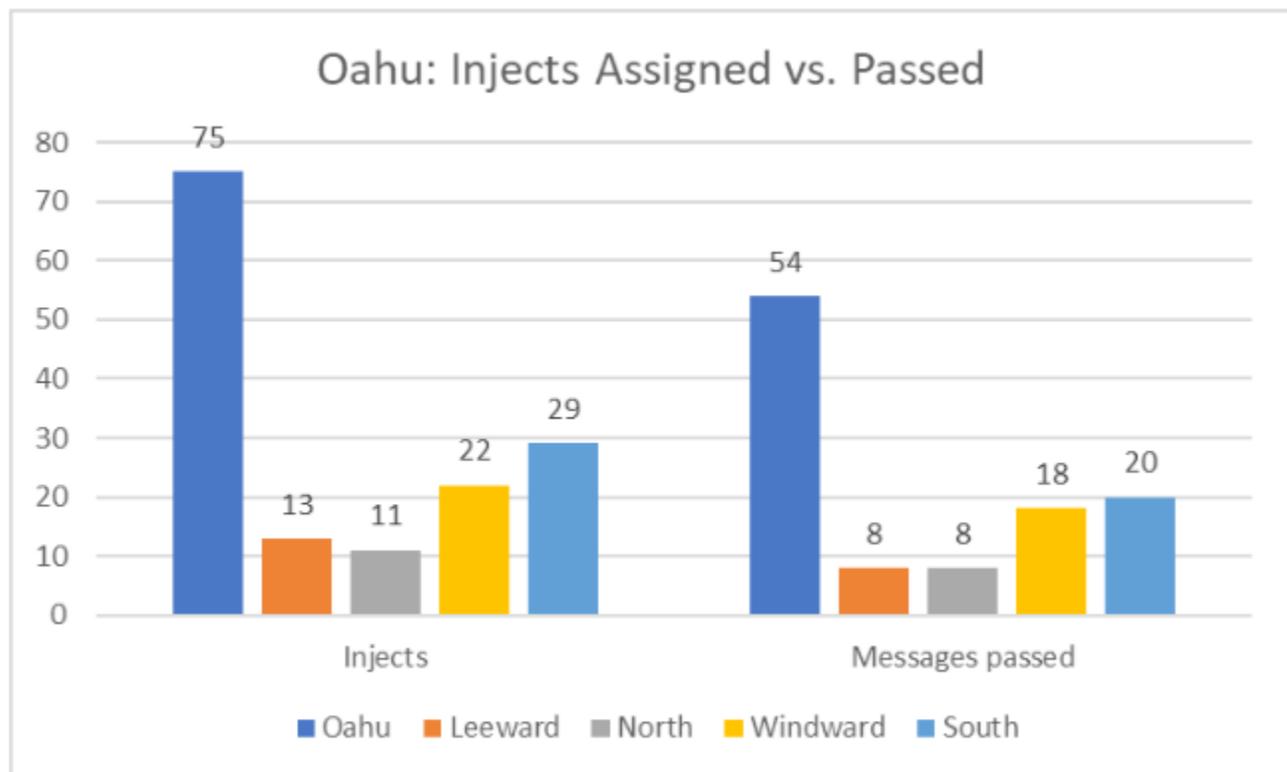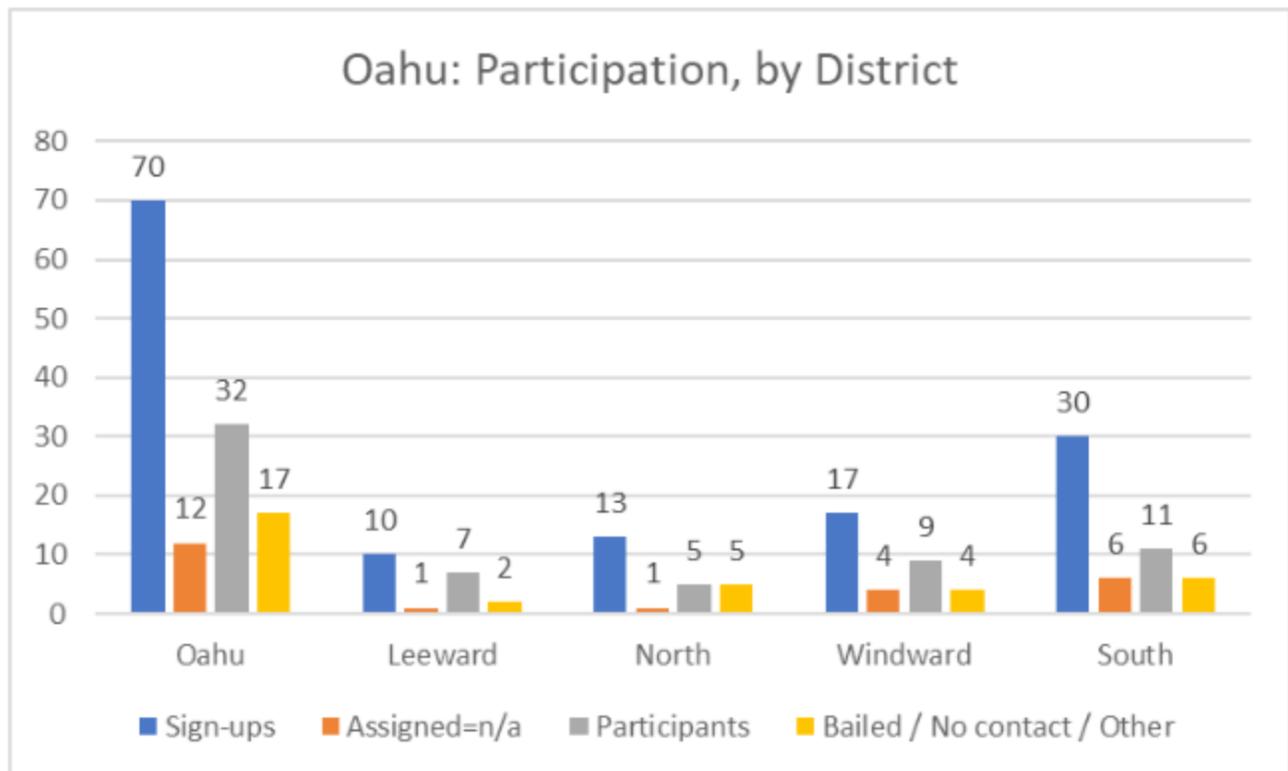
EOC Data Reported	Overall	Forwarded
Winlink Messages	80	28
Check-ins	16	8
Damage or Status	44	15
Misc. (Check-outs, 309, Test)	28	

