

Post-Winlink 2023 exercise report

NEMCo volunteers organized a RACES Winlink exercise. Winlink is an over the air Email system with many capabilities. It can do email via the internet, but its biggest power is the ability to access over the air gateways to the internet as well as direct peer-to-peer messaging between stations. This exercise focused on the direct peer-to-peer messaging aspect of Winlink. It is thought that after a large earthquake that gateways and the internet may be down. Winlink can take up the slack for emergency services.

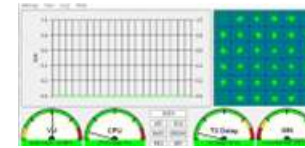
An issue with doing peer-to-peer messaging is that you need to know the call sign of the station you are calling in advance. So, we collected volunteers and published a map of stations locations that will operate on a common frequency. This map lets people know what other stations are near them and in what direction.

NEMCo RACES is migrating digital messaging to Vara FM. This has greater range and throughput than packet radio. So naturally we encouraged Vara FM.

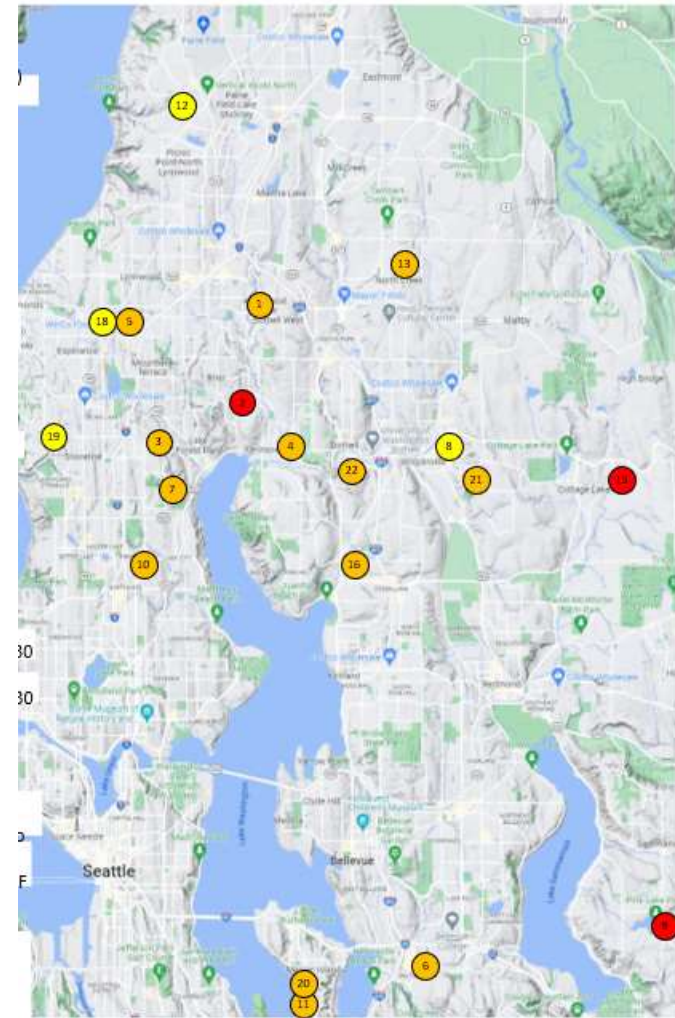
NEMCo volunteers held two Winlink classes prior to the exercise.

In past Winlink exercises, we have run only VHF operations. This year we added Vara HF operations to the mix. We had several volunteers that graciously ran both Vara FM and Vara HF at the same time. There are several events in the Pacific North West that use Vara HF because this is the only way to move traffic in the mountains. This was good practice for that. Vara HF is an effective tool for moving health and welfare traffic out of the area in the event of an earthquake.

The exercise runs for multiple days, and many participants let their stations run unattended. This gives people a chance to learn how to use Winlink. Make a mistake. Then try again.



2023-4-2



Planning started at the first of the year when we picked a date and sent out emails to other organizations and people asking if they were interested in participating. It takes more than a month to plan. Advertising the exercise to other RACES organizations can go through a couple of club meeting cycles to let people schedule this in and have volunteers sign up.

The previous years we did this exercise for a nine-day period spanning two weekends. The idea was that people would have their stations up and running unattended and people that were just starting out with Winlink would have time to learn how to use Winlink. Such a long period of time is a bit onerous for many people. After an earthquake, the time before power is back up and running could be quite long. A few people reported that they had been running their station on battery power.

This year, we went to a shorter three-day period. We had more people as mapped stations. This was a bit more intense on the designated VHF frequency in the middle of the weekend. But Bob, KM6SO, noted that people were being polite and not transmitting over other people.

We had 17 VHF stations on our map for other stations to connect with. We also had several HF stations from out of the area that were from Wenatchee, WA and also from Nevada! We want to say a heartfelt thank you for your participation!

There was no official requirement for keeping tabs on participation. The main goal was an educational experience to get Hams using Winlink in general and Vara FM in particular. At the end of the event, we were able to collect some data on participation.

17 Mapped VHF stations in the area.

3 HF HAM stations outside of the area.

32 Unique, non-mapped stations that we heard from.

53 total participants. This may be a low number because there were stations that did not report or there may have been other activity between the unique stations that we did not hear about. This is the first time that we tried to make a tally of participation of any kind.

Of the stations that reported, there were 377 VHF messages received and 73 HF messages received. Again, this is just a rough estimation.

So, what did we learn as a group from all this?

- The voice repeater for coordination was helpful. A few time when we had an issue with a Digipeater, a few of use we able to immediatly talk about it. Thank you Redmond ARES for the use of their voice repeater!
- The W7MIR-10 digipeater is critical for some stations. It is interesting how one station in a valley can go from Mukilteo all the way to Mercer Island
- We had some issues with the W7MIR-10 digipeater. It would get stuck in a loop and block further use for some time. Some investigation is Needed

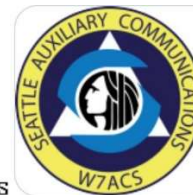
- Running 2 radios on 2 computers with the same callsign was a bad idea.
- To uninstall Winlink Express completely requires deleting the installation directory and all files within it.
- For HF, Canadian hams running LSB use a different band plan than US U.S. band plan on 7106.5.
- Interest from outside groups wanting to participate again next year. Interesting. We had not expected outside interest.
- For HF, Noticed that a station can initiate a message transfer with a weaker station, but the weaker station has a much harder time initiating the connection. This needs more investigation.

Ideas from participants for next year TBD:

- More mapped stations.
- Vara AC utilization?
- More frequencies?
- Tactical call signs?

Thanks to all the participants and we hope to see you all again next year!

A special thanks to:



As an example, this is a map of stations connecting with K7XTN, Christian:

