

Amateur Radio Operations Activation & Support Policy

Effective: August 3rd, 2023

Background:

Amateur radio volunteers provide critical assistance to GYX warning operations by providing real time storm related information which is used for warning decision making by the on-duty meteorologists. This support is most helpful during rapidly changing, high impact, severe weather situations. Because the amateur radio support is done by volunteers, they cannot replicate duties to be performed by NWS staff. Additionally, for their health and legal protection, roles and responsibilities need to be clearly defined and followed.

Amateur Radio Role In Supporting NWS Gray/Portland Operations:

The guiding principles for support are outlined in the [June 2011 ARRL-NWS MOU](#) which encourage

1. The ARRL to cooperate with the NWS in “establishing organized Skywarn networks with radio amateurs serving as communicators and spotters”
2. The ARRL to encourage its “Section management teams to provide specialized communications and observation support on an as-needed basis for NWS offices”
3. The NWS to “work with ARRL Section amateur radio emergency service volunteers to establish Skywarn networks”.

The Amateur radio network in our area has two important capabilities that NWS GYX can leverage. The first is the capability to monitor emergency responder communications across the region and relay preliminary information on possible storm related impacts. Secondly, the ability to directly communicate with one another to collect actual observed storm related impacts in near real-time. These are the bits of information that can be valuable in the warning decision process.

Activation Definition Criteria:

- **Formal Activation:** An amateur radio coordinator will be available to relay storm reports. Coordination on activation with other staff and the Amateur Radio Coordinator will be led by the FIC (Lead Meteorologist or on-duty Forecaster-in-Charge) the day prior to the expected event to determine a start and end time for support. The FIC should always use appropriate forecaster discretion to determine the need for Formal Activation, however suggested situations are:
 - SPC issues (or is expected to issue) a Severe Thunderstorm or Tornado Watch for a substantial portion of the CWA

- Coordination regarding activation should occur the day prior or no later than the morning of based upon SPC outlooks and the FIC's expectation that a watch will be issued
 - Blizzard warnings in effect
 - High Wind warnings in effect
 - Flood/Flash Flood conditions expected across a substantial portion of the CWA
 - Ice Storm warnings in effect
 - Tropical Storm/Hurricane Warnings in effect
 - Other situations, which may include those listed as typical Informal Activation, per the discretion of the FIC

The FIC will follow the [SKYWARN Activation and Call List](#) Procedures for SKYWARN activation.

- **Informal Activation:** Situations where formal amateur radio volunteer support is not required for NWS GYX operations, however an amateur radio coordinator may elect to be available to relay storm reports. This is also known as “self-activation”. NWS GYX staff are *not required* to monitor NWSChat (SLACK) “state-me-nh-skywarn” channel in this case, and no assumption should be made by amateur radio volunteers that operational staff will see anything posted there. The amateur radio coordinator should email the gyx.skywarn@noaa.gov account and/or call the office to talk with the FIC about their plans. Any information can be sent to the office via [SKYWARN Net Control Operator Weather Report Sheet](#) or email if needed. The situations where an Informal Activation may occur are listed below.
 - Winter weather advisory/warning (in the absence of damaging winds or ice) in effect
 - Wind Advisory in effect
 - Coastal Flood Warning in effect
 - Severe thunderstorm/tornado warning(s) with no watch in effect
 - Isolated flash flooding
- **De-Activation:** The FIC will inform via email/NWSchat/phone the Amateur Radio coordinator when services are no longer needed, if that had not been coordinated prior to the beginning of activation.

Remote Support at WFO Gray/Portland:

- For the majority of weather events a remote virtual volunteer Amateur Radio weather net coordinator will be sufficient for SKYWARN operations. In general, these weather events will consist of standard severe weather days that will cause localized damage and/or snowstorms/flooding events that are widespread but will have relatively limited damage to the CWA. In addition, widespread communication outage (power outage) threat will

be low. The FIC will consider the overall meteorological conditions and potential impacts in the decision making progress between remote or on-site support.

