Neighborhood HamWatch Comes to Knox County

A Community Emergency Communications Service
Sponsored by:
The Pen Bay Amateur Radio Club
and Radio Relay International

During significant storms and other events where conventional communications may be compromised, Knox County ham radio operators have a system in place to provide "on the ground" information from around the county to each other, to the county Emergency Management Agency and to the National Weather Service in Gray. Reports can include items such as:

- Damage reports
- Accidents
- Power outages
- Reports of persons in need of assistance
- Ice or snow accumulations or dangerous wind conditions
- Other reportable hazards

At these times, area hams meet at the top of each hour on the county repeater system. Anyone who has a scanner is welcome to monitor these transmissions.

National HamWatch Overview

We are formalizing a new dimension to this program by implementing a system for non-hams to participate in the process. Along with the above, a number of involved hams are equipping themselves with Personal Radio Service communications devices. We are doing this within the framework of Radio Relay International's layered communications strategy.

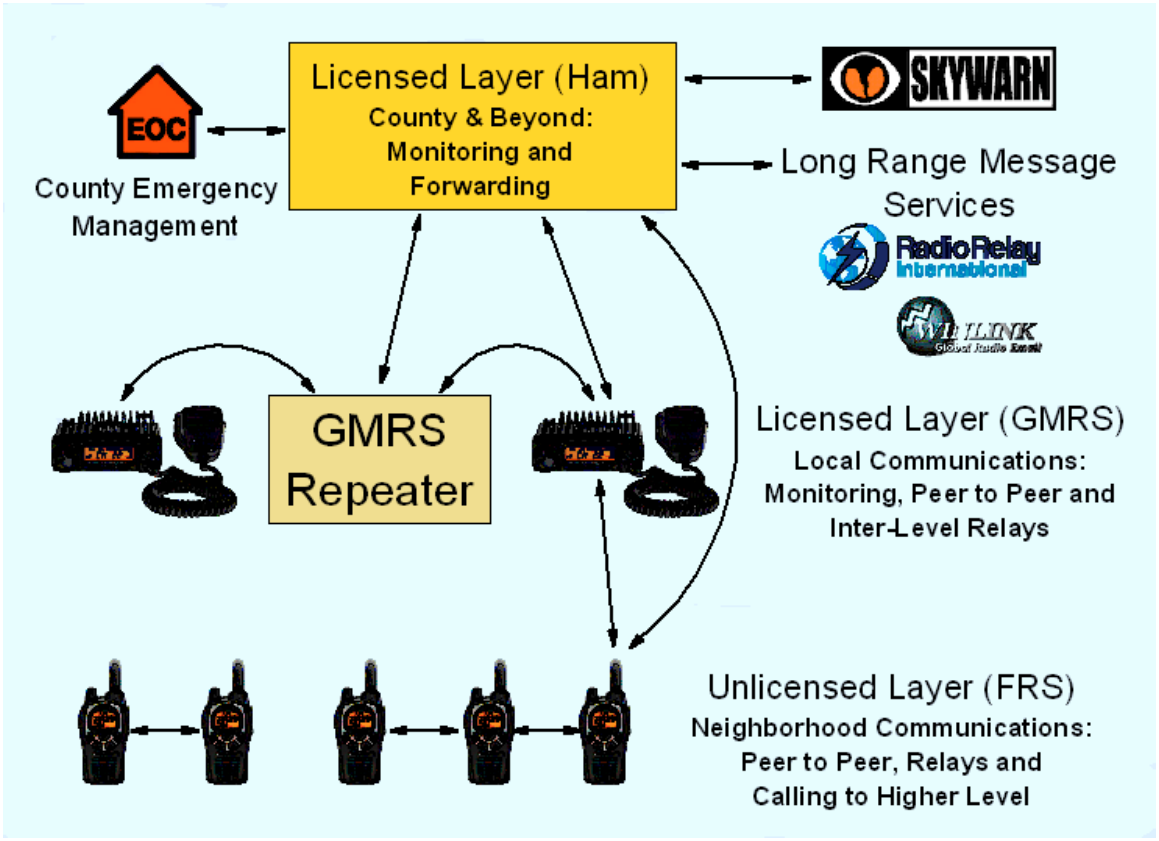
There are two services that are being supported using frequencies (channels) that are common to both. The first is the Family Radio Service or FRS. FRS is exemplified by the handi-talkies that are commonly found at Walmart and similar outlets. FRS is an unlicensed radio service but is limited to relatively short ranges by radio power (2 watts) and their built-in antennas.

The second service is the General Mobile Radio Service (GMRS). GMRS permits higher powers (up to 50 watts) and external antennas. GMRS requires an FCC license but the license is applicable to all immediate family members of the license holder. This is defined as the licensee's spouse, children, grandchildren, stepchildren, parents, grandparents, stepparents, brothers, sisters, aunts, uncles, nieces, nephews, and in-laws. A GMRS license costs $70 and is valid for 10 years. There is no test, all one needs to do is apply on line. The GMRS channels are currently included in the current FRS radios but a

much better alternative is to get a GMRS-only radio and a simple external antenna. This can be had for under $100.

If you and your neighbors have simple FRS radios, you can communicate amongst yourselves should telephone or internet service be interrupted. If one of you has a GMRS radio you can communicate with the FRS units on a shared frequency and also communicate with a ham who is similarly equipped. The ham can then relay messages to local agencies, the Weather Service, etc. Hams can also send personal messages to your friends or relatives who might be elsewhere in the state or country. This message relay system is exactly the same system that has been used to relay thousands of personal messages from Texas, Florida and Puerto Rico in the aftermath of the recent hurricanes.

The graphic below depicts how FRS, GMRS and Ham Radio fit together in this network.



What You Can Do

- See who in your immediate neighborhood have FRS radios and test them using a channel in the 1-7 range.
- For anyone who is out of immediate range, see if you can set up relays and practice relaying messages.
- Find out if there is a ham radio operator close enough to you to receive your transmissions. In our area, the ham will operate on Channel 19.

- You may wish to purchase a GMRS radio and license. If a neighborhood group is using FRS radios, it is advisable for at least one person to have a higher power GMRS radio.
- Take a SKYWARN training class and become a weather spotter. These sessions are 2 hours in length and are offered in this area by the Gray office of the National Weather Service. These are usually done through the Knox County Emergency Management Agency.

Frequencies (Channels)

The Knox County Amateur Radio Storm Net may be monitored on the following frequencies:
147.060 MHz or 145.490 MHz (primary)
147.540 (backup)

The net meets during storms at the top of each hour.

Neighborhood level FRS operations should use one of the channels in the 1-7 range. Do not use PL (privacy) tones. RRI's National SOS Radio Network includes protocols for emergency calling with FRS radios.

GMRS to GMRS calling should use Channel 15. This is also shared with FRS.
GMRS (or FRS) calling to a Ham station using GMRS should use Channel 16.

Equipment Suggestions

FRS radios may be obtained from Walmart, Amazon, etc. These are generally sold in pairs and you may already have one. While the stated range figures have no practical validity, they are an indication of relative power output. Be sure that the radio you select has Channels 1-7 and 15-22. These are the shared channels with GMRS.

The BTECH GMRS-V1 GMRS handi-talkie is an excellent choice for convenience. These are available for $54.99 + postage from Amazon.

With this radio, you can increase the range with an add-on antenna. A good option is a "roll up j-pole." These can be stored in a large baggie and then hung from a pole or tree when needed. We recommend the DBJ-2 VHF UHF Dual Band Roll Up portable Antenna ($35

+ postage). This may be purchased on eBay. It comes with an extension cable and a set of adapters for different radios. Be sure to order the MURS/GMRS version, not the ham version.

For higher power, the Midland MXT115 Micro Mobile GMRS radio is a good option. It has a 15 watt output and runs from a 12 volt battery. It includes an auto accessory jack plug and a magnetic mount antenna. This radio is available from Amazon for $149.99 + shipping.

Both of the above GMRS radios are compatible with repeaters.

Status

Update on the Owls Head to St. George network
Need to discuss standard calling times for FRS/GMRS monitors. Maybe :15 past the hour.

For more information:

Email to KnoxHams
Website
FCC GMRS licensing link