BUILDING BLOCKS

Making it work in a dynamic environment

May 30, 2025

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Clark County ARES/RACES

Disclosure

Title: *Building Blocks*

Date: May 30, 2025

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Security
Classification: UNCLASSIFIED

Suggests that radio amateurs…

1. Constant state of readiness

2. Realistic mission sets

3. Not expect total failure of systems

4. Exploit meaningful and joint readiness exercises

5. Key capabilities are portable

Building Blocks grouped

- An effective <u>Program</u>

- Effective <u>Teams</u>

- Effective <u>Individuals</u>

- A few <u>Best</u> Practices

PROGRAM

Define who you are...

Fact Sheet
Clark County Amateur Radio Emergency Service

Revised: June 2024.1

Clark County Amateur Radio Emergency Services (ARES) is a deployable, county-level emergency support and communications team affiliated with Clark Regional Emergency Services Agency (CRESA) and the American Radio Relay League (ARRL), Northwest Division.

ARES has the additional responsibility of providing emergency governmental communications under the federal **Radio Amateur Civil Emergency Service (RACES)** under the provisions of FCC Part 97, Section 407 during national emergencies and disasters.

Key points about ARES:

- Led by appointed Emergency Coordinator and Assistant Emergency Coordinator.
- Can rapidly mobilize over 80 trained personnel as both field units and in fixed facilities (such as hospitals, fire stations, and sheriff's offices).
- Attributes focus on flexibility and adaptability.
- All personnel hold current federal amateur radio licenses, have completed criminal background investigations, and are trained and credentialed to respond effectively.

Capabilities of ARES include:

- Augmenting public safety communications in the field and at key facilities.
- Bridging gaps in existing voice and digital messaging (text, imagery) modes of communication.

- Providing alternative communication from the general public using the General Mobile Radio Service (GMRS).
- Operating in the absence of commercial power using solar and generator power sources.
- Reporting critical infrastructure status (e.g., bridges, utilities, roads) to the county Emergency Operating Center and Department Operating Centers.
- Aiding with evacuations and sheltering.
- Augmenting key logistics and related critical supply pathways.

Response Time: within 4 hours of request.
Endurance: Up to 14 days.

Technology infrastructure includes:

- Network of mountain top repeaters, satellite, and land mobile radio systems capable of VHF/UHF/HF modes of operation (analog and digital).
- Fixed and deployable antenna systems.
- Portable computing systems capable of receiving and transmitting text and imagery

CLARK COUNTY AMATEUR RADIO EMERGENCY SERVICE
Administrative contact ec@ccareswa.org
https://www.ccareswa.org

Define competency...

National Qualification System
Qualification, certification and credentialing
of incident personnel

Qualification **Certification** **Credentialing**

Prerequisites completed

Position task book completed

Qualification review and certification/recertification

Credentials issued or reissued

Position Task Book

Clark County Amateur Radio Emergency Service
ARES/RACES

ARES EMERGENCY COMMUNICATOR
INDIVIDUAL TASK BOOK

Task Book Assigned To:

Name: _____ Call: _____

ARES Team: _____

Phone Number: _____ Email: _____

Task Book Initiated By:

ARES Leader's Name: _____ Call: _____

ARES Team: _____ Leader's Title: _____

Phone Number: _____ Email: _____

Revised: 2.19.24

GENERAL INFORMATION and INSTRUCTIONS

Task Book:

The Task Book is a working document that enables those ARES® communicators electing to participate in the ARRL training plan to track and document their training plan elements as they are completed towards the various levels of increasing proficiency. The Task Book should contain all training plan items, completion dates and sign-offs as the ARES® communicator transitions through the three skill levels. The ARES® communicator is responsible for maintaining his/her Task Book and having it with him/her during training and assignments. The Task Book also contains sections with definitions of the communicator levels, as well as common responsibilities. This document was derived from *ARRL ARES Communicator Task Book* and adapted for the needs of Clark County, Washington.

Recommendations of minimum proficiencies and skills per level are listed. **ECs, at their discretion, can add or substitute skills that they consider important.** Prior known experience may be substituted for some listed tasks. It is suggested that items in the proficiency/skills section be used in training sessions or for meetings/events presentations.