On-site Support at WFO Gray/Portland:

- In rare instances, it may be determined that having in-person Amateur Radio weather net coordinator support at the office is best to meet operational needs. In general, these weather events will be associated with rapidly evolving, high end severe weather that has a significant risk of causing widespread damage and/or being a threat to the public's safety across a **substantial** portion of the CWA. The FIC should consider both meteorological and non-meteorological factors (eg: weekend, holiday etc) in the decision making process. Such meteorological situations include, but **are not limited to**:
 - Derecho or other fast moving large squall lines
 - Multiple large supercells
 - SPC issuing an Enhanced Risk or higher that includes at least one of the population centers in the CWA
 - Major Ice Storms
 - Land falling Tropical Cyclone
- The risk of significant communication issues that are expected to impact the office's ability to receive timely information during significant weather is another potential consideration to arrange for in-person support in situations beyond what are listed above.
- The formal request for in-person support will originate from WFO Gray/Portland, preferably well before the event is expected to occur. Final decision making responsibility rests with the FIC. The FIC should use their discretion, in addition to the guidance outlined above, to determine if the need for In-person support exists. Before making the formal request for in-person support to the Amateur Radio Coordinator Group, the FIC should collaboratively discuss with other operational staff and as necessary management to best weigh the pros and cons based on the situation. A two-way dialogue with the Amateur Radio Coordinator is also critical early in this process. Strong consideration needs to always be given to ensuring that the volunteer(s) can safely travel to and from the office.

Restrictions/Procedures for In-Person Support

- The Amateur Radio Coordinator will provide the FIC the name(s), cell number and times that the volunteer(s) will be in the office.
- Due to space limitations, no more than 2 volunteers can be in the office at any given time. One exception is SKYWARN Recognition Day on the 1st Saturday in December, when there can be more than two volunteers in the office with use of the conference room.
- The volunteer(s) must sign in and sign out upon arriving and departing the office.

- No use of government computers, printers, phones or other equipment (other than the radio itself) is allowed.
- No connection of personal devices to government communication/IT systems is allowed. This includes using a USB cord to charge a cell phone. Use a plug in an electrical outlet for charging purposes.
- Internet connectivity will be supplied by the volunteers via their own “hotspot”, though backup “Mi-Fi” hotspot access supplied by the WFO should be available if needed.
- Volunteers will not enter any restricted areas, the administrative or ET sections of the building
 - Since they officially must be escorted at all times, they will remain in operations - with allowances to use the bathroom or brief access to the break room in an unescorted manner.
- Volunteers should be self-sufficient with regard to their food and drink needs and bring what they will need as nearby stores or restaurants may be closed, depending on the situation. The office refrigerator can be used to store food and an office microwave is available to heat food up.
- They will respect the critical tasks being performed by operational staff and ensure distractions are kept to a minimum.
- No sleeping, including the use of government or personal cots or sleeping bags is allowed. Nor can the volunteer sleep in their car while in the office parking lot. If an extended period of in-office support is needed, it is the volunteer's responsibility to arrange for a place to get adequate rest.
- The maximum length of any individual's in-office support is 12 hours, with at least an 8 hour break before returning to the office. This is to minimize the risk of exhaustion when the individual is traveling to/from the office
- The FIC will assign a single member of the staff to be the primary liaison with the volunteer for any needs the volunteer may have and to be the primary contact for getting information from the volunteer.

Roles and Responsibilities - Amateur Radio and NWS Staff

NWS Gray/Portland staff:

- Determine the accuracy of reports/information
- Follow-up directly with the appropriate local/state agency to get clarification on any initial information provided by amateur radio and other sources
- Determine whether to make reports/information publicly available
 - When making information public, users will assume the information is official even if it is clearly designated preliminary, so care needs to be taken to not disseminate incorrect information.
 - Follow [LSR SOP](#) for injuries and fatalities
- Will comply with Directives 10-602 and 10-1722 with regard to not providing any pre-release of information to the amateur radio volunteers, just as with media and EM partners, either via NWSChat or in-person