Notes on Data Collection Statewide:

1. Data collected and reported varied from county to county.

2. A critical source for exercise evaluation is the ICS-309 Communication logs. It is also important for participants and facilitators to complete these logs in a consistent manner.

   a. Establish standard operating guidelines regarding logging.
   b. All stations forward these logs to their DEC, who takes responsibility for assuring they are collected.
   c. DEC forwards logs to the ASEC responsible for operations in their area.

3. The challenges in collecting and reporting results consistently between counties were the result of the COMEX planning team failing to develop a statewide Exercise Evaluation Guide (EEG) and Exercise Evaluation Plan, which are 2 critical components of the HSEEP process.

4. Consistent data collection is important on an ongoing basis as it would allow us to evaluate our progress towards reaching defined goals.

Lessons Learned & Suggestions for Improvement Planing:

Summary:

Extensive discussions were held after the April 16th COMEX via nets, phone, video conference, and email. The following recommendations were developed from conversations between COMEX facilitators, participants, and ARES Leadership:

Many areas of focus for improvement were identified. These areas must be broken down into categories and addressed and coordinated via a **multi-year integrated preparedness Training Plan** in collaboration with and supported by the Hawaii ARES FSO, and the ARRL section leadership.

Education and training needs are far beyond what any individual COMEX planning team can address in any single exercise. Greater responsibility for training and exercises needs to be pushed down to the DEC/CEC level. The first step is to define clear goals, objectives, and priorities.

District & Community Emergency Coordinators*: (DECs & CECs)
(Suggested Goals/objectives)

1. Hold weekly ARES Nets in every community.
(Several existing nets are held Saturday at 19:00 HST)

- ◦ Discuss Communications Plans, ICS-204 assignments, and your ICS-205 Incident Radio Communications plans. (PACE)
- ◦ Hold periodic voice message handling practices.
- ◦ Nets may begin on repeaters, linked repeaters systems, DMR, etc. However, each community needs to move towards simplex nets as it becomes feasible to do so.
- ◦ Remind stations of available resources such as training videos, equipment discounts, Winlink information, HawaiiARES.net website, and to join the hawaiiares.groups.io reflectors.
- ◦ Ask stations about their questions and concerns, and address them.
- ◦ The ARES nets should not just be social nets.

2. Determine the needs of stations in your area and help them to progress.
Guide stations towards identifying training topics and resources. Help them to find needed equipment, share information about discounts, and let stations know about the potential support from the ARES FSO. Work with the SEC and ASECs as well as with local clubs and other groups. Some topics identified include:

- ◦ Antenna build projects. (Especially low-cost VHF/UHF gain and directional antenna options)
- ◦ Hardware and cables for enabling digital modes. (Signal link, RA boards, etc.)

    ◦ Off-grid Power/battery options.
    ◦ Reach out individually to stations having difficulty to assure their participation and success.

Role of <u>Assistant Section Emergency Coordinators</u>: (ASECs)

Provide support to SEC and DECs. Keep other ASECs, DECs and CECs in the loop about developments in your assigned areas of responsibility.

Keep the SEC informed about issues and concerns raised by the DECs and CECs in your area of responsibility.

- Take responsibility for finding solutions to issues brought up by DECs/CECs
- Seek buy-in from leadership and publish solutions widely.

Identified ARES of Focus for Future Improvements:

<u>Basic Radio Operation</u>

- **Controlling Radio Features.** (Controlling squelch, single vs. dual watch modes, changing transmit power, Timeout Timer, keyboard lockout, radio field programming, etc.)

- **Successful Technique:** (Talking across and close to the mic, listening to orient your HT to the best location for signal quality and stand still, suggestions to interface HT to a gain antenna, use of a rat tail, best practice for battery charging and storage, etc.)

- Don't wait for operators to ask about these topics. Many won't know enough to know what questions to ask or will be embarrassed to ask. Be proactive in sharing your knowledge.

<u>Voice Message Handling</u>

- Use of break tags and pro-words.
- 3-5 words short transmissions.
- How to request/provide fills.
- Options for check-in, and accessing the frequency on a busy net.
- Choosing an appropriate tactical call sign.
- Use of tactical call signs versus FCC ID requirement.
- Guidance on message priority determination. (Emergency, Priority, Routine)
- Assisting as a relay, encourage frequency and band agility.
- Using good judgment to meet the needs of the situation at hand. (There are few ironclad rules, but lots of guidelines and best practices.)

Logging Transmissions: (ICS-309)

- Educate stations as to why we log. (Logs allow us to maintain situational awareness, assure message exchange was completed, maintain a record for continuity of operations in the next operational period, aid leadership in communication planning, and logs help us all to cover our okole.)

- Educate stations on what to log.

    - Log check-ins, check-outs, band condition reports, & relays. Log anything you would not wish to forget or that others may need to know about.
    - Discuss the Logging of routine & tactical traffic versus formal traffic which uses a separate form. (e.g. ICS-213)

- Hub & Spoke Operation: Maintain a voice log of traffic (from/to spoke) versus the Digital (Winlink) log. Hubs need to maintain and submit 2 logs.

- Educate stations as to why we need to forward logs up the chain to CEC, DEC, COMEX planning team, or served agencies. How should we forward the logs?

Use of Digital Modes:

1. Stations will always need to start with a focus on basic radio operation, successful RF techniques, and voice messaging handling. This will continue to be the foundation of amateur radio, and our skills must be built upon a foundation that includes this knowledge. We are not just "Appliance operators."

2. Winlink is an important digital mode with many different options and capabilities. Regular and ongoing exercise and practice are required to gain the skill set needed to make the most of it. It is fine to start with Winlink Telnet over the Internet, but if stations do not progress into RF modes, there is little value.

3. We encourage stations to move into Winlink Radio mail and other digital modes as they reach a point in the hobby where they can start to understand the benefits. If it is pushed too soon, people may become overwhelmed, disinterested, frustrated, and are unlikely to understand how it is any different than Internet email.

4. There are other modes besides Winlink. (FLDigi, JS8 Call, APRS, AREDN Mesh, etc.) A nearly exclusive focus on Winlink alone threatens to reduce participation in ARES to the point where we will not be able to be effective in providing disaster communications.

Guidance, Goals, & Objectives for the <u>COMEX Planning Team Level</u>:

1. The multi-year integrated preparedness plan should limit the scope of the exercise enough to allow the exercise planning team to focus on creating specific "SMART" objectives. Assure that you have a clear consensus and buy-in from ARES leadership as to the defined goals, objectives, and scope of the exercise early on in the planning process.

2. Push back on "scope creep." There will be a wide variety of influences pushing your team towards embracing or focusing on tasks and goals that may not be within the defined scope of your exercise. This will inevitably lead to the missing of deadlines, require a greater amount of time to complete the planning process, and can lead to the burnout of volunteers.

3. Involve DECs and CECs often and early on. Focus on bringing them on board, give clear instructions and objectives, review their progress, and include them in major planning meetings, especially the mid-term and final planning meetings.

Efforts, Goals, & Objectives at Hawaii ARES FSO, <u>SEC Level</u>:
(Many of these efforts are currently ongoing)

- Appoint DECs on each island who will actively engage with the Amateur Radio Community and who will support and participate in our training and exercises.

- Encourage and assist DECs in developing and appointing CECs who will actively engage in training and mentoring activities for stations in their communities.

  - As ARES membership increases, assure that each DEC and CEC maintains a manageable span of control.

  - The CEC's role includes assisting the DEC in developing skilled operators in their area and acting as a clearinghouse to identify training needs and provide information, training resources, and opportunities.

- Maintain a central "Catalog" of training, informational, and technical resources: (Hawaii ARES Website)

  - Include links to a variety of relevant training on Video platforms. (Youtube, Vimo, etc.)

  - Maintain and publish a statewide communications plan (ICS 204, 205) for applicable bands and modes.

  - Host ICS-204 Assignment list (Hubs, spokes, designated relay stations) for each district. Encourage each **<u>DEC and CEC</u> to be responsible for developing,**

updating, and signing off on this Document.

- ○ Host the ICS-205 Incident Radio Communications Plan for each district. Encourage each ***DEC and CEC* to coordinate with local stations to develop a plan for Primary, Alternate, Contingency, and Emergency Communication Pathways as needed.)**

- Maintain multiple methods of contact and frequent communications with DECs and CECs. (Hawaiiares.groups.io, website, email, nets, etc.) Our leaders need to feel that they have the resources and support they need to be successful.

- Establish MOUs, MOAs, and SOGs with served agencies, and other groups involved in disaster preparedness, response, and recovery. Assist local ARES leaders in developing these relationships.

Overview of HSEEP Process and ICS Forms:

HSEEP Initial Steps:
- ○ Engage Senior Leadership
- ○ Set Preparedness Priorities
- ○ Hold Integrated Preparedness Planning Workshop
- ○ Develop an Integrated Preparedness Plan

Aspects of a Multi-Year Integrated Preparedness Plan:

- ○ The IPP will provide a "road map" towards achieving our specific Hawaii ARES FSO long-term goals and objectives, with a focus on training.
- ○ Aligns organizational leadership by specifying documented objectives, together with a realistic time frame.
- ○ Guides the development of specific exercises by limiting the scope of the exercise, so that the planning team may focus on SMART objectives within that scope.
- ○ Goals and objectives break down the broad mission of an organization into manageable pieces. Tie these to desired measurable outcomes, and not necessarily to specific tactics, technologies, or techniques.

HSEEP Exercise Design Planning Meetings:

- ○ Concepts & Objectives (C&O) Meeting
- ○ Initial Planning Meeting
- ○ Mid Term Planning Meeting
- ○ Master Scenario Events List (MSEL) Planning Meeting
- ○ Final Planning Meeting

Incident Command System (ICS) Forms:

- ◦ Incident Briefing (ICS-201)
- ◦ Incident Objectives (ICS-202)
- ◦ Organization Assignment List (ICS-203)
- ◦ Assignment List (ICS-204)
- ◦ Incident Radio Communications Plan (ICS-205)
- ◦ Incident Organizational Chart (ICS-207)
- ◦ Safety Message Plan (ICS-208)
- ◦ General Message Form (ICS-213)
- ◦ Resource Request Message (ICS-213 RR)
- ◦ Activity Log (ICS-214)
- ◦ Communications Resource Availability Worksheet (ICS-217A)

[End of Report]