Skill Levels:

Level 0 - Candidate.
Level 1 - Entry level into ARES, includes essential knowledge and skills learned when obtaining an Amateur Radio license.
Level 2 – Operational level knowledge and essential skills desired by ARES obtained through coursework and training.
Level 3 – Advanced level knowledge and essential skill set that initiates a pathway to leadership positions and assignments.

Responsibilities:

Individual
- Review and understand Task Book requirements
- Identify desired objectives/goals
- Satisfactorily demonstrate completion of tasks for each level
- Assure the evaluations are completed
- Maintain and keep the Task Book up to date
- Make Task Book available during assignments

Evaluator
- Be knowledgeable and proficient in the tasks being evaluated
- Approved by EC as an Evaluator
- Has completed skill level(s) above Communicator being evaluated
- Meet with Communicator and evaluate past experiences, current qualifications and desired objectives/goals
- Review tasks with Communicator
- Document completion of tasks with Task Book sign-off's

Three levels of competency

Level 0: Candidate

Level 1: Entry into ARES

Level 2: Operationally competent

Level 3: Advanced knowledge and skill

Certificate of Credentialing

CLARK COUNTY
AMATEUR RADIO EMERGENCY SERVICE
Vancouver, Washington

CERTIFICATE OF CREDENTIALING
LEVEL THREE

This Certificate Of Credentialing Is Awarded To

Dave Cherba, WZ8T

In recognition of successfully achieving the requirements of a Level Three (Advanced) Emergency Communicator in accordance with established CCARES / RACES skill and knowledge requirements.
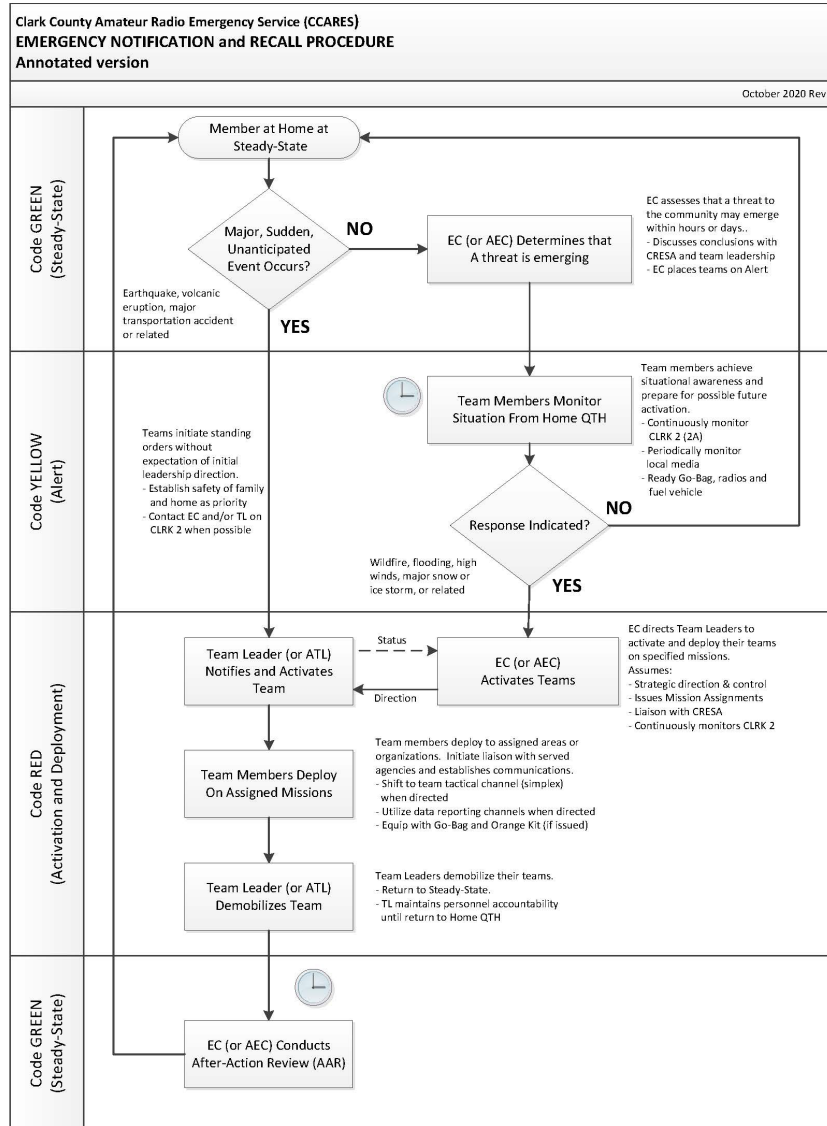
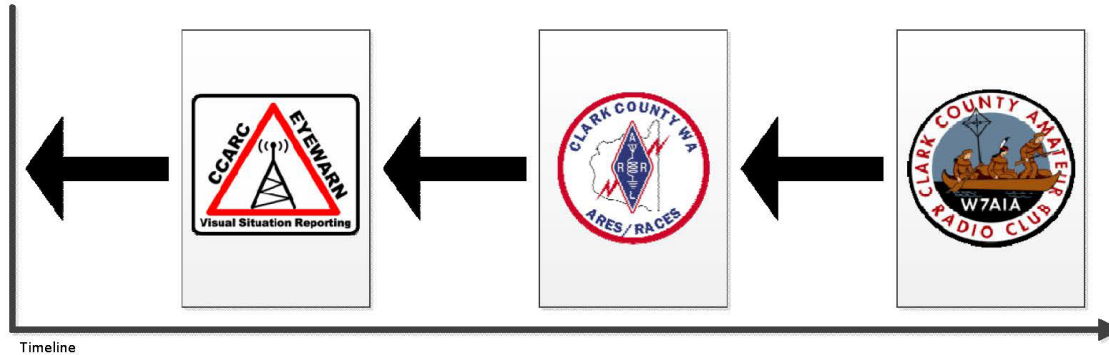Michael Barnhart, AE7GQ
_____

Emergency Coordinator

4/27/2024

Defined activation process

Clark County Amateur Radio Emergency Service (CCARES)
EMERGENCY NOTIFICATION and RECALL PROCEDURE
Annotated version

October 2020 Rev. 2

Code GREEN (Steady-State)

Member at Home at Steady-State

Major, Sudden, Unanticipated Event Occurs? — **NO** → EC (or AEC) Determines that A threat is emerging

EC assesses that a threat to the community may emerge within hours or days..
- Discusses conclusions with CRESA and team leadership
- EC places teams on Alert

Earthquake, volcanic eruption, major transportation accident or related

YES

Code YELLOW (Alert)

Teams initiate standing orders without expectation of initial leadership direction.
- Establish safety of family and home as priority
- Contact EC and/or TL on CLRK 2 when possible

Team Members Monitor Situation From Home QTH

Team members achieve situational awareness and prepare for possible future activation.
- Continuously monitor CLRK 2 (2A)
- Periodically monitor local media
- Ready Go-Bag, radios and fuel vehicle

Response Indicated? — **NO**

Wildfire, flooding, high winds, major snow or ice storm, or related

YES

Code RED (Activation and Deployment)

Team Leader (or ATL) Notifies and Activates Team — Status → EC (or AEC) Activates Teams

Direction

EC directs Team Leaders to activate and deploy their teams on specified missions.
Assumes:
- Strategic direction & control
- Issues Mission Assignments
- Liaison with CRESA
- Continuously monitors CLRK 2

Team Members Deploy On Assigned Missions

Team members deploy to assigned areas or organizations. Initiate liaison with served agencies and establishes communications.
- Shift to team tactical channel (simplex) when directed
- Utilize data reporting channels when directed
- Equip with Go-Bag and Orange Kit (if issued)

Team Leader (or ATL) Demobilizes Team

Team Leaders demobilize their teams.
- Return to Steady-State.
- TL maintains personnel accountability until return to Home QTH

Code GREEN (Steady-State)

EC (or AEC) Conducts After-Action Review (AAR)

Clark County Amateur Radio Club and Clark County Amateur Radio Emergency Service

Joint EMCOMM Concept of Operations

Timeline

	REPORT	RESPOND	SUPPORT
Time element:	Immediate	Within 2 to 4 hours	> 6 hours or specified time/date
Activated by:	Self-activation	Notification by EC and TL	Notification by ERC
Mission focus:	Report local observations	Field response	Augmentation of ARES
Personnel:	Any/All licensed radio amateurs	Credentialed ARES members	CCARC members
Structure:	Individuals	Teams	Individuals
Training:	Limited to NCS	Specified competencies	Specified competencies
Program manager:	James Newsome, KE7ZAC	Michael Barnhart, AE7GQ	John Allen, N9YQ
Website:	https://eyewarn.net/	https://ccareswa.org/	http://www.w7aia.org/

Revised: 20 FEB 2022 Clairmont

RACES

- Amateur radio was suspended during World War II shortly after the attack on Pearl harbor.

- Radio was seen as a security threat.

- Most nations suspended, revoked or severely restricted non-governmental communications as well.

- Most licensed operators joined the war effort as military or civilian operators.

- Today, the *War Powers Act (Section 706, 47 U.S.C. 606)* can do the same under presidential authority.

1. *War Powers Act can be* invoked following a major (national) emergency.

2. FCC suspends all non-governmental amateur communications.

3. State and local emergency management (homeland security) agencies authorized to use amateur radio in direct support of governmental operations under FCC Part 97, Section 407 (RACES).

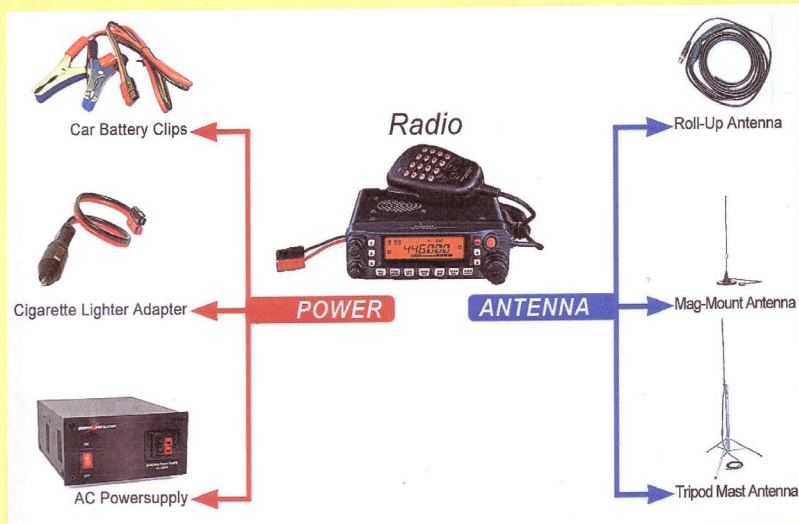4. Only designated RACES operators may operate under provisions of state or local protocols.

Uniform team equipment

TEAMS

Ham Comm Kit Setup

Car Battery Clips — Cigarette Lighter Adapter — AC Powersupply → **POWER** → Radio → **ANTENNA** → Roll-Up Antenna — Mag-Mount Antenna — Tripod Mast Antenna

1) Plug RADIO into POWER and ANTENNA. Use short antenna cable if it will reach.

2) Turn on radio and make sure it's in MEMORY MODE. How? Look for memory channel numbers *(see below)*. If not in memory mode, *briefly* press the **[V/M]** button until memory channel numbers appear.

Memory Number
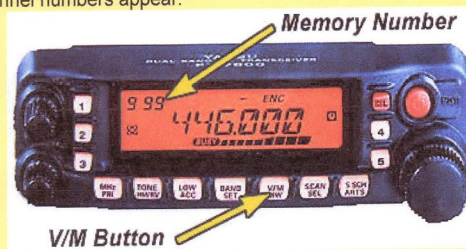
V/M Button

3) Turn big knob to desired memory channel. Start with your County's **primary repeater**.

4) Listen. Do you hear people talking? No? Push microphone button and identify yourself. Release button and listen.

*If no answer, the repeater may be broken. Turn big knob to **secondary** County voice channel and repeat. No response? Go to the **tertiary** County voice channel and repeat. Keep going. If you get all the way to the last County voice [not data] channel without luck, repeat the process. **Be patient:** It will take time for people to get on the air.*
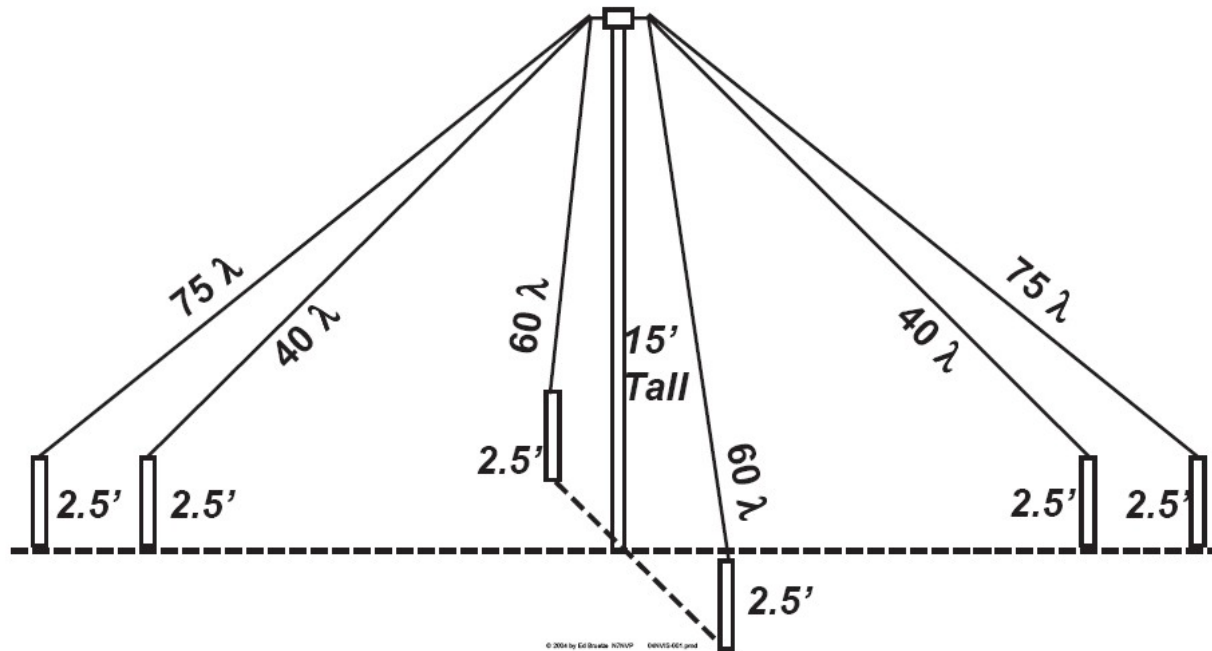
Individual Go-Kit
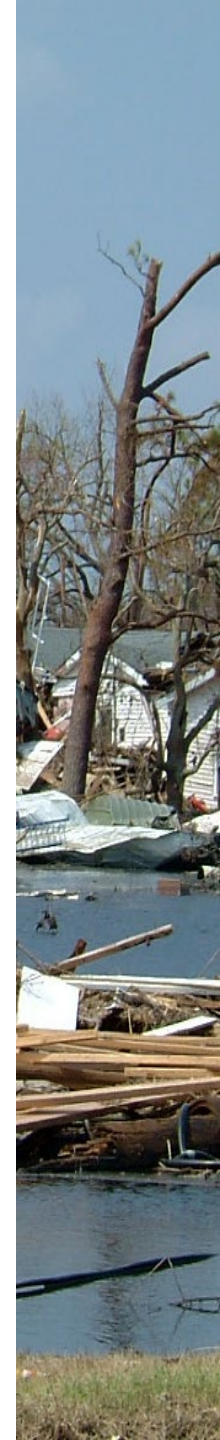
NVIS Antenna

NVIS Tri-Band Antenna for 75, 60, & 40 Meters.
Side View

BEST PRACTICES

Community Service

Parks on the Air

Summits on the Air

Starlink

The Starlink Internet connection system

Starlink Satellite

Starlink ground station

Clear view of the sky for 180deg

Starlink antenna

Customer

Starlink wireless router

Internet backbone
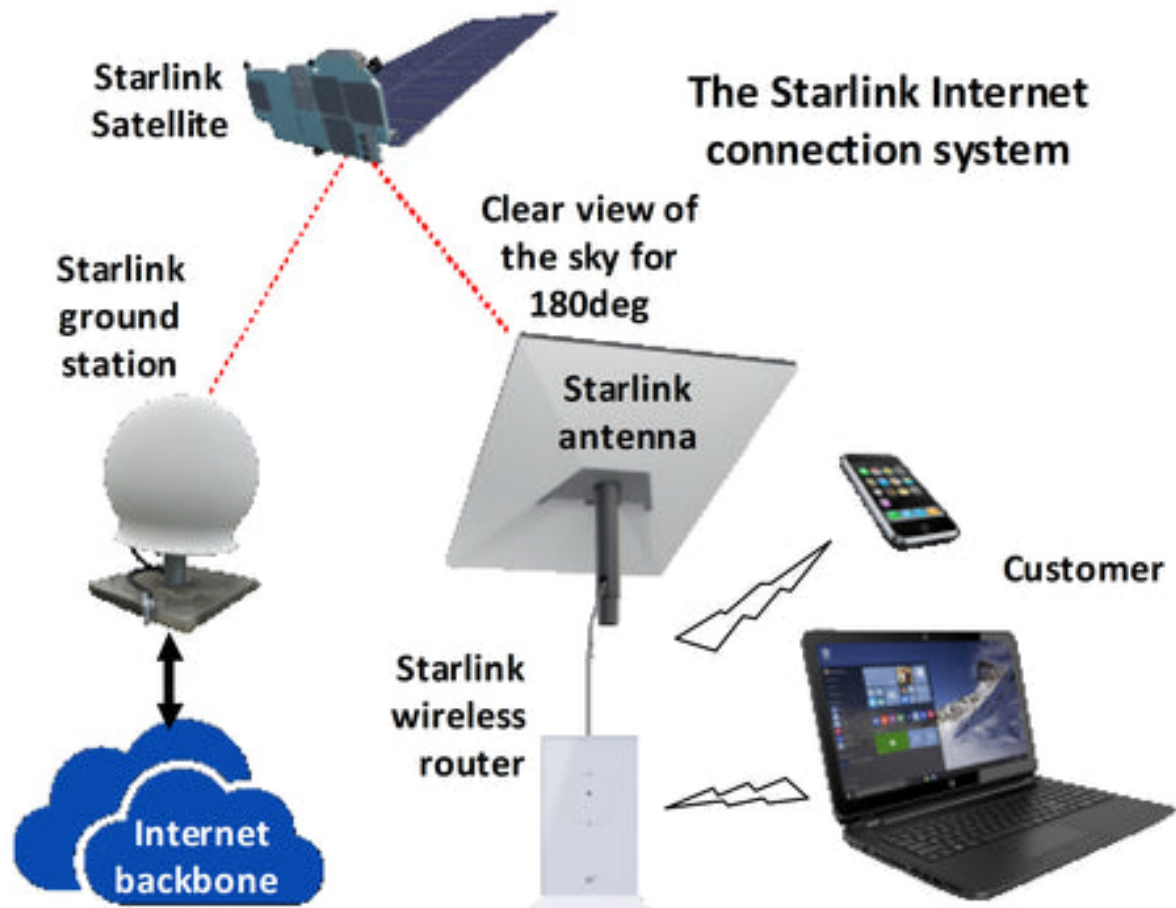
Record keeping

- Pocket notebook

- Portable receiver with VOX recorder

General Mobile Radio Service

1. Saturated (overloaded) cell networks

2. Need for public information & assistance

3. Source of situational information for EOC

4. Limited (or no) access to amateur radio

5. Mission enhancement for ARES/RACES

Other Than Part 97…

- Citizens Band Radio Service – Part 95 D

- Family Radio Service – Part 95 B

- General Mobile Radio Service – Part 95 E

- Multi-use Radio Service – Part 95 J

General Mobile Radio Service

- Low-cost radios

- No testing to obtain a license

- In common use – climbers, hikers

- Growing presence within community groups as a part of disaster preparedness

- Community Emergency Response Teams (CERT) use FRS for intra-team comms

Operational Considerations

1. Individual license is required

2. May transmit one-way communications

3. May communicate with unlicensed persons

4. Must utilize FCC-assigned call sign

5. 22 channels (462 and 467 MHz)

6. Channel 20 (462.6750) is an unofficial emergency channel

Bottom Line

- An effective <u>Program</u>

- Effective <u>Teams</u>

- Effective <u>Individuals</u>

- A few <u>Best</u> Practices