- Example: giving information about specific warning decisions before warnings have been issued

Amateur radio volunteers:

- Will treat all conversations with NWS employees as trusted communication that are not to be disseminated without approval
 - This is particularly important when conducting in-person support where the volunteer can hear on-going discussions among the operational staff
- Will not contact local/state agencies directly on behalf of the NWS to get clarification on information

Information Helpful for Amateur Radio Volunteer Staff

Since NWS Gray/Portland staff are monitoring the media, social media, ME/NH WebEOC platforms, and have easy access to 1000+ mesonet weather stations (including private backyard weather stations) via IRIS there is no operational need or requirement for amateur radio volunteers to monitor those sources. This will also reduce the possibility of duplicate reports that can result in unnecessary distractions to NWS Gray/Portland staff. Amateur radio volunteers should prioritize efforts to gather real-time information from the sources that NWS Gray/Portland do not otherwise have direct access to, namely direct observations from other amateur radio operators and emergency responder communications. The kinds of information that are most useful are listed below, but with each report that is relayed, the request is that we have a location (address if available), the time of the event (if known – otherwise specify it was the time the event was reported), and source (this is important if we need to make follow-up calls to the source)

- Thunderstorms
 - Downed trees, powerlines
 - we will follow up with authorities to determine if it's due to wind, lightning or a traffic accident
 - Hail, pea size (¼") in diameter or larger
 - Possible funnel cloud/tornado
 - Lightning strike damage
 - Possible injury/deaths (we will follow up with authorities)
 - Reliably measured wind gusts greater than 50 mph, unless their weather station already sends data to the internet.
- High Wind Events
 - Property damage, Downed trees/powerlines, road closures
 - Measured (not estimated) wind gusts of 40 mph and above from amateur radio personnel who has a weather station that does not send data to the internet
 - Reports of injuries/deaths
- Flooding/Heavy Rainfall
 - Flooded roads (include information about passable or closed)
 - Flooding of streams

- Observed by amateur radio personnel heavy rainfall rates (more than 1" in 60 minutes, or 2"+ total within 3 hours) if their rain gauge data are not available on the internet
 - NOTE: rainfall accumulations can be submitted individually from spotters/amateur radio operators via the online storm report portal - only if their data are not already available online or will be submitted through CoCoRaHS.
- Coastal Flooding
 - Flooded roads (include information about passable or closed)
 - Property damage
- Tropical Systems – refer to all of the above.
- Winter Weather
 - Property damage, downed trees especially if it leads to road closures
 - NOTE: snow and ice accumulation measurements can be submitted individually from spotters/amateur radio operators via the online storm report portal if they choose.

The need for the above information after an event has ended is not required as NWS Gray/Portland staff have the responsibility to gather any additional information necessary for final assessment and verification activities. However, if necessary the WCM will communicate with the Amateur Radio Coordinator regarding potential assistance in this effort.

NWSChat

- Only authorized amateur radio personnel that have a leadership role in coordination with WFO Gray/Portland will be granted access to the system. GYX WCM will confer with the Amateur Radio Coordinator prior to approving any requests for NWSChat access by a member of the amateur radio community.
- The *Maine-ME-NH-Skywarn* Channel is the sole room used to share information. Chat communication should be focused on coordination efforts (checking in and out as weather net controller, questions, possible preliminary reports, focus area for likely storm damage..etc) with the GYX SKYWARN Net Reporting Form being the primary interface for relaying storm reports. Pictures can also be relayed via this chat channel.
- GYX operational staff will monitor the *Maine-ME-NH-Skywarn* Channel during formal activation periods. This room may not be monitored at other times.

Amateur Radio Equipment Testing / Net Controllers

- Equipment located at the office should be tested to be in working order by the Amateur Radio coordinator every 6 months.
 - The visit will be coordinated through the WCM
 - Can be part of an operations training day where severe weather operations are exercised
- List of Net Controllers will be provided in December by local SKYWARN Coordinator