Whatcom Emergency Communications Group (WECG)

12 STEPS TO EMERGENCY RADIO COMPETENCE

This is intended as a basic roadmap to gain competence in amateur radio emergency communications.

1-Get your FCC amateur radio license. Tests are given in Whatcom County the 2nd Saturday of even numbered months. Cost is $15
Your first license will be a Technician. This limits you generally to the VHF/UHF bands. This is sufficient for local communications in the county via simplex or repeaters. The next level of license (General) will allow you to use the high frequency (HF) bands. HF can be valuable for emergency communications over longer distances (and for national and international contacts). HF also requires more expensive and elaborate equipment and antennas. The highest license category is Amateur Extra which allows access to all amateur bands.
You should consider joining the Amateur Radio Relay League (ARRL) which is the national organization for amateur radio. Membership includes the monthly magazine QST which has articles on emergency communications.

2-Get a dual band handheld (HT – handy talkie) and learn how to program it for the Mt. Constitution repeater (146.740 MHz) and the VHF and UHF national calling frequencies.
Dual band HTs are in the $100-$300 range although some are as cheap as $30. The cheaper models are not always compliant with FCC regulations. A magnetic mount antenna will allow you limited use of the HT in your car.
Most radios have programming software available as an alternative to manual programming. However, you should be able to add a new frequency, offset and repeater tone using instructions in the radio's manual.

3-Download, print and learn to read WECG's standing ICS-205 form and program your radio to Lookout and Church Road repeaters and other locally used frequencies.
The standing ICS-205 is the frequency menu for WECG in case of an emergency. It tells you where to tune your radio first if there is an emergency and what the alternative frequencies are. Digital gateways and other contact information, such as phone numbers are also included. By programming your radio to local repeaters you will learn about tones and tone squelch.

4-Tune in to the WECG Sunday net at 1900 hours on the Mt. Constitution repeater and other nets to practice using your radio.
The Sunday net is an opportunity to check in with the WECG radio community. In an emergency a net would be set up on one of the WECG emergency frequencies (Lookout or Church Road repeaters and/or simplex). If you were available, you would give your call sign. It is good to listen to the Sunday net first to understand the process. You can check in as a visitor at the end of the roll call a few times before signing up for the Sunday roll call list.
Other nets are the Region 1 emergency net (Tuesday at 10AM, 145.19 MHz), the Skagit Co net (Wednesday at 7pm, 145.19 MHz) and the Blaine net (Sunday at 7:30 PM 145.230 MHz)
There is also a general net (non-emergency) on Mt. Constitution every day around 7am.

5-Take ICS courses 100, 200, 700, 800 (free on line). The Auxiliary Communications Emergency Solutions (ACES) basic course with hands-on practice for $25 is a jump start to emergency radio use.
The ICS courses help you understand the Incident Command System (ICS) used by emergency management around the country. You will see how amateur radio communications fit into the ICS structure. The Whatcom Unified Emergency Coordination Center (WUECC) in Whatcom County is organized based on the ICS.
The ACES Basic course is an excellent introduction to amateur radio emergency communications (current cost $25 and held over 2 days) and includes hands on practice with your HT. The ARRL has a similar online course (Emergency Communications-001).
If you want to take part in Search and Rescue (SAR) callouts you will need to have current first aid training. In addition, you will have other SAR core competency requirements for full participation in SAR.

6-Get your state emergency worker card so the Sheriff/DEM knows who you are and that you have been vetted.
The emergency worker (yellow) card is good for three years and is issued by the Sheriff's Office Department of Emergency Management after a background check is completed.

7-Participate in radio support for local events (races) to gain experience in radio communications. This is valuable experience being a part of a working communications operation.
WECG currently provides amateur radio health and welfare support in Whatcom County for the Chuckanut 50K race, Ski to Sea, MS Walk and the Ragnar Relay.

8-Learn to pass traffic. You will need to know how to create, read and pass traffic on an ICS 213 form to someone else even if you aren't equipped for digital messaging at your home.
The primary role of amateur radio, in an emergency when normal communications are not available, is to send and receive information accurately to support the ICS. The ICS 213 is a basic message form to insure accuracy of message and rapid handling at the message destination.   You must learn the coding Whatcom County uses to speed handling of ICS 213s when they arrive at the Unified Emergency Coordination Center; priority, location etc.

9-Get a free Winlink account at winlink.org and install Winlink RMS Express on your computer. This is the entry point to passing written (digital) traffic and enables you to send and receive messages at digital radio access points when the internet is down.
There are a number of online tutorials and YouTube videos to help you get set up. Having your own Winlink email address means you will be able to send, receive and collect messages during an emergency when you get to an access point even if the internet is down.

10--Send and receive an ICS 213 message from your personal Winlink account using your own or a friends radio, computer and digital interface already set up with Winlink RMS Express (not using the internet). This will secure your Winlink account by communicating digitally through a Common Message Server (CMS) radio transmission site.
Accessing the WebMail part of the WL2K web page does not automatically register a new user. Your User information will remain in the database for 400 days after your last interaction with the CMS. User radio privileges are not checked by Winlink 2000 system staff. Use of WebMail does not "update" the 400 day limit; this must be done by using a RMS station, or connecting directly to the CMS.

11-WECG/ARES provides emergency radio support to clients such as The Red Cross and PeaceHealth/St. Joseph Hospital and the Whatcom Unified Emergency Coordination Center. Effective emergency radio support requires knowledge of unique emergency plans. Prepare yourself for an emergency by learning your local plans. If there is no emergency plan where you work or live-build one and share it.

- The local WUECC will rely on digital communications from its support groups in addition to Winlink in an emergency situation. The current favored digital mode is FLdigi, using a free downloadable software package. FLdigi can be used for short messages and ICS forms. Digital communication frequencies are designated in the band plan. FLdigi requires hours of practice use in order to tune your skills, radio and equipment to the modes used by local emergency operations.
- Download a Whatcom County Fire District Map http://www.co.whatcom.wa.us/DocumentCenter/View/1434 and a Bellingham Fire District map http://www.cob.org/documents/gis/maps/fire-stations-response-zones-map-11x17.pdf so you are able to identify local city and county fire districts and their various stations and locations. This is your best chance to find help fast. In most cases, in a serious emergency, the amount and type of support available to you will be determined by your physical location. The importance of knowing an emergency plan is illustrated when you hear the location of emergency exits and oxygen and receive seatbelt instruction on every airline flight.

12-Practice using the equipment within the WECG/ARES van, using WECG Go-Kits and in the SAR radio room using unfamiliar radios and equipment different from your own.
Generally learning emergency procedures takes less time than learning to master use of a radio. Hands-on experience using several different radios builds resilience and increases a radio volunteer's value in an emergency.

Additional steps such as license advancement, and working HF emergency communications from your home station will require time and financial investment beyond what is mentioned in these 12 steps.

Go to wecg.org for more information on amateur radio and emergency communications in Whatcom